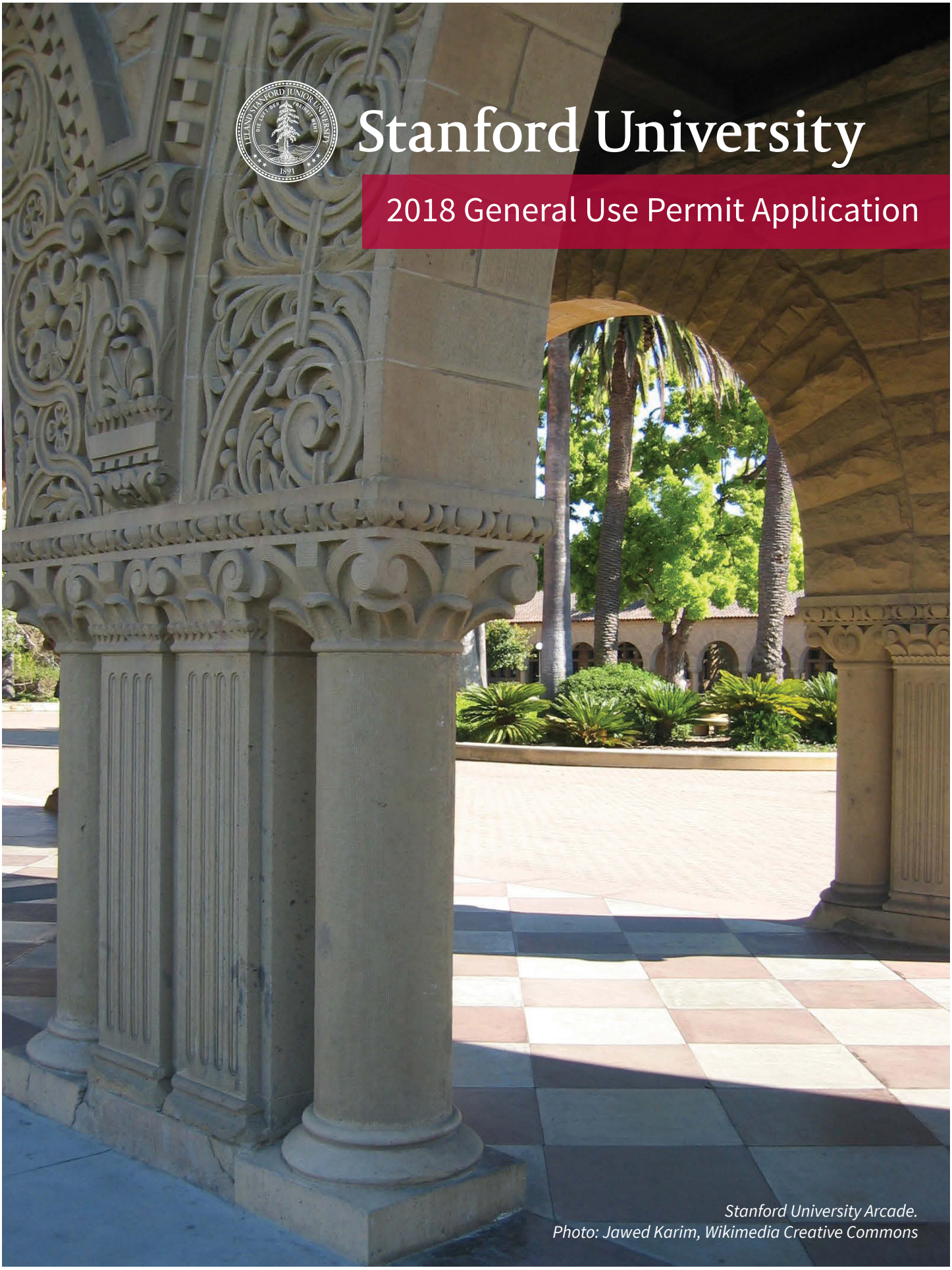
Stanford University

2018 General Use Permit Application



Stanford University Arcade.
Photo: Jawed Karim, Wikimedia Creative Commons

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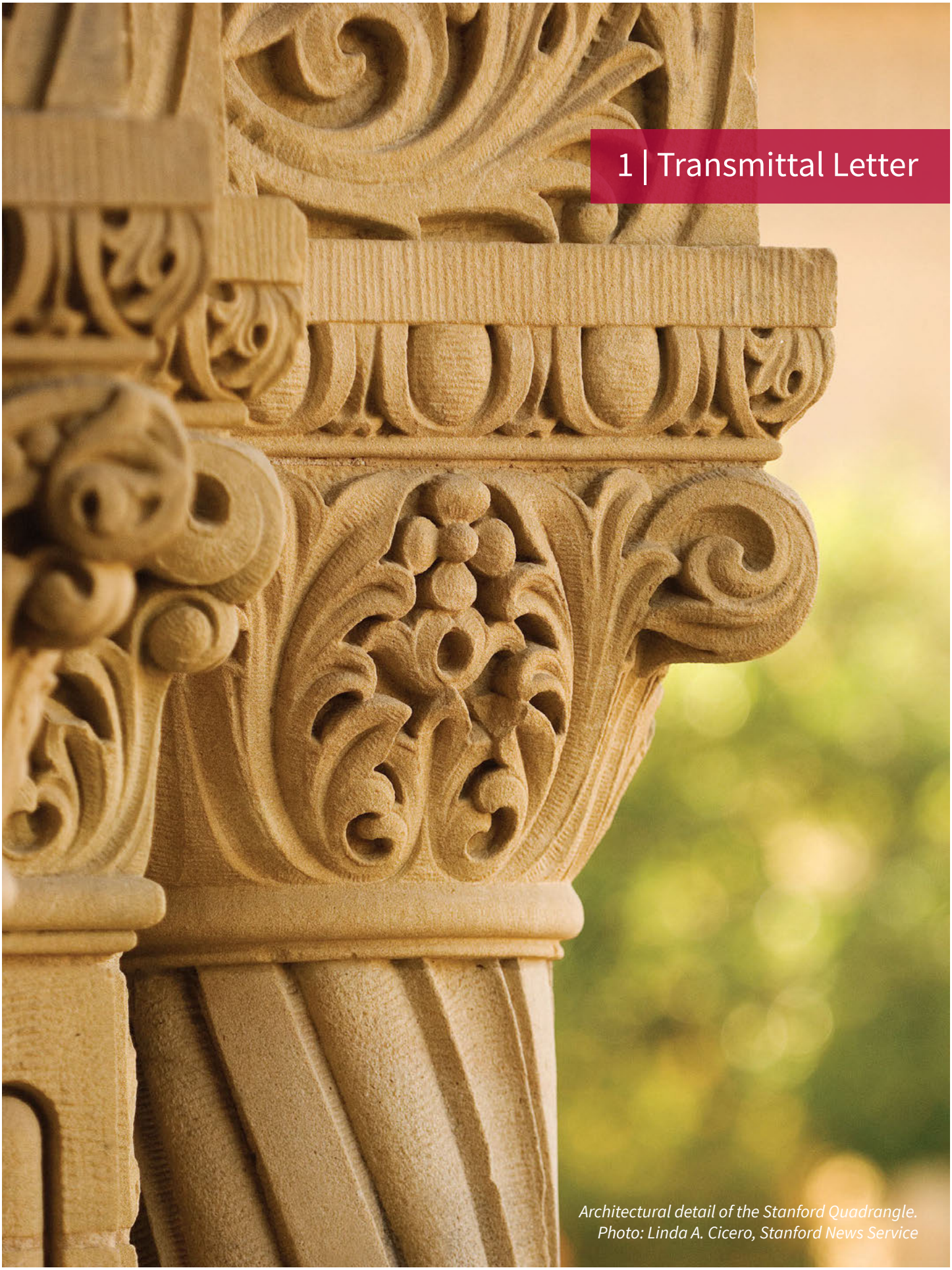


Architectural detail of the Stanford Quadrangle.
Photo: Linda A. Cicero, Stanford News Service

STANFORD UNIVERSITY
LAND USE AND ENVIRONMENTAL PLANNING

November 21, 2016

Kirk Girard
Director, Department of Planning and Development
Santa Clara County
70 West Hedding Street
7th Floor, East Wing
San Jose, CA 95110

Dear Mr. Girard:

Stanford University is pleased to submit an application for an updated General Use Permit for its lands in unincorporated Santa Clara County.

The regulatory framework established by Santa Clara County and Stanford in 2000 has been very successful. Together, the Stanford Community Plan and 2000 General Use Permit have provided Stanford *flexibility* as to the types and locations of academic and housing facilities that it develops over time, allowing the university to respond nimbly to evolving teaching and research innovations. The framework holds Stanford *accountable* for potential impacts that could arise from new development. Measurable performance standards and comprehensive impact reduction programs reduce vehicle trips to and from the campus, prevent excessive water use, ensure that flooding does not occur, and promote groundwater recharge. These comprehensive impact reduction programs often are more effective than project-by-project mitigation. The combination of *flexibility with accountability* ensures that, regardless of the type or specific location of new construction, negative impacts to the surrounding community do not occur. The Background Conditions Report contained in Tab 4 of the application provides a detailed description of the achievements of this regulatory framework since 2000.

As Stanford neared the end of the academic and housing authorizations granted by the 2000 General Use Permit, we considered the need for additional facilities on campus. After the existing authorizations are completed, a need exists for new facilities to accommodate state-of-the-art teaching and research to house new multi-disciplinary initiatives that evolve into robust fields of study and often require larger research spaces. In addition, the University desires to build more housing for its faculty and students to strengthen the residential nature of the University. The amount of development requested in this application for the 2018 General Use Permit is expected to support the University's operation until 2035, is consistent with historic growth, and is consistent with the Moderate Growth Scenario in the Sustainable Development Study prepared by Stanford and approved by Santa Clara County in 2009.

In accordance with the accountability aspect of our regulatory framework, Stanford prepared technical studies to better understand the potential environmental impacts from the anticipated development request. These technical studies are provided as part of the application for the County's consideration.

3160 Porter Drive, Suite 200 • Palo Alto, CA 94304-8442 • (650) 723-7773 • Fax (650) 725-8598

By conducting these studies in advance, Stanford gained a fuller understanding of potential impacts and was able to provide measures in the application to reduce these impacts. We understand that the County will conduct its own independent review of these technical reports, supported by consultants hired and directed by County staff.

Based on these reports, Stanford is comfortable continuing the no-net-new-commute trips goal, confident that it can be achieved. Stanford is not asking to move the Academic Growth Boundary. The analysis of vehicle miles traveled (VMT) demonstrates that, after construction of the additional academic facilities, the VMT of workers is about 75% below the regional average, well below the State's desired threshold of achieving 15% below the regional average. Similarly, the VMT of the campus residents is about 40% below the regional average, also below the desired threshold of 15% below the regional average. These numbers indicate that Stanford's infill type development that includes excellent access to transit and provision of on and near campus housing is precisely the type of development that the Governor's Office is encouraging to reduce VMT. In addition, the greenhouse gas (GHG) analysis demonstrates that Stanford's extensive efforts to reduce its GHG emissions will ensure that its per capita emissions at completion of the proposed 2018 General Use Permit will be beneath the efficiency threshold needed to meet the State's newly adopted goal to reduce emissions to 40% below 1990 levels by 2030 and would be beneath the level needed to remain on a trajectory toward the Governor's GHG reduction goal for 2050.

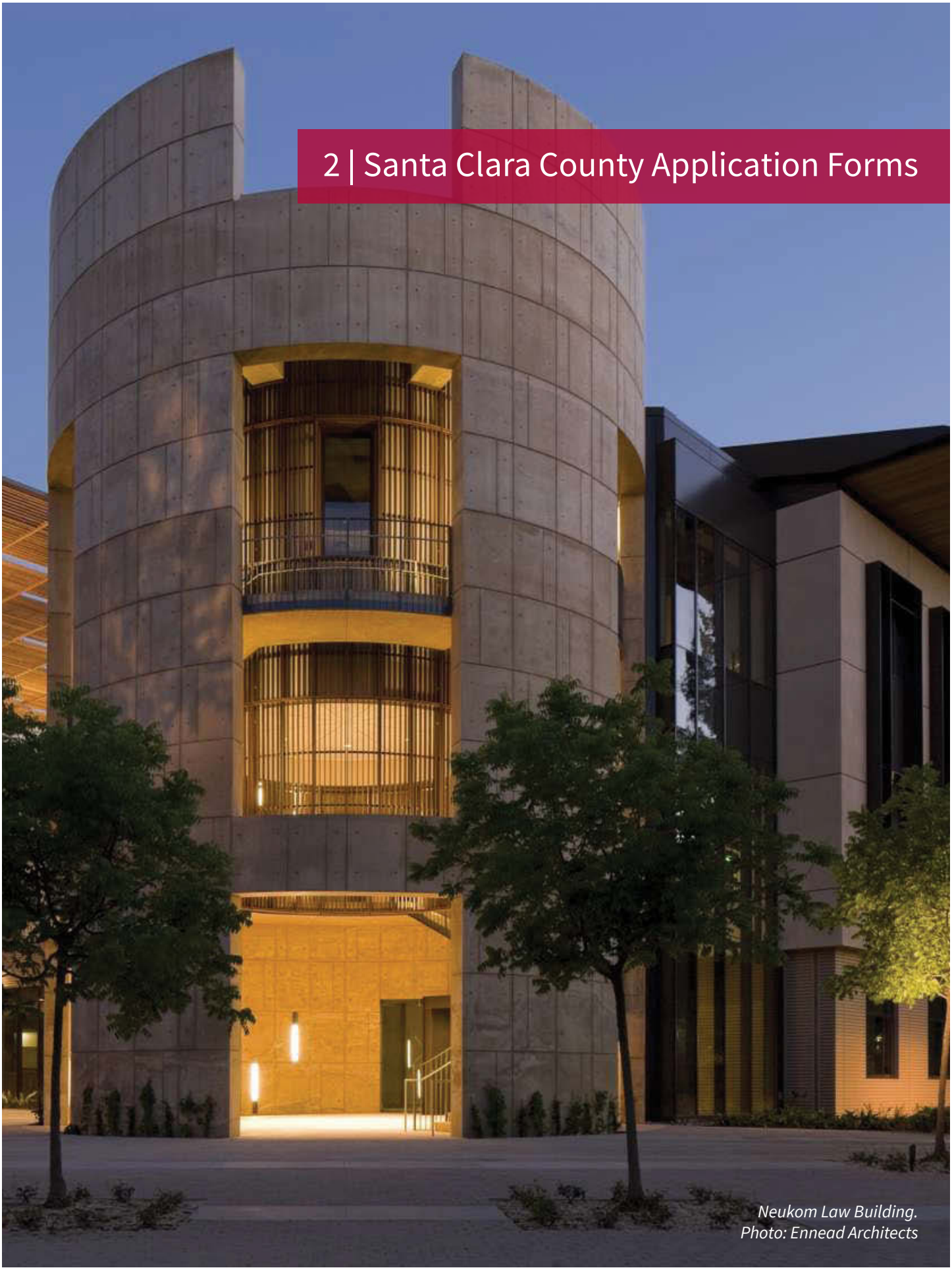
Stanford has carefully considered its needs for the future and ways in which to reduce its effects on the surrounding community. We look forward to continuing to work with you and the community as our application is considered for approval.

Sincerely,

Catherine Palter

Catherine Palter
Associate Vice President
Land Use and Environmental Planning

2 | Santa Clara County Application Forms



Neukom Law Building.
Photo: Ennead Architects

SANTA CLARA COUNTY PLANNING DEVELOPMENT APPLICATION

PROPERTY OWNER'S NAME	Phone	Email	Prefer correspondence: Email ☒ Mail ☐
Stanford University	(650) 723-0199	cpalter@stanford.edu	
Mailing Address	**City**	**Zip**	
3160 Porter Drive, Suite 200	Palo Alto, CA	94304	
APPLICANT OR APPELLANT NAME	**Phone**	**Email**	**Prefer correspondence: Email ☒ Mail ☐**
Catherine Palter	(650) 723-0199	cpalter@stanford.edu	
Mailing Address	**City**	**Zip**	
3160 Porter Drive, Suite 200	Palo Alto, CA	94304	

ADDRESS OF SUBJECT PROPERTY: Stanford University APN: 142-04-023 and various,see list

EXISTING USE OF PROPERTY: Various, Academic Campus ACCESS RESTRICTIONS (gate, dog, etc.): N/A

The ACKNOWLEDGEMENTS AND AGREEMENTS FORM on the reverse side of this application must be completed and signed by the property owner(s).

FOR DEPARTMENT USE ONLY

FILE NUMBER: _____ – _____

PROJECT DESCRIPTION: See attached description in Tab 3 of application

APPLICATION TYPES	FEE(S)	COMMENTS / SUBMITTAL MATERIALS
Architecture and Site Approval / ASX		
Building Site Approval / BA (Urban / Rural)		
Certificate of Compliance		
Design Review / DRX		
CEQA (EA / Cat Ex / Prior CEQA / EIR)		
Compatible Use Determination (WA / OSE)		
Geologic Report / Letter		
Grading Approval / Abatement		
Lot Line Adjustment / Lot Merger		
Pre-Screening		
Special Permit		
Subdivision		
Use Permit		
Variance		
Other		
TOTAL FEES		

Application fees are not refundable.

Submittal reviewed and received by: _____

Date: _____

Coordinates: X _____ Y _____

Zoning: _____

General Plan: _____

Parcel Size: _____

USA / SOI _____

WA / OSE / HCP

Early Outreach: L1 / L2

Previous Files: _____

ACKNOWLEDGEMENTS AND AGREEMENTS

FILE NUMBER: —

I. INDEMNITY

Applies to all Planning applications.

As it relates to the above referenced application, pursuant to County of Santa Clara Ordinance Code Section A33-6, except where otherwise expressly prohibited by state or federal law, I hereby agree to defend, indemnify and hold harmless the County and its officers, agents, employees, boards and commissions from any claim, action or proceeding brought by any person or entity other than the applicant ("third party") against the County or its officers, agents, employees, boards and commissions that arises from or is in any way related to the approval of this application, including but not limited to claims, actions or proceedings to attack, set aside, void or annul the approval. If a third party claim, action or proceeding is filed, the County will promptly notify the applicant of the claim, action or proceeding and will cooperate fully in the defense. Notwithstanding the above, the County has the right to participate in the defense of any claim, action or proceeding provided the County bears its own costs and attorney fees directly associated with such participation and defend the action in good faith. The applicant will not be required to pay or perform any settlement unless the applicant agrees to the settlement.

II. FEES

Applies to hourly billable application types. Refer to Department of Planning and Development fee schedule.

a. I/We the Owner(s) of the subject property, understand that my/our application requires payment of a minimum non-refundable fee, plus additional funds when staff hours devoted to the application exhaust the initial payment. Staff hours are billed at the hourly rate in effect at the time the staff hours are accrued.

b. Typical tasks charged to an application include, but are not limited to, the following: intake and distribution of application, staff review of plans and other relevant materials; correspondence; discussions/ meetings with owner, applicant and/or other interested parties; visits to the project site by authorized agency staff; file maintenance; environmental assessment; staff report preparation; agenda and meeting preparation; meeting attendance; presentations to boards, commissions, and community groups; contract administration.

c. The minimum nonrefundable fees for development applications are based on staff billing rates and staff hours needed to process a typical application. Staff hours may exceed a base application fee (requiring additional billing) due to project complexity and public interest on a project. This could include the need to review technical reports, conduct several meetings with the owner / applicant, and respond to public inquiries.

d. Invoiced fees are due within 30 days of the date on the billing letter. **Fees not paid within 30 days are considered late and are subject to collection at the expense of the Owner.** While such fees are outstanding, the Planning Office reserves the right to cease all work on a project until said fees are paid in full.

e. Any fees not paid within 45 days of invoicing shall be subject to interest charged at a rate equal to that earned by the County Treasury investment pool for that period.

f. The owner and applicant are encouraged to periodically check on the status of their projects and fees. Questions regarding the status of hours charged to an application may be addressed to the planner assigned to the project.

g. For more information on Planning Office application fees and how they are calculated, visit the County Planning Office web site at www.sccplanning.org.

III. APPLICATION AUTHORIZATION AND AGREEMENT TO PAY

I (We), the Owner(s) of the subject property, hereby authorize(s) the filing of this application and on-site visit by authorized staff. In addition I (We) acknowledge and understand the information above related to fees and agree to pay all application fees. I (We) certify and accept the terms and conditions as described above.

OWNER'S NAME(S) (Please Print)

CATHERINE PALTER

OWNER'S SIGNATURE(S) Catherine Palter

DATE NOVEMBER 21, 2016

List of APNs in Project Area

APN	APN	APN	APN	APN	APN
14204010	14207018	14207081	14208050	14208104	14210003
14204013	14207019	14207082	14208051	14208105	14210004
14204015	14207020	14207083	14208052	14208106	14210005
14204017	14207021	14207084	14208053	14208107	14210006
14204018	14207022	14207085	14208054	14208108	14210007
14204021	14207023	14207086	14208055	14208109	14210008
14204036	14207024	14207087	14208056	14208110	14210009
14205002	14207025	14208001	14208057	14208111	14210010
14205003	14207026	14208002	14208058	14208112	14210011
14205004	14207027	14208003	14208059	14208113	14210012
14205005	14207028	14208004	14208060	14208114	14210013
14205006	14207029	14208005	14208061	14208115	14210014
14205007	14207030	14208006	14208062	14208116	14210015
14205008	14207031	14208007	14208063	14208117	14210016
14205009	14207032	14208008	14208064	14208118	14210017
14205010	14207033	14208010	14208065	14208119	14210018
14205011	14207034	14208011	14208066	14208120	14210019
14205012	14207035	14208012	14208067	14208121	14210020
14205013	14207036	14208013	14208068	14208122	14210021
14205014	14207037	14208014	14208069	14208123	14210022
14205015	14207038	14208015	14208070	14208124	14210023
14205016	14207039	14208019	14208071	14208125	14210024
14205020	14207040	14208020	14208072	14208126	14210025
14205021	14207041	14208021	14208073	14208127	14210026
14205022	14207042	14208022	14208074	14208128	14210027
14205024	14207050	14208023	14208076	14208129	14210028
14205025	14207051	14208024	14208077	14208130	14210029
14205027	14207054	14208025	14208078	14208131	14210030
14205028	14207055	14208026	14208079	14208132	14210031
14205029	14207056	14208027	14208080	14208133	14210032
14205030	14207057	14208028	14208081	14208134	14210033
14205033	14207058	14208029	14208082	14208135	14210034
14205034	14207059	14208030	14208083	14208136	14210035
14205045	14207060	14208031	14208084	14208137	14210036
14206001	14207061	14208032	14208085	14208138	14210037
14206002	14207062	14208033	14208086	14208139	14210038
14206003	14207063	14208034	14208087	14208140	14210039
14207001	14207064	14208035	14208090	14208141	14210040
14207004	14207065	14208036	14208091	14208142	14210041
14207005	14207066	14208037	14208092	14208143	14210042
14207006	14207067	14208038	14208094	14208144	14210043
14207007	14207068	14208039	14208095	14208145	14210044
14207008	14207069	14208040	14208096	14208146	14210045
14207009	14207070	14208041	14208097	14209003	14210046
14207010	14207071	14208042	14208098	14209006	14210047
14207011	14207072	14208045	14208099	14209008	14210048
14207014	14207073	14208046	14208100	14209009	14210049
14207015	14207074	14208047	14208101	14209010	14210050
14207016	14207075	14208048	14208102	14210001	14210051
14207017	14207080	14208049	14208103	14210002	14210052

APN	APN	APN	APN	APN	APN
14210053	14210104	14211026	14211076	14211126	14221018
14210054	14210105	14211027	14211077	14211127	14221019
14210055	14210106	14211028	14211078	14211128	14221020
14210056	14210107	14211029	14211079	14211129	14221021
14210057	14210108	14211030	14211080	14211130	14221022
14210058	14210109	14211031	14211081	14211131	14221023
14210059	14210110	14211032	14211082	14211132	14221024
14210060	14210111	14211033	14211083	14211133	14221025
14210061	14210112	14211034	14211084	14211134	14221026
14210062	14210113	14211035	14211085	14211135	14221027
14210063	14210114	14211036	14211086	14212002	14221028
14210064	14210115	14211037	14211087	14212003	14221029
14210065	14210116	14211038	14211088	14212006	14221030
14210066	14210117	14211039	14211089	14212007	14221031
14210067	14210118	14211040	14211090	14212008	14221032
14210068	14210119	14211041	14211091	14212009	14221033
14210069	14210120	14211042	14211092	14213001	14221034
14210070	14210121	14211043	14211093	14213007	14221035
14210071	14210122	14211044	14211094	14213007	14221036
14210072	14210123	14211045	14211095	14213008	14221037
14210073	14210124	14211046	14211096	14214009	14221038
14210074	14210125	14211047	14211097	14214015	14221039
14210075	14210126	14211048	14211098	14214016	14221040
14210076	14210127	14211049	14211099	14215007	14221041
14210077	14210128	14211050	14211100	14215008	14221042
14210078	14210129	14211051	14211101	14215009	14221043
14210079	14210130	14211052	14211102	14216010	14221044
14210080	14211001	14211053	14211103	14216036	14221045
14210081	14211002	14211054	14211104	14216037	14221046
14210082	14211005	14211055	14211105	14216041	14221047
14210083	14211006	14211056	14211106	14216070	14221048
14210084	14211007	14211057	14211107	14216071	14221049
14210086	14211008	14211058	14211108	14216072	14221050
14210087	14211009	14211059	14211109	14216076	14221051
14210088	14211010	14211060	14211110	14216077	14221052
14210089	14211011	14211061	14211111	14221002	14221053
14210090	14211012	14211062	14211112	14221004	14221054
14210091	14211013	14211063	14211113	14221005	14221055
14210092	14211014	14211064	14211114	14221006	14221056
14210093	14211015	14211065	14211115	14221007	14221057
14210094	14211016	14211066	14211116	14221008	14221058
14210095	14211017	14211067	14211117	14221009	14221059
14210096	14211018	14211068	14211118	14221010	14221060
14210097	14211019	14211069	14211119	14221011	14221061
14210098	14211020	14211070	14211120	14221012	14221062
14210099	14211021	14211071	14211121	14221013	14221063
14210100	14211022	14211072	14211122	14221014	14221064
14210101	14211023	14211073	14211123	14221015	14221065
14210102	14211024	14211074	14211124	14221016	14221066
14210103	14211025	14211075	14211125	14221017	14221067

List of APNs in Project Area

APN	APN	APN	APN	APN
14221068	14222033	14222083	14226009	14227033
14221069	14222034	14222084	14226010	14227034
14221070	14222035	14222085	14226011	14227035
14221071	14222036	14222086	14226012	14227036
14221072	14222037	14222087	14226013	14227037
14221073	14222038	14222088	14226014	14227038
14221074	14222039	14222089	14226015	14227039
14221075	14222040	14222090	14226016	
14221076	14222041	14222091	14226017	Note: These APNs
14221077	14222042	14222092	14226018	are overflow parcels.
14221078	14222043	14222093	14226019	14204013
14221079	14222044	14222094	14226020	14204015
14221080	14222045	14222095	14226021	14204017
14221081	14222046	14222096	14226022	14204018
14221082	14222047	14222097	14226023	14204021
14221083	14222048	14222098	14226024	14205022
14221084	14222049	14222099	14226025	14205025
14221085	14222050	14222100	14226026	14205027
14222001	14222051	14222101	14227001	14205028
14222002	14222052	14222102	14227002	14205029
14222003	14222053	14222103	14227003	14205030
14222004	14222054	14222104	14227004	14205033
14222005	14222055	14222105	14227005	14205034
14222006	14222056	14222106	14227006	
14222007	14222057	14222107	14227007	
14222008	14222058	14222108	14227008	Mailing labels for parcels
14222009	14222059	14222109	14227009	within 1000 feet of project
14222010	14222060	14222110	14227010	area are provided under
14222011	14222061	14222111	14227011	separate cover to the County.
14222012	14222062	14222112	14227012	
14222013	14222063	14222113	14227013	
14222014	14222064	14222114	14227014	
14222015	14222065	14222115	14227015	
14222016	14222066	14222116	14227016	
14222017	14222067	14222117	14227017	
14222018	14222068	14222118	14227018	
14222019	14222069	14222119	14227019	
14222020	14222070	14222120	14227020	
14222021	14222071	14222121	14227021	
14222022	14222072	14222122	14227022	
14222023	14222073	14222123	14227023	
14222024	14222074	14222124	14227024	
14222025	14222075	14226001	14227025	
14222026	14222076	14226002	14227026	
14222027	14222077	14226003	14227027	
14222028	14222078	14226004	14227028	
14222029	14222079	14226005	14227029	
14222030	14222080	14226006	14227030	
14222031	14222081	14226007	14227031	
14222032	14222082	14226008	14227032	

OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA

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TRACT No. 10032
832-M-16
OLMSTEAD TERRACE
FACULTY HOMES

1" = 200'

1" = 600'

ROADS FROM AERIAL PHOTO

120/31

124/21

137/1

UNIVERSITY

EL CAMINO REAL

PALO RD

PALM DR

ARBORETUM DR

EMBARCADERO RD

CHURCH ST

PARK BLVD

PARK AVE

LELAND

YALE

WILLIAMS

WELLESEY

CORNELL

PRINCETON

OBERLIN

HARVARD

HANOVER

STANFORD AVE

QUARRY ROAD

STANFORD STADIUM

MAUSOLEUM

CAMPUS DR

CAMPUS DRIVE

MUSEUM WY

ROTH WY

LOMITA

LASUEN

GALVEZ

ARGUELLO

SERRA ST

MEMORIAL WAY
-518 Memorial Wy.-

SAM McDONALD MALL

EUCALYPTUS ROAD

PAMPAS LANE

OLMSTEAD

BONAIR SIDING

715 SERRA

-741 Escondido Rd.-

-5/6/10/12/14 Comstock Cir.-

ESCONDIDO VILLAGE

ESCONDIDO ROAD (PVT.)

11
TRA LINE

10

32 VALUE OVERFLOW
STANFORD UNIVERSITY HOSPITAL
HOOVER PAVILION
9.61 Ac.

19

SEE DET. "B"

SEE DET. "A"

15
(511.573 AC.)

C
OWNER'S REQ.
2017-18

36
580.15 Ac
Calc

13 VALUE OVERFLOW
15 VALUE OVERFLOW
16 VALUE OVERFLOW
17 VALUE OVERFLOW
18 VALUE OVERFLOW
21 VALUE OVERFLOW
22 VALUE OVERFLOW
29 VALUE OVERFLOW
30 VALUE OVERFLOW
31 VALUE OVERFLOW
35 VALUE OVERFLOW
24 VALUE OVERFLOW
25 VALUE OVERFLOW
26 VALUE OVERFLOW
33 VALUE OVERFLOW
34 VALUE OVERFLOW
27 VALUE OVERFLOW
28 VALUE OVERFLOW

19
(81.71 AC)

28
(65.90 AC)

29
(20.68 AC)

30
(69.02 AC)

21
(23.45 AC)

22
(44.70 AC)

23
(31.28 AC)

20
(32.0 AC)

(0.58 AC)

7
0.459 AC

DETAIL "A"
1"=200'

DETAIL "B"
1"=200'

1" = 60'

R.O.S. 747/40

AMEND R.O.S. 767/51

TRA DET. MAP 051, 061

LAWRENCE E. STONE — ASSESSOR
Cadastral map for assessment purposes only.
Compiled under R. & T. Code, Sec. 327.
Effective Roll Year 2017-2018

OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA

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R.O.S. 747/40

VACATED RD. DOC. 16263778

WILLOW ROAD

San Francisquito Ck.

WELCH RD

PASTEUR DR. (800)

QUARRY RD.

1" = 400'

S.B.E. 2748-43-(32)48 PCL.1
PACIFIC BELL WIRELESS
104 S.F. P.I.

32 — 1.973AC.

OWNER'S REQ. 2013-14 — 0.65 Ac.

44

45 — 162.087 Ac. Calc.

248.13 AC (PL.)

21 — 31.67 AC.

24 — 50.52 AC.

20 — 0.59 AC.

DETAIL
1" = 100'

DETAIL

-246 IS POOL HOUSE AND 248 IS MAIN HOUSE-

SANTA TERESA SUBD. (UNRECORDED)

STOCK FARM RD

OAK -473- RD

SEARSVILLE RD

CAMPUS DR

LOS ARBOLES AVE

GOVENORS AVE

JORDAN

VIA PUEBLO

VIA ORTEGA

PANAMA

VIA PALOU

SEQUOIA LN.

VIA CRESPI

SERRA ST

ROTH WAY

LOMITA AVE

LOMITA MALL

SANTA TERESA ST

SAMUEL MORRIS WY

STANFORD MEDICAL CENTER

VALUE OVERFLOW: 43, 22, 34, 25, 46, 27, 28, 30, 33, 37, 50, 51, 40, 41, 49, 23, 35, 53, 26, 29, 36, 39, 47, 38, 42, 48, 52

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

TRA DET. MAP 051

LAWRENCE E. STONE — ASSESSOR
Cadastral map for assessment purposes only.
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TRA DET. MAP 051, 052

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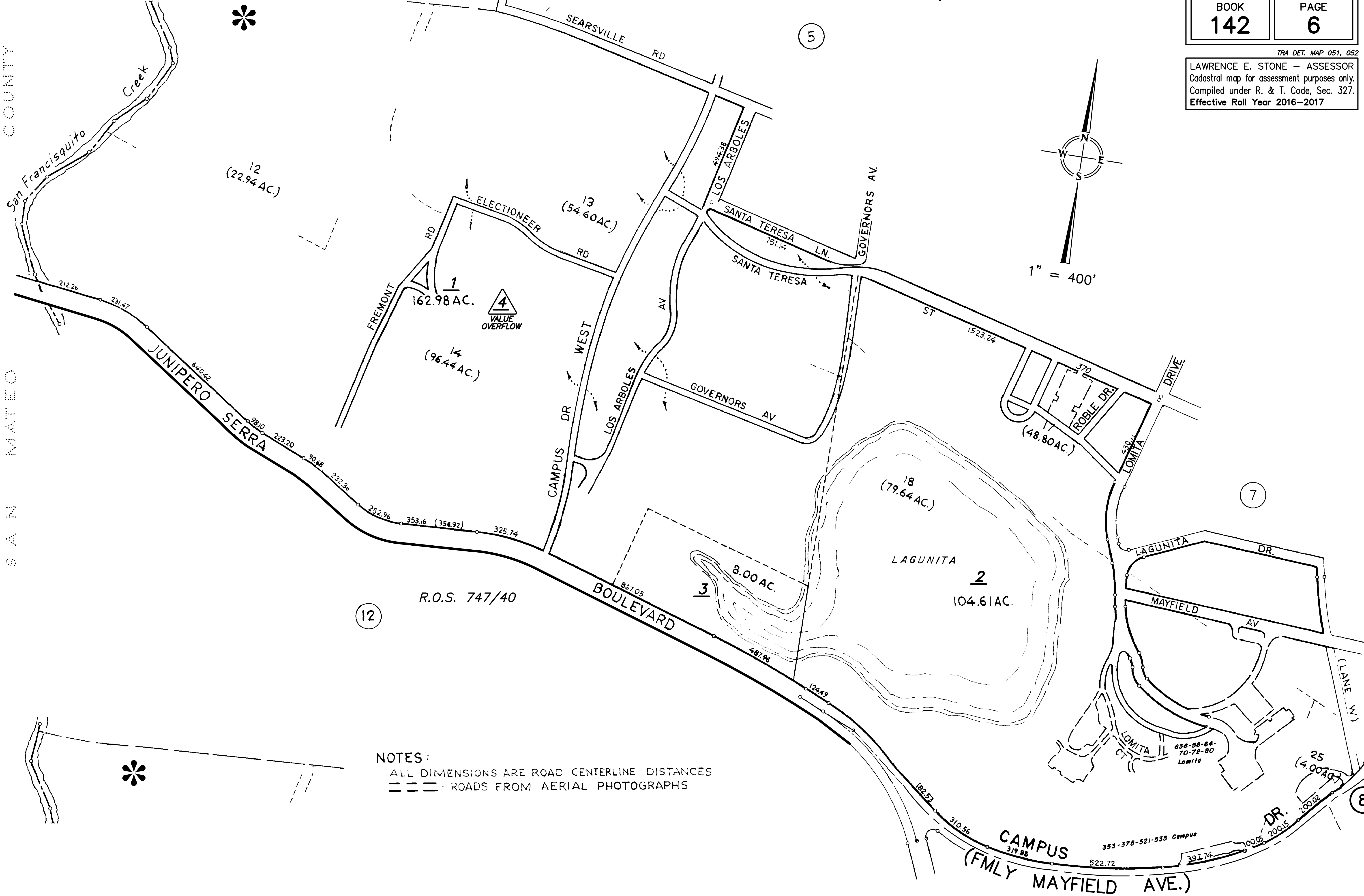

SAN MATEO COUNTY
San Francisquito Creek
SEARSVILLE RD
5
N
W
E
S
1" = 400'
12 (22.94 AC.)
13 (54.60 AC.)
ELECTIONEER RD
FREMONT RD
1 162.98 AC.
4 VALUE OVERFLOW
14 (96.44 AC.)
CAMPUS DR WEST
LOS ARBOLES AV
LOS ARBOLES
494.38
SANTA TERESA LN.
751.14
GOVERNORS AV.
SANTA TERESA ST
1523.24
GOVERNORS AV
370
ROBLE DR.
DRIVE
LOMITA
17 (48.80 AC.)
18 (79.64 AC.)
LAGUNITA
2 104.61 AC.
3 8.00 AC.
7
LAGUNITA DR.
MAYFIELD AV
(LANE W)
JUNIPERO SERRA BOULEVARD
212.26
231.47
640.42
98.10
223.20
90.68
232.36
252.96
353.16
(356.92)
325.74
867.05
487.96
124.49
R.O.S. 747/40
12
LOMITA CT
636-58-64-70-72-80 Lomita
25 (4.00 AC.)
8
CAMPUS DR. (FMLY MAYFIELD AVE.)
182.53
310.56
319.88
522.72
392.74
100.05
200.15
200.02
353-375-521-535 Campus

NOTES:
ALL DIMENSIONS ARE ROAD CENTERLINE DISTANCES
= = = ROADS FROM AERIAL PHOTOGRAPHS

BOOK 142 PAGE 7

1" = 300'

SERRA

22.17 AC.

LASUEN MALL

19.35 AC.

GALVEZ MALL

85

88 VALUE OVERFLOW

90 VALUE OVERFLOW

APPRAISER'S REQUEST 2001-02

86

89 VALUE OVERFLOW

91 VALUE OVERFLOW

LOMITA MALL

ESCONDIDO MALL

24.67 AC. (Includes Panama, Duena & Santa Teresa Streets)

DUENA ST

SANTA TERESA ST

87

95 VALUE OVERFLOW

LOMITA DR

2.115 AC

1

R.O.S. 747/40

LAGUNITA DR.

515 Lasuen

5 BOOK STORE 2.034 AC

4 POST OFFICE 0.655 AC

92 VALUE OVERFLOW

94 VALUE OVERFLOW

93 VALUE OVERFLOW

82

21.48 AC. - 0.90 AC. IN 20.58 AC.

MAYFIELD AV.

NATHAN ABBOTT WY

(1.9712 AC PL.)

83

51

50

0.88 AC

84

(1.7248 AC PL.)

LANE W

ALVARADO

CAMPUS DR.

80

309.26

102.73

24

SALVATIERRA ST

SANTA YNEZ ST

MAYFIELD

VALPARAISO AVE

CORONADO AVE

R.O.S. 851/12

LANE A

LANE B

0.57 AC

0.72 AC

0.50 AC

CHORD 31.91

CHORD 36.59

DOLORES ST.

STANFORD SUB'D Nº 1 (UNRECORDED)

TRA DET. MAP 062

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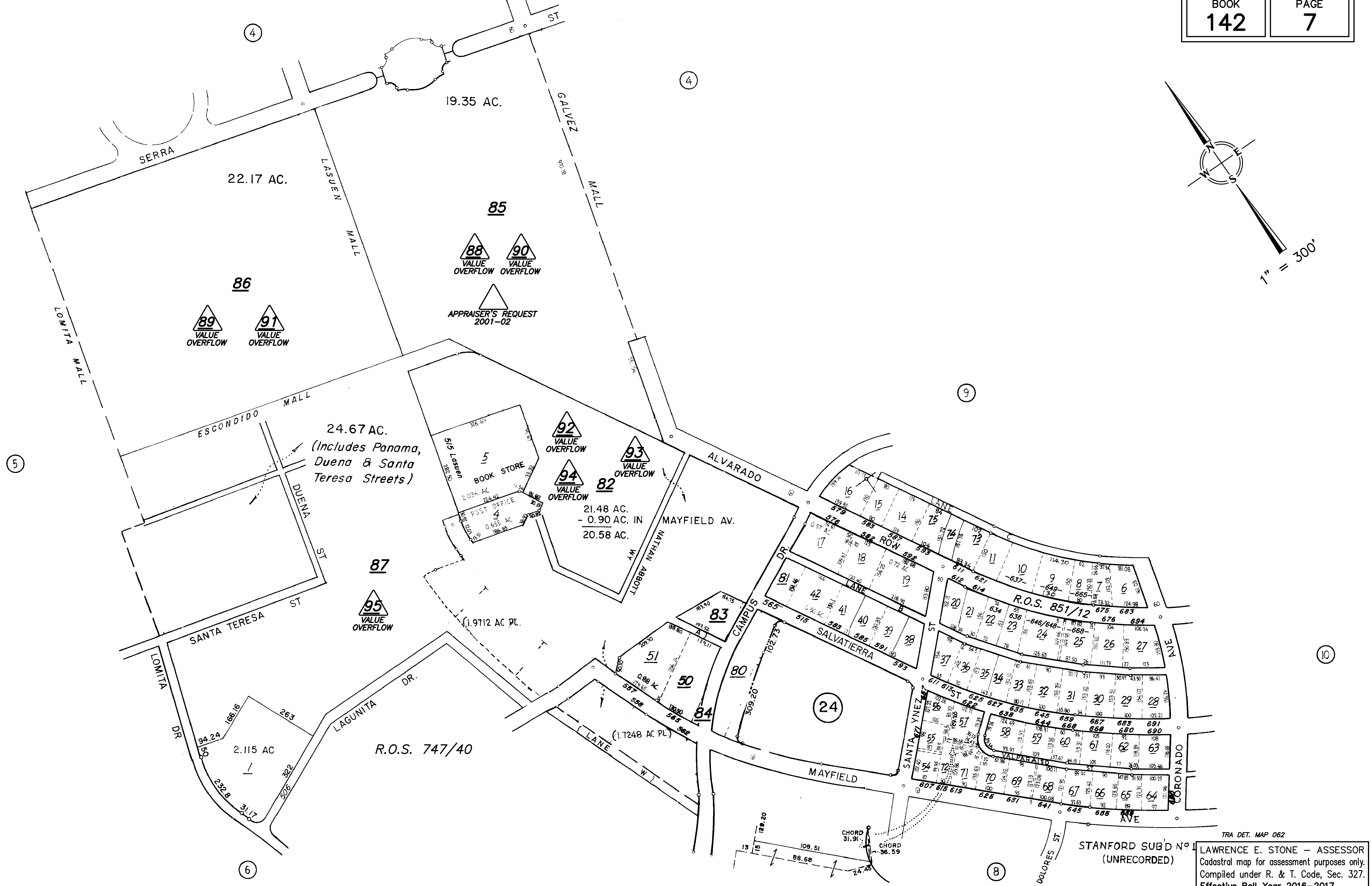

SERRA ST
LASUEN MALL
GALVEZ MALL
LOMITA MALL
ESCONDIDO MALL
DUENA ST
SANTA TERESA ST
LOMITA DR
LAGUNITA DR.
ALVARADO ROW
MAYFIELD AV.
NATHAN ABBOTT WY
CAMPUS DR.
SALVATIERRA ST
SANTA YNEZ ST
VALPARAISO ST
MAYFIELD AVE
CORONADO AVE
DOLORES ST.
LANE C
LANE B
LANE A
LANE W
19.35 AC.
22.17 AC.
85
86
87
82
88 VALUE OVERFLOW
90 VALUE OVERFLOW
89 VALUE OVERFLOW
91 VALUE OVERFLOW
92 VALUE OVERFLOW
93 VALUE OVERFLOW
94 VALUE OVERFLOW
95 VALUE OVERFLOW
APPRAISER'S REQUEST 2001-02
24.67 AC.
(Includes Panama, Duena & Santa Teresa Streets)
515 Lasuen
BOOK STORE
POST OFFICE
21.48 AC.
- 0.90 AC. IN
20.58 AC.
2.115 AC
(1.9712 AC PL.)
(1.7248 AC PL.)
R.O.S. 747/40
R.O.S. 851/12
STANFORD SUB'D Nº 1
(UNRECORDED)
CHORD 31.91
CHORD 36.59
1" = 300'
N
E
S
W
TRA DET. MAP 062

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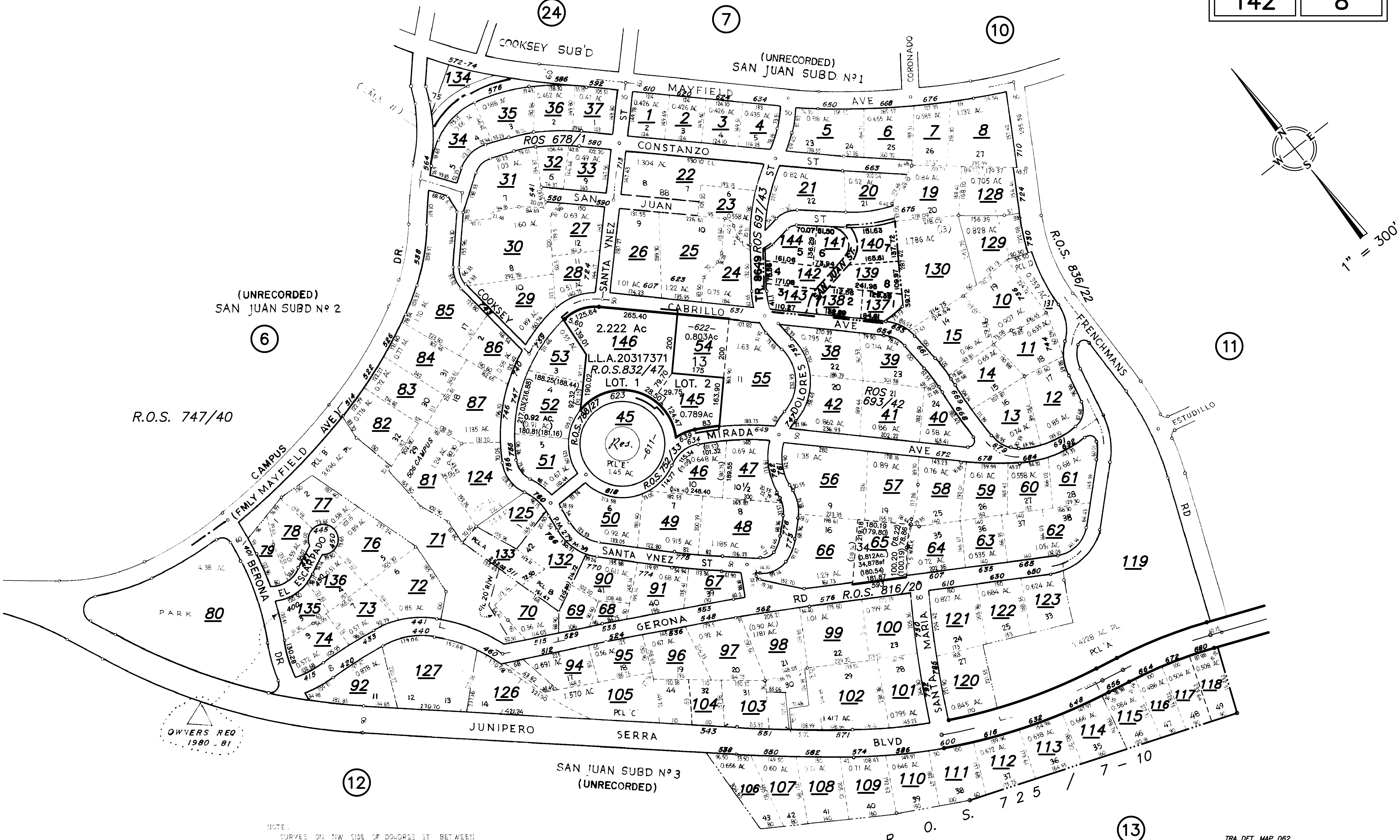

COOKSEY SUB'D
(UNRECORDED)
SAN JUAN SUBD Nº 1
CORONADO
MAYFIELD
AVE
CONSTANZO
ST
SAN
JUAN
ST
SANTA YNEZ
COOKSEY
CABRILLO
AVE
DOLORES
MIRADA
AVE
SANTA YNEZ
ST
GERONA
RD
SANTA MARIA
ROS 678/1
ROS 697/43
TR. 8649
R.O.S. 836/22
FRENCHMANS
RD
ESTUDILLO
(UNRECORDED)
SAN JUAN SUBD Nº 2
R.O.S. 747/40
CAMPUS
(FMLY MAYFIELD AVE)
DR.
L.L.A.20317371
R.O.S.832/47
LOT. 1
LOT. 2
Res.
PCL 'E'
R.O.S.816/20
ROS 693/42
PCL 'A'
PCL 'B'
PCL 'C'
BERONA
EL ESCARPADO
PARK 80
DR
JUNIPERO SERRA BLVD
SAN JUAN SUBD Nº 3
(UNRECORDED)
R. O. S. 725 / 7 – 10
OWNERS REQ
1980 - 81
1" = 300'
119

NOTE:
CURVES ON NW SIDE OF DOLORES ST BETWEEN
CABRILLO AVE AND SANTA YNEZ ST ARE ARC DIST
REMAINDER CHORD DIST

TRA DET. MAP 062

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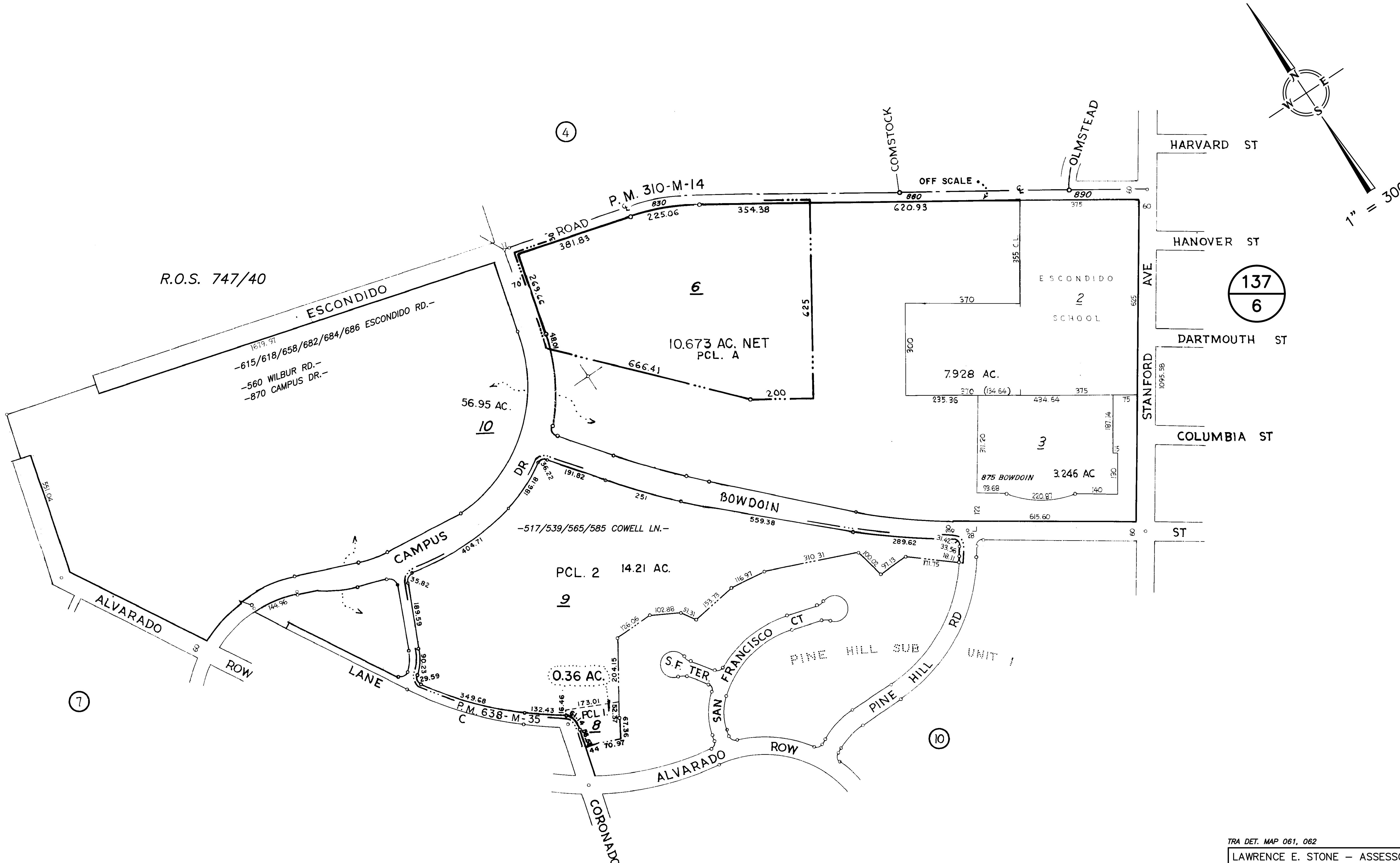
R.O.S. 747/40
ESCONDIDO
-615/618/658/682/684/686 ESCONDIDO RD.-
-560 WILBUR RD.-
-870 CAMPUS DR.-
56.95 AC.
10
P.M. 310-M-14
ROAD
COMSTOCK
OLMSTEAD
OFF SCALE
HARVARD ST
HANOVER ST
DARTMOUTH ST
COLUMBIA ST
ST
STANFORD AVE
6
10.673 AC. NET
PCL. A
ESCONDIDO
2
SCHOOL
7.928 AC.
3
875 BOWDOIN
3.246 AC
BOWDOIN
CAMPUS DR
-517/539/565/585 COWELL LN.-
PCL. 2
14.21 AC.
9
0.36 AC.
PCL 1
8
P.M. 638-M-35
LANE
ALVARADO ROW
ALVARADO ROW
CORONADO
SAN FRANCISCO CT
S.F. TER.
PINE HILL RD
PINE HILL SUB UNIT 1
1" = 300'
137
6
4
7
10

TRA DET. MAP 061, 062

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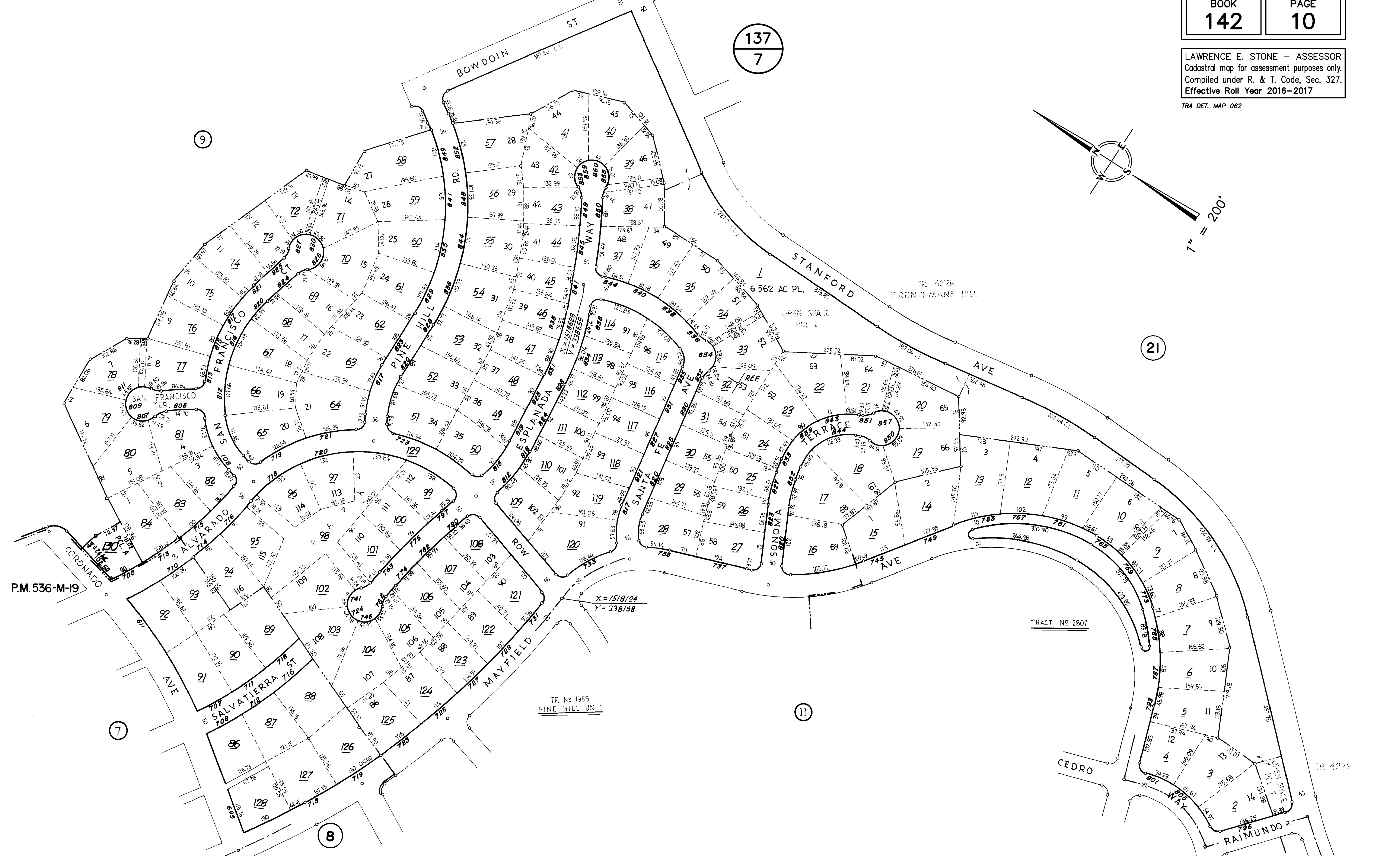

BOWDOIN ST.
STANFORD AVE
PINE HILL RD.
ESPLANADA
WAY
SANTA FE AVE
SONOMA TERRACE
SAN FRANCISCO CT.
SAN FRANCISCO TER.
ALVARADO
SALVATIERRA ST.
CORONADO AVE
MAYFIELD AVE
PEPPER ROW
CEDRO WAY
RAIMUNDO
PATH
OPEN SPACE PCL 1
OPEN SPACE PCL 7
6.562 AC PL.
PCL A
REF.
TR 4276 FRENCHMANS HILL
TR 4276
TRACT Nº 2807
TR Nº 1959 PINE HILL UN. 1
P.M. 536-M-19
X = 1518628
Y = 338659
X = 1518124
Y = 338198
1" = 200'
N
S
E
W
137
7
9
21
11
7
8

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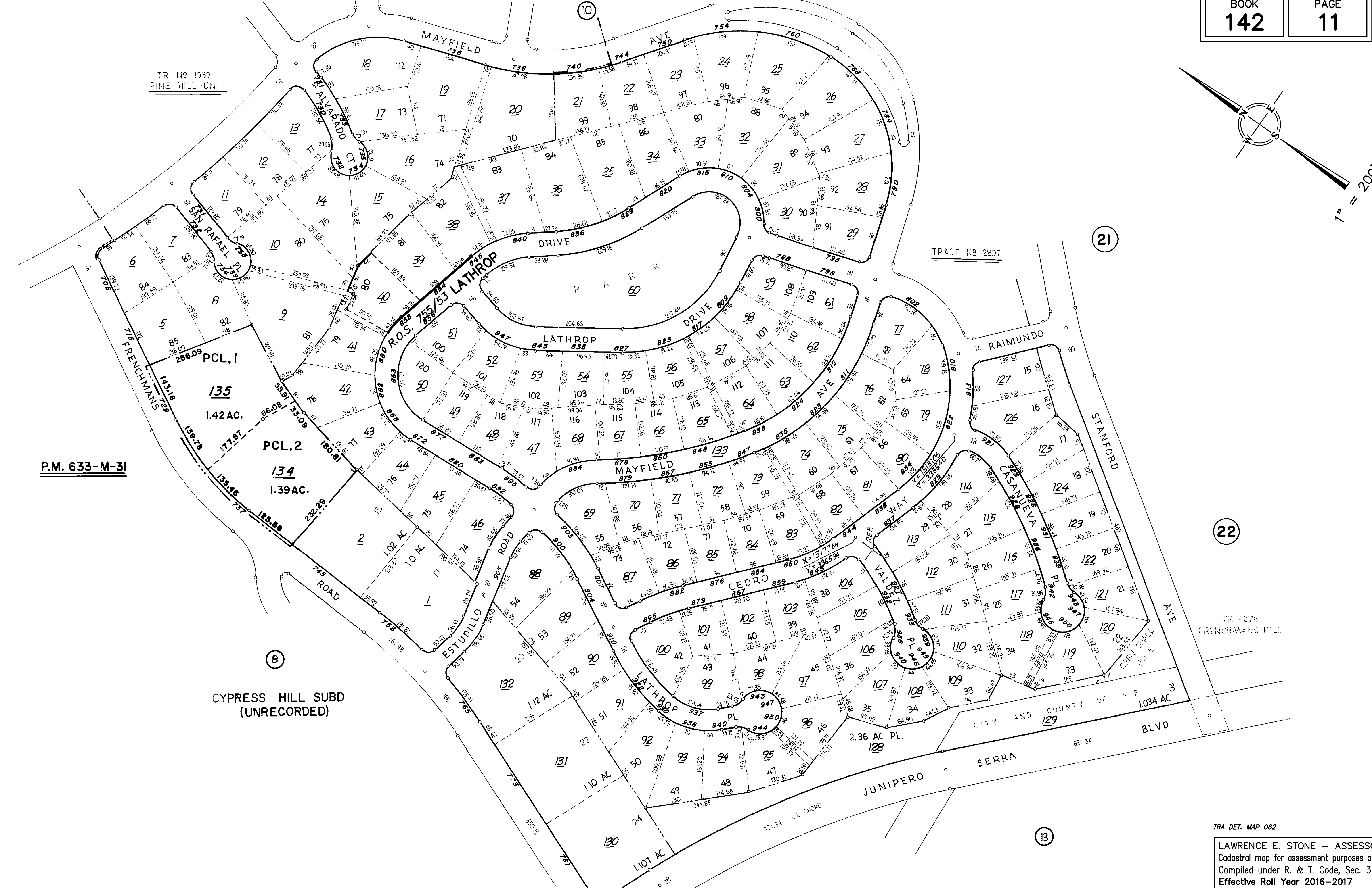

MAYFIELD AVE
TR. № 1959
PINE HILL-UN 1
ALVARADO CT
SAN RAFAEL PL
FRENCHMANS ROAD
PCL. 1
135
1.42 AC.
PCL. 2
134
1.39 AC.
P.M. 633-M-31
R.O.S. 755/53
LATHROP DRIVE
PARK
60
MAYFIELD AVE
CEDRO
VALDEZ PL.
CASANUEVA PL.
REF. WAY
RAIMUNDO
STANFORD AVE
TRACT № 2807
TR 4276
FRENCHMANS HILL
ESTUDILLO ROAD
LATHROP PL
CYPRESS HILL SUBD
(UNRECORDED)
JUNIPERO SERRA BLVD
CITY AND COUNTY OF S. F.
129
1.034 AC
2.36 AC PL.
128
OPEN SPACE PCL 6
1.12 AC
1.10 AC
1.107 AC
1.02 AC
1.0 AC
8
10
13
21
22
1" = 200'
TRA DET. MAP 062

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6

UNITED STATES FISH AND WILDLIFE SERVICE CONSERVATION ESMT. 30.048 Ac

SERRA

JUNIPERO

867.31

MAYFIELD AVE

P.M. 748–M–52

8

(4.54 AC) 52

(8.30 AC) 54

PCL. A 5.400 AC.

P.M. 319–M–33

(11.55 AC) 8.645 AC PL

2

6

204

(8.5 AC) 61

7

93.813 AC.

PCL. 1 8

20.03 AC.

(9.19 AC) 51

BLVD

SAN MATEO COUNTY

San Francisquito Creek

(37.42 AC) 53

(16.338 AC)

(23.34 AC) 63

62

(22.44 AC) 60

(17.82 AC) 59

12.152 AC

3

CITY AND COUNTY OF S. F. (HETCH–HETCHY AQUEDUCT)

–51 Vista Ln.–

9

302.629 AC. PLAN.

(87.579 AC) 58

13

(21.80 AC) 65

(173.08 AC) 64

Los Trancos Ck

14

1" = 600'

NOTE:
- DIMENSIONS ALONG RDS C.L. DISTANCES
- LOT LINES TRACED FROM STANFORD MAP

TRA DET. MAP 051, 052

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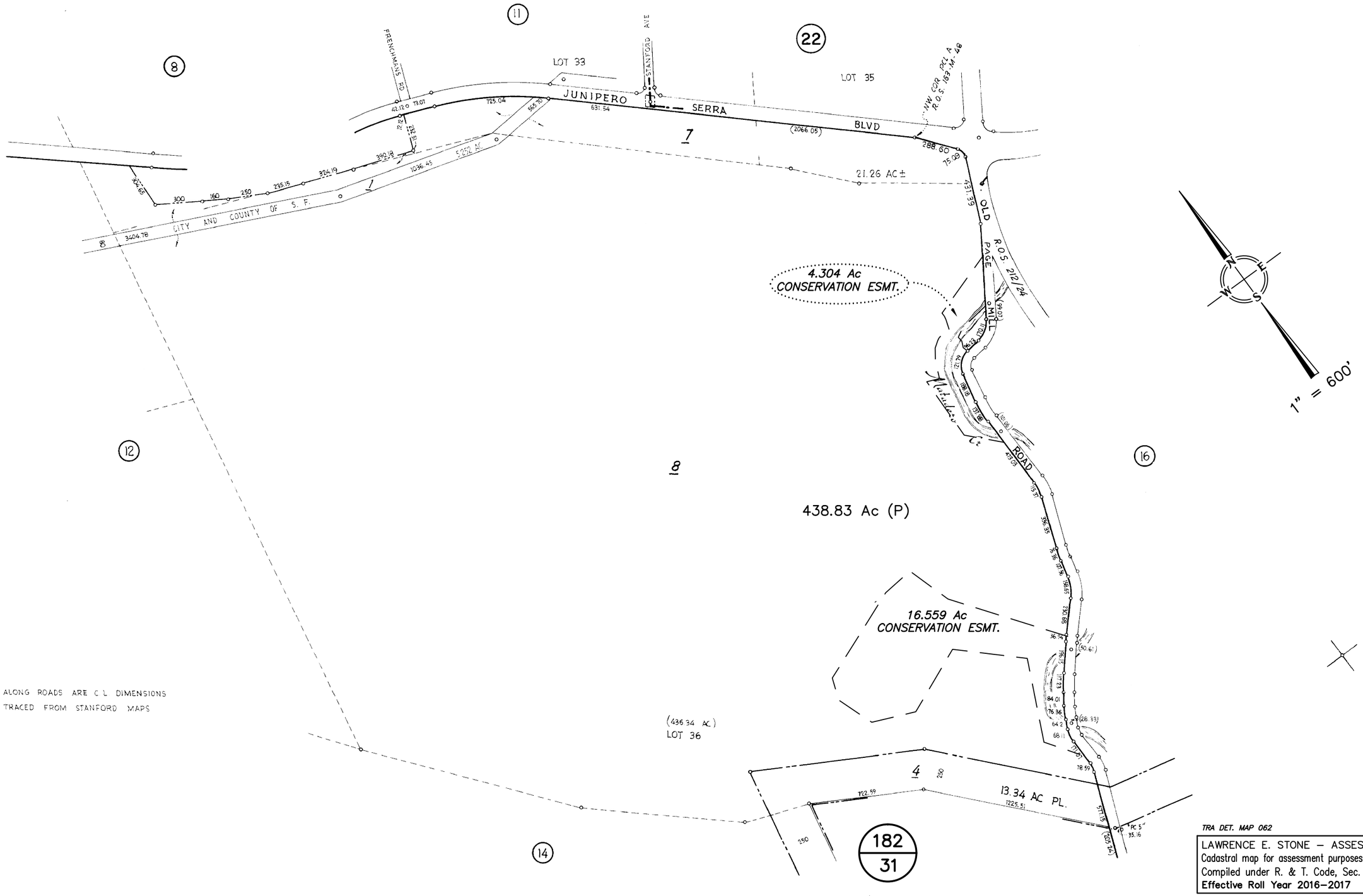

NOTES :
- DISTANCES ALONG ROADS ARE C L DIMENSIONS
- LOT LINES TRACED FROM STANFORD MAPS

TRA DET. MAP 062

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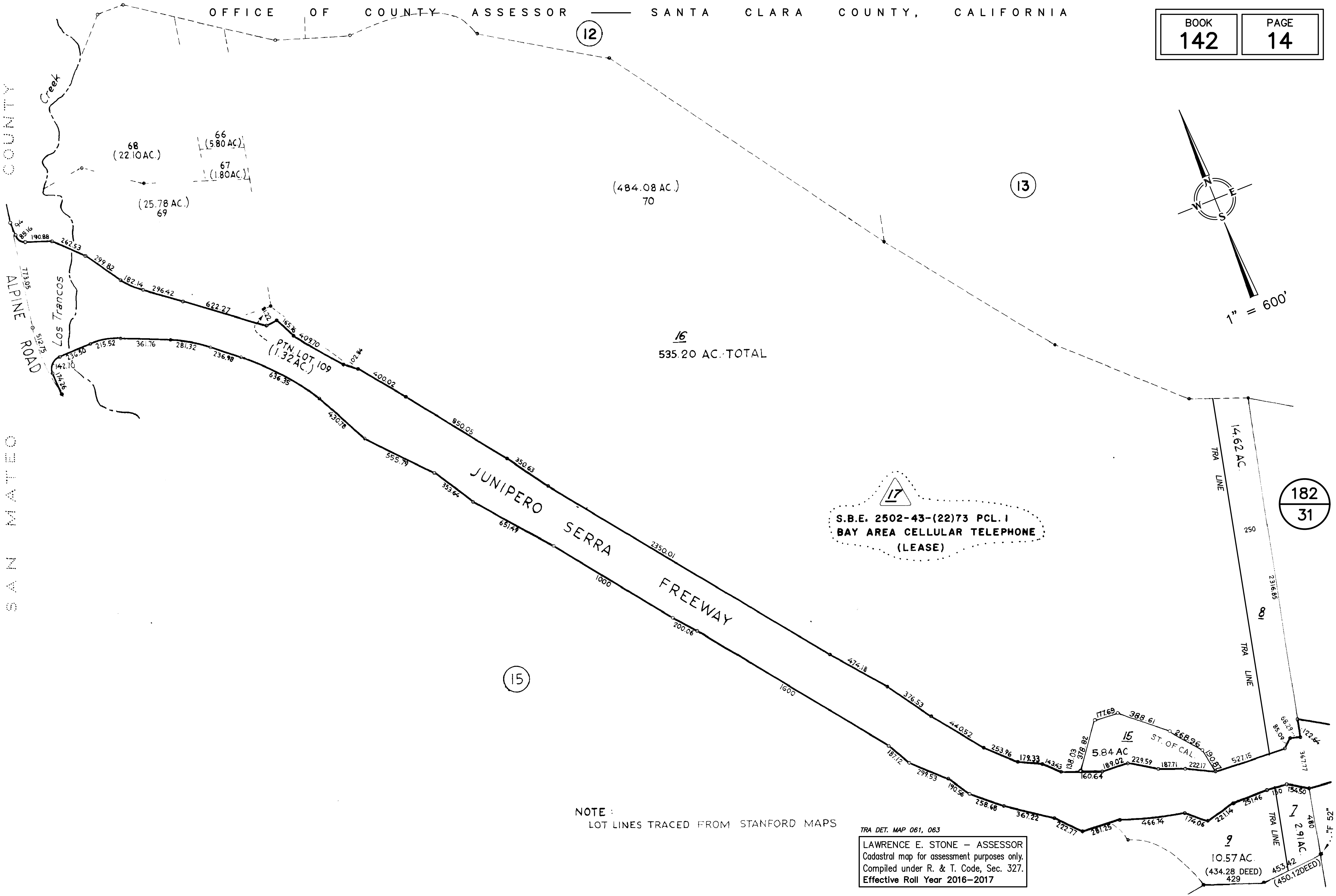

NOTE:
LOT LINES TRACED FROM STANFORD MAPS

TRA DET. MAP 061, 063

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14

JUNIPERO SERRA FREEWAY

280

R.O.S. 737/39

R.O.S. 835/36

ALPINE ROAD

ARASTRADERO ROAD

Los Trancos Creek

SAN MATEO COUNTY

(26.71 AC ± (P))

(468.14 AC ± (P))

(33.47 AC)
109

(11.58 AC)
71

(15.31 AC)
72

9

8

4.15 AC

7
496.56 Ac. TOTAL

74
(14.49 AC)

1

0.019 AC

NOTE:
LOT LINES TRACED FROM STANFORD MAPS.

TRA DET. MAP 053

1" = 600'

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TRA DET. MAP 062, 063

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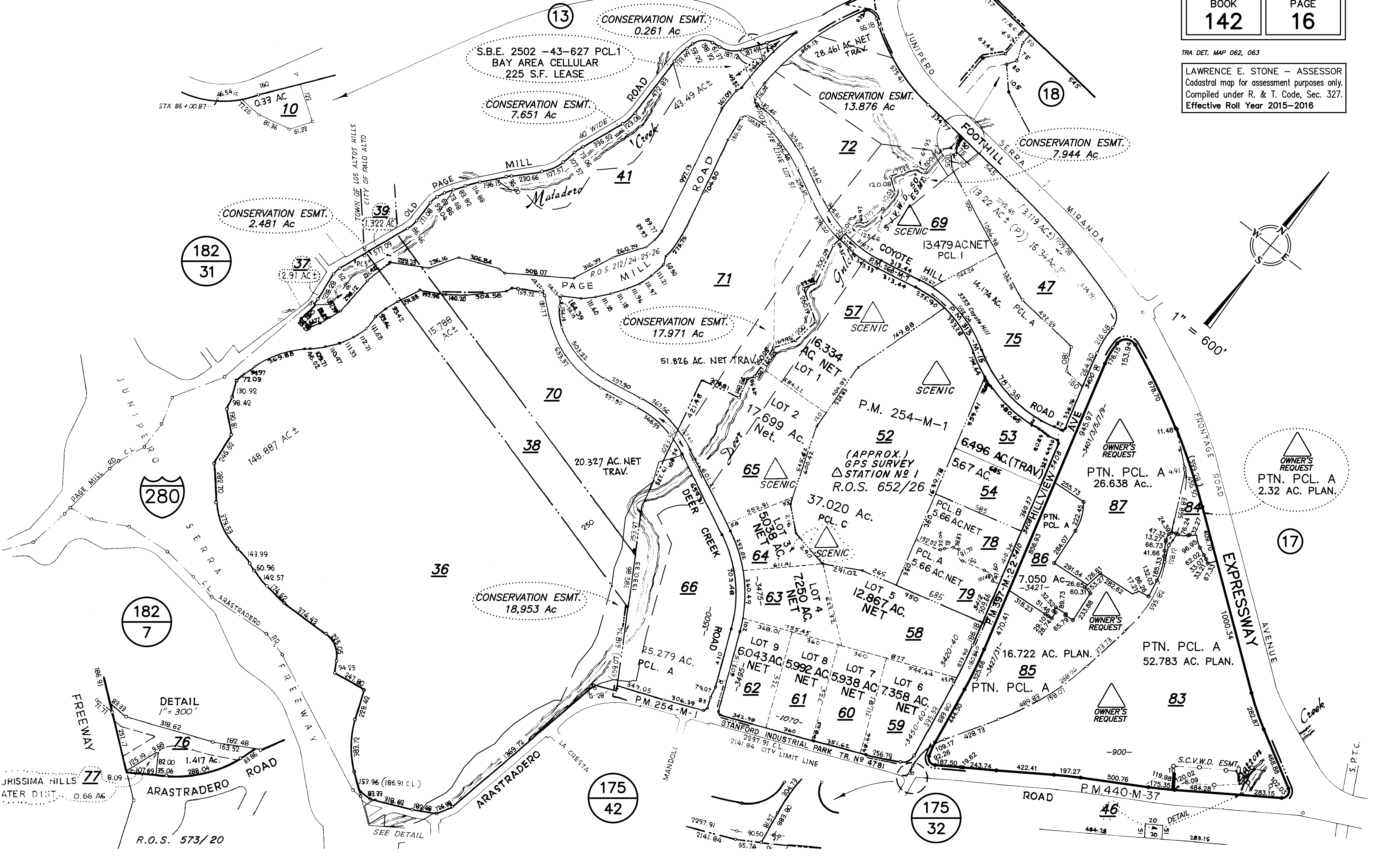

CONSERVATION ESMT. 0.261 Ac
S.B.E. 2502 -43-627 PCL.1
BAY AREA CELLULAR
225 S.F. LEASE
CONSERVATION ESMT. 7.651 Ac
CONSERVATION ESMT. 2.481 Ac
CONSERVATION ESMT. 13.876 Ac
CONSERVATION ESMT. 7.944 Ac
CONSERVATION ESMT. 17.971 Ac
CONSERVATION ESMT. 18,953 Ac
PAGE MILL ROAD
OLD PAGE MILL ROAD
FOOTHILL EXPRESSWAY
JUNIPERO SERRA FREEWAY
ARASTRADERO ROAD
DEER CREEK ROAD
COYOTE HILL ROAD
HILLVIEW AVE
MIRANDA AVENUE
FRONTAGE ROAD
Matadero Creek
Deer Creek
TOWN OF LOS ALTOS HILLS
CITY OF PALO ALTO
0.33 AC
43.49 AC±
1.322 AC
2.91 AC±
148.887 AC±
15.788 AC±
51.826 AC. NET TRAV.
20.327 AC. NET TRAV.
28.461 AC. NET TRAV.
13.479 AC. NET PCL. I
14.174 AC. PCL. A
16.334 AC. NET LOT 1
17.699 Ac. Net. LOT 2
P.M. 254-M-1
(APPROX.) GPS SURVEY STATION NO I
R.O.S. 652/26
37.020 Ac. PCL. C
6.496 AC.(TRAV)
5.67 AC.
5.66 AC. NET PCL. B
5.66 AC. NET PCL. A
7.050 Ac.
PTN. PCL. A 26.638 Ac.
PTN. PCL. A 2.32 AC. PLAN.
PTN. PCL. A 52.783 AC. PLAN.
16.722 AC. PLAN. PTN. PCL. A
25.279 AC. PCL. A
LOT 3 5.038 AC. NET
LOT 4 7.250 AC. NET
LOT 5 12.867 AC. NET
LOT 6 7.358 AC. NET
LOT 7 5.938 AC NET
LOT 8 5.992 AC NET
LOT 9 6.043 AC NET
STANFORD INDUSTRIAL PARK TR. NO 4781
P.M. 397-M-22
P.M. 440-M-37
S.C.V.W.D. ESMT.
SCENIC
OWNER'S REQUEST
DETAIL 1" = 300'
1.417 Ac.
URISSIMA HILLS WATER DIST. 0.66 AC
R.O.S. 573/20
SEE DETAIL
LA CRESTA
MANDOLI
S.P.T.C.
1" = 600'
10 13 17 18 36 37 38 39 41 46 47 52 53 54 57 58 59 60 61 62 63 64 65 66 69 70 71 72 75 76 77 78 79 83 84 85 86 87
182/31 182/7 175/42 175/32
280

OFFICE OF COUNTY ASSESSOR — SANTA CLARA COUNTY, CALIFORNIA

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22 25 19

PAGE MILL (FMLY. PAGE MILL ROAD) EXPRESSWAY

C.L. CITY & COUNTY

1801/41/81/91/99 1701 1661 1651 1501

596.45 481.26 400.85 587.55 810.98 1050.28

58.81 31.20 76.38

60' DR.

22 9 29 30

10.396 AC 8.456 AC 3.497 AC 3.508 AC

652.32 670 640 648.11 724.09 706.75

575.99 575.08 572.99 655.59 492.48 30

31.94 (42.47)

4.674 Ac 4.436 Ac

S OWNER'S REQ. 2016-17 49 S OWNER'S REQ. 2016-17 50

S.B.E. 2722-43-(30)19 PCL.1 SPRINT SPECTRUM L.P. 270 S.F. LEASE

372.96 491.69 864.65 27.17

392.99 365.83 3160-3170

CITY AND COUNTY OF SAN FRANCISCO

JUNIPERO SERRA BLVD FRONTAGE ROAD

FOOTHILL EXPRESSWAY

442.23 408.92 389.09 397.46 0.245 AC 33 35 20

E.C 2.97

S.B.E. 2748-43-(32)15 PCL.1 PACIFIC BELL WIRELESS 227 S.F. LEASE

42 7.419 AC 403.20 3155-45 801.76 1333.89

41 5.384 AC 249.74 315.74 3165 70.23

5.395 AC 796.84 394.76 362.13 3172-4 3181 140.63

34 27 1.711 AC 26 1.244 AC 373.68 399.04 40 3.219 AC 319.95 198 39 0.727 AC 160 198

2.605 AC 609.35 11 2.75 AC 2.50 AC 446.47 3180 3178 3201 3221 3215 241.71 129 90.00 147.93 3210 318.42 191.54 77.49 92.93

7 46.761 AC 1479.93

48 36.46 Ac. TOTAL

S.C. FLOOD EASEMENT

REQUEST 1985/90

1202.24 3180 3190 3200

910.98 3000 ST HANOVER 1194.43

18 (6.586 AC) 2.723 AC 509.60 3277 Miranda 314.52 23 4.451 AC 2.508 AC 37 315.21 300 213.56 3200 60

44 47 36 457.96 360.28 2.708 AC 106.78 AVE

Matadero Creek

1.113 AC 3351 Miranda 229.33 338.13 377.68 46 249.78 211.36 165.16 46.60 10.01 3260-40

3.066 AC 16 3351 Miranda 308.25 38 229 351.15

557.37 388.49 2.103 AC 14 2.46 AC 13 124.82 16.9 75.44 395 3300

1.102 AC 3351 Miranda 216.19 660.30 43 5.329 AC 389.54 3330-40 HILLVIEW AVENUE

16 17 20

1" = 300'

TRA DET. MAP 062 8/27/15

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1" = 200'

TR. Nº 4276
FRENCHMANS HILL

X= 1 518 427
Y= 336 497

PCL. 16
1.72 AC

PCL. 2
9.42 AC

PCL. 3
2.52 AC

PCL. 4
9.42 AC

PCL. 15
1.55 AC

(RES.)
CITY OF PALO ALTO
1.846 AC

10.193 AC. NET

PALO ALTO UNIFIED SCHOOL DISTRICT
NIXON ELEMENTARY

STANFORD AVE
WING WAY
COTTRELL
RAIMUNDO
VERNIER
ALLARDICE
TOLMAN DR
CATHCART WAY
MEARS COURT
PETER COUTTS ROAD
10' WATER ESMT

10
22
26
19

137
7

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STANFORD AVE (11)

WING PLACE

COTTRELL PLACE

RAIMUNDO WAY

ALBARDICE WAY

CATHCART WAY

PETER COUTTS ROAD

JUNIPERO SERRA BLVD.

SAN FRANCISCO CITY AND COUNTY OF

OREGON — PAGE MILL EXPRESSWAY

(13) (18) (21) (25)

PCL. 5
10.71 AC
2

PCL. 8
0.22 AC
123

PCL. 9
0.23 AC
122

PCL. 10
0.17 AC
121

PCL. 11
0.16 AC
120

PCL. 12
0.62 AC
119

PCL. 13
0.29 AC
118

PCL. 14
0.27 AC
117

(PCL. 5)
(10.71 AC)

3.55 AC

TR. Nº 4276
FRENCHMANS HILL

1" = 200'

10' WATER ESMT

TRA DET. MAP 062

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OFFICE OF COUNTY ASSESSOR —— SANTA CLARA COUNTY, CALIFORNIA

TR. NO. 5619

CONDOMINIUM OF PEARCE MITCHELL HOUSES

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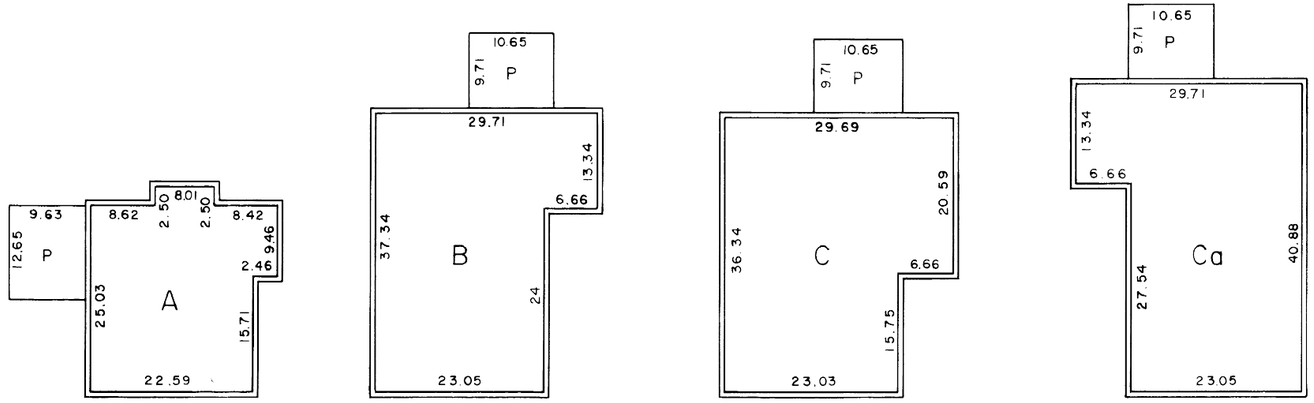
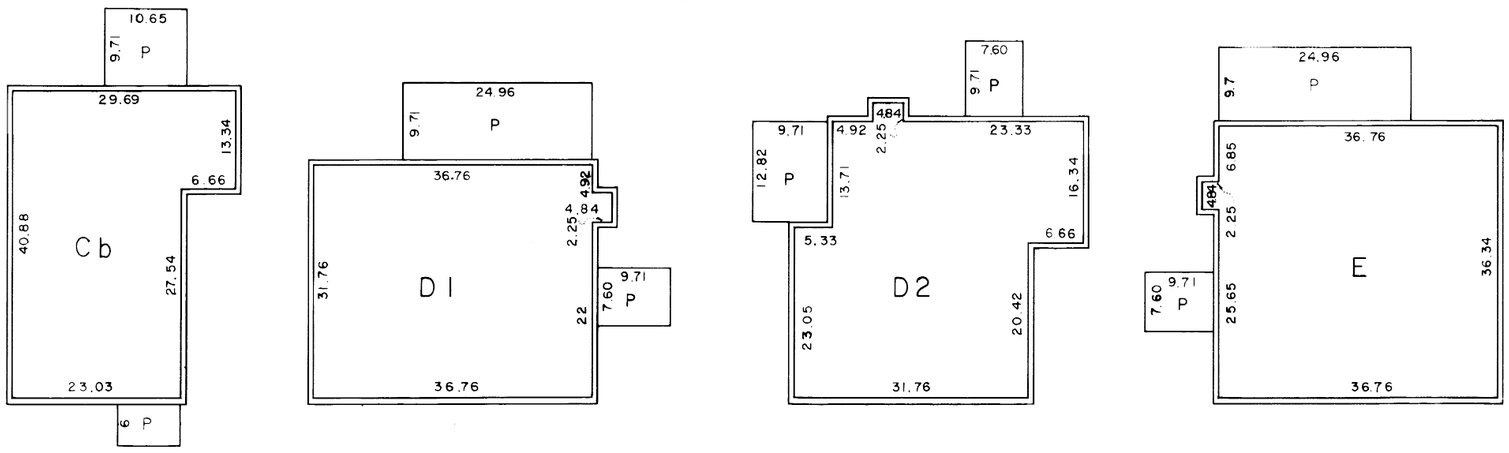
TYPICAL UNITS



TYPICAL UNITS



UNIT NO.	BLDG. TYPE	COMMON AREA	PCL. NO.	UNIT NO.	BLDG. TYPE	COMMON AREA	PCL. NO.
1	D2	1.4668	1	42	Ca	1.2531	42
2	D2	1.4668	2	43	Ca	1.2531	43
3	Cb	1.2531	3	44	Ca	1.2531	44
4	Cb	1.2531	4	45	D2	1.4668	45
5	Cb	1.2531	5	46	D2	1.4668	46
6	Cb	1.2531	6	47	A	0.7363	47
7	B	1.1556	7	48	A	0.7363	48
8	B	1.1556	8	49	A	0.7363	49
9	Ca	1.2531	9	50	A	0.7363	50
10	Ca	1.2531	10	51	A	0.7363	51
11	Cb	1.2531	11	52	A	0.7363	52
12	Cb	1.2531	12	53	A	0.7363	53
13	Cb	1.2531	13	54	A	0.7363	54
14	Cb	1.2531	14	55	D2	1.4668	55
15	Ca	1.2531	15	56	D2	1.4668	56
16	Ca	1.2531	16	57	C	1.1846	57
17	E	1.6097	17	58	C	1.1846	58
18	E	1.6097	18	59	C	1.1846	59
19	E	1.6097	19	60	C	1.1846	60
20	E	1.6097	20	61	B	1.1556	61
21	D1	1.4107	21	62	B	1.1556	62
22	D1	1.4107	22	63	B	1.1556	63
23	Ca	1.2531	23	64	B	1.1556	64
24	Ca	1.2531	24	65	C	1.1846	65
25	Ca	1.2531	25	66	C	1.1846	66
26	Ca	1.2531	26	67	C	1.1846	67
27	Ca	1.2531	27	68	C	1.1846	68
28	Ca	1.2531	28	69	C	1.1846	69
29	Ca	1.2531	29	70	C	1.1846	70
30	Ca	1.2531	30	71	C	1.1846	71
31	Ca	1.2531	31	72	C	1.1846	72
32	Ca	1.2531	32	73	B	1.1556	73
33	Ca	1.2531	33	74	B	1.1556	74
34	Ca	1.2531	34	75	B	1.1556	75
35	Ca	1.2531	35	76	B	1.1556	76
36	Ca	1.2531	36	77	C	1.1846	77
37	Ca	1.2531	37	78	C	1.1846	78
38	Ca	1.2531	38	79	C	1.1846	79
39	Ca	1.2531	39	80	C	1.1846	80
40	Ca	1.2531	40	81	D2	1.4668	81
41	Ca	1.2531	41	82	D2	1.4668	82

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19

18

22

PARCEL A

1234.11

31.23

159.67

137.05

185.52

30'

401.49

206.53

376.37

255.14

326.66

509.28

PETER COUTTS CIRCLE

PETER COUTTS ROAD

RAIMUNDO WAY

OREGON - PAGE MILL EXPRESSWAY

120'

1" = 100'

BLDG. 8-B
UNITS 97-106
97 THRU 106

BLDG. 7-B
UNITS 87-96
87 THRU 96

BLDG. 6-B
UNITS 65-74
65 THRU 74

BLDG. 9-C
UNITS 107-118
107 THRU 118

BLDG. 10-C
UNITS 75-86
75 THRU 86

RECREATION BLDG. & POOL AREA

BLDG. 5-B
UNITS 55-64
55 THRU 64

BLDG. 13-D
UNITS 119-128
119 THRU 128

BLDG. 11-D
UNITS 45-54
45 THRU 54

BLDG. 12-D
UNITS 13-22
13 THRU 22

BLDG. 4-B
UNITS 35-44
23 THRU 34

BLDG. 1-A
UNITS 129-140
129 THRU 140

BLDG. 2-A
UNITS 1-12
1 THRU 12

BLDG. 3-A
UNITS 23-34
23 THRU 34

AMENDED
C.C. G860 PG 295

TRACT Nº 7061
PETER COUTTS HILL

BLDG.	UNIT NUMBERS	PARCEL NUMBERS
2-A	1 — 12	1 — 12
12-D	13 — 22	13 — 22
3-A	23 — 34	23 — 34
4-B	35 — 44	35 — 44
11-D	45 — 54	45 — 54
5-B	55 — 64	55 — 64
6-B	65 — 74	65 — 74
10-C	75 — 86	75 — 86
7-B	87 — 96	87 — 96
8-B	97 — 106	97 — 106
9-C	107 — 118	107 — 118
13-D	119 — 128	119 — 128
1-A	129 — 140	129 — 140

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STANFORD AVE. (10)

1" = 40'

(PVT) COURT

RYAN

RYAN (PVT)

COURT

COMMON AREA

1.140 Ac

0.347 Ac

TRA DET. MAP 062

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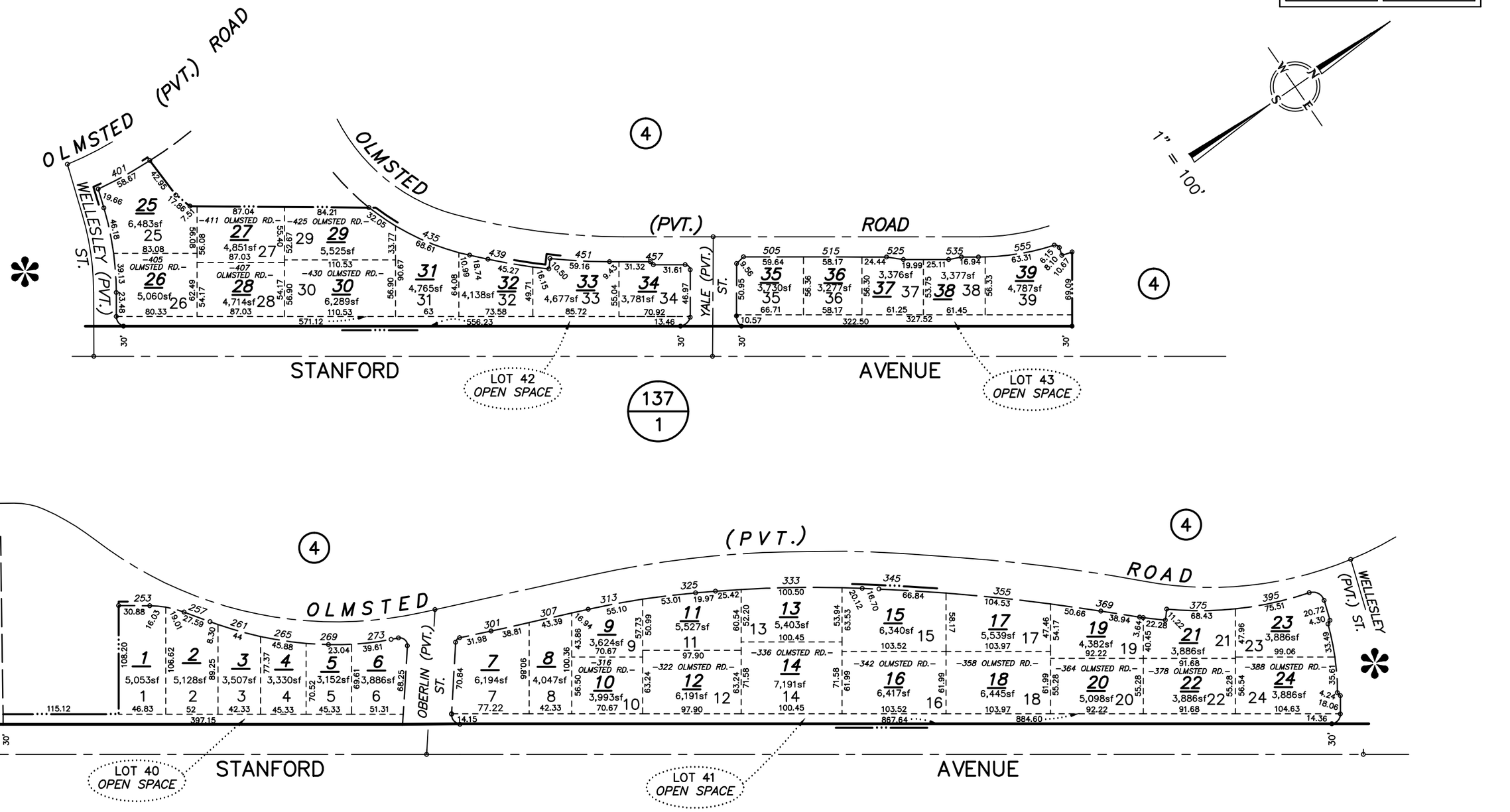

TRACT No. 10,032, 832–M–16

OLMSTEAD TERRACE FACULTY HOMES

137/1

TRA DET. MAP 051 AND 061

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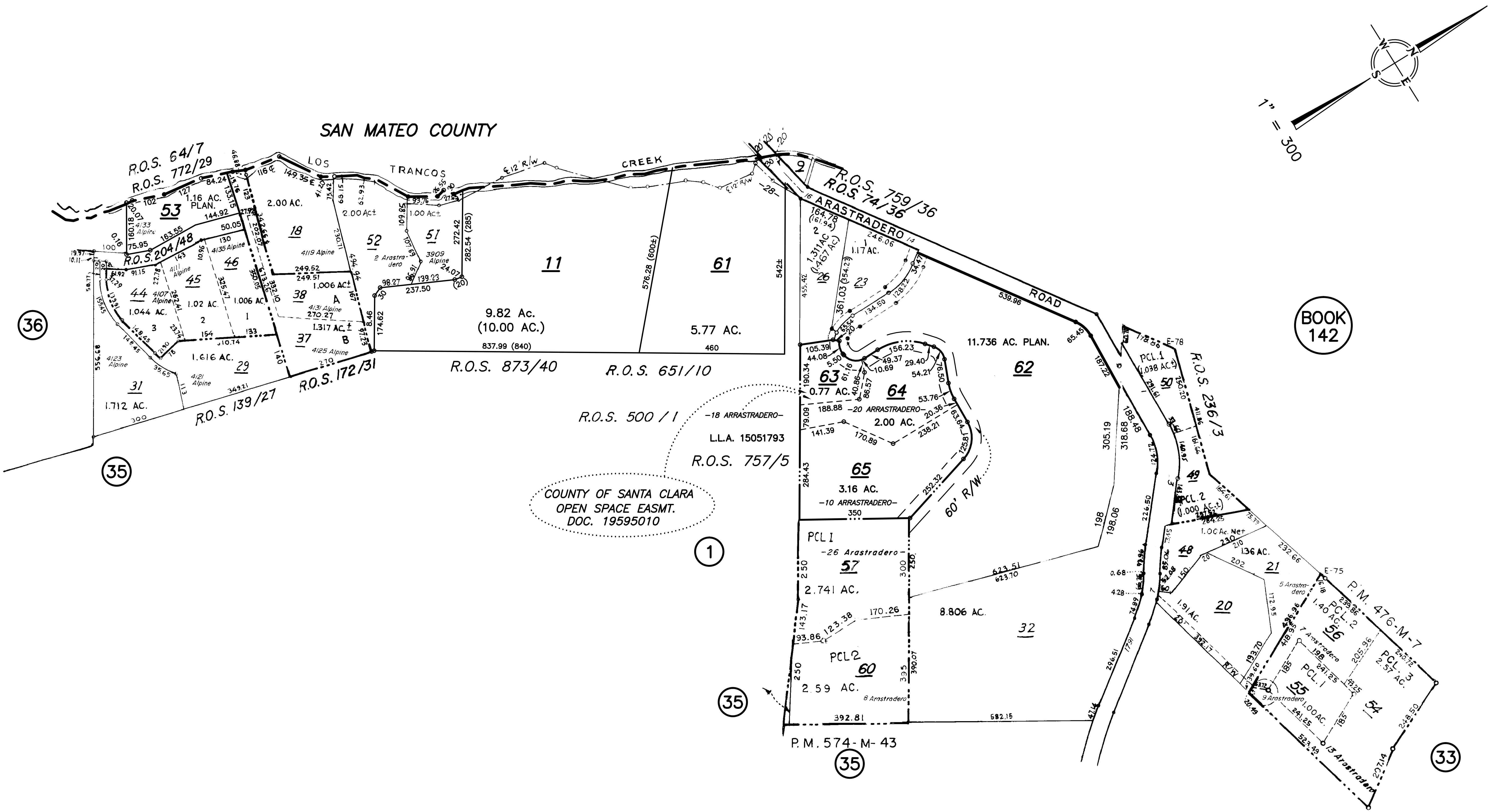

SAN MATEO COUNTY
LOS TRANCOS CREEK
R.O.S. 64/7
R.O.S. 772/29
R.O.S. 204/48
R.O.S. 759/36
R.O.S. 74/36
ARASTRADERO ROAD
R.O.S. 873/40
R.O.S. 651/10
R.O.S. 172/31
R.O.S. 139/27
R.O.S. 500/1
L.L.A. 15051793
R.O.S. 757/5
COUNTY OF SANTA CLARA
OPEN SPACE EASMT.
DOC. 19595010
R.O.S. 236/3
P.M. 476-M-7
P.M. 574-M-43
60' R/W
BOOK 142
1" = 300
11
9.82 Ac.
(10.00 AC.)
61
5.77 AC.
62
11.736 AC. PLAN.
63
0.77 AC.
64
2.00 AC.
65
3.16 AC.
PCL I
57
2.741 AC.
PCL 2
60
2.59 AC.
32
8.806 AC.
53
1.16 AC. PLAN.
18
2.00 AC.
52
2.00 AC±
51
1.00 AC±
44
1.044 AC.
45
1.02 AC.
46
1.006 AC.
38
1.006 AC±
37
1.317 AC.±
29
1.616 AC.
31
1.712 AC.
26
23
1.17 AC.
50
PCL. 1
49
PCL. 2
48
21
1.36 AC.
20
1.91 AC.
56
55
54
36
35
1
33

TRA DET. MAP 53

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3 | Project Description

McMurtry Art and Art History Building.
Photo: Iwan Baan, Courtesy of DS+R, Boora, and Stanford

3 | Project Description

1.0 INTRODUCTION

Leland Stanford Junior University opened its doors in 1891 and has been in continuous operation as an institution of higher learning and research for 125 years. Stanford has been a coeducational and residential campus from its founding.

Most of the University's academic buildings, student housing and neighborhoods of faculty/staff housing are located within unincorporated Santa Clara County. For several decades, the County has regulated land use at Stanford through a series of general use permits. Those permits identify allowed land uses, authorize total square footage for academic and academic support facilities, authorize total quantities of housing units and student beds, and specify conditions designed to implement the County's legislative policies and to minimize adverse effects on the surrounding community.

In 2000, Santa Clara County took an additional step. The County completed a comprehensive public process to create a new legislative policy framework to guide future land use decisions at Stanford. After extensive public outreach, the County adopted the Stanford Community Plan, which is part of the County's General Plan and describes land use strategies, policies and implementation measures specific to Stanford. The Community Plan is an umbrella document that extends for a longer duration than a single general use permit. For example, the Growth and Development element includes a policy requiring that an Academic Growth Boundary remain in place until the year 2025.

At the same time as the County enacted the Stanford Community Plan, it issued the current general use permit (the 2000 General Use Permit), which authorized the first increment of new academic and academic support space, housing, parking and other infrastructure that could be constructed on the campus pursuant to the Community Plan's legislative policies.

Stanford is nearing completion of the facilities and housing authorized by the 2000 General Use Permit. For that reason, Stanford is now proposing that the County approve a new 2018 General use Permit covering the next increment of campus development.

As documented in the accompanying Background Conditions Report, the legislative policy framework established by the Stanford Community Plan and the conditions required by the 2000 General Use Permit have successfully minimized adverse effects on the surrounding community over the last 16 years.

Highlights include:

- The Community Plan's Academic Growth Boundary has channeled campus growth on infill locations within the core campus most suitable for development, and has protected natural resources on lands in the foothills.

- The Sustainable Development Study required by the Community Plan, and approved in 2009, has demonstrated that Stanford is growing in a manner that promotes compact infill development. The study shows that any of three growth scenarios forecasted through the year 2035 to be accommodated within the Academic Growth Boundary.

- Stanford has achieved the Community Plan's No Net New Commute Trips goal, even while adding well over one million square feet of new and expanded academic and academic support facilities and approximately 2,500 new housing units and student beds. This accomplishment is largely due to Stanford's award-winning transportation demand management programs, which have reduced Stanford commuters' drive-alone rate to 50%.

- Stanford has decreased its potable water use by 30% from 2000 to 2015 through a comprehensive program to identify and implement water conservation measures, and through replacement of the campus-wide heating and cooling system.

- Stanford has decreased its air pollutant and greenhouse gas emissions by replacing its outdated cogeneration plant with a new state-of-the-art Central Energy Facility. The new facility is 70% more efficient than the prior cogeneration process for heating and cooling campus buildings.

- Stanford has installed solar panels on campus buildings, and will soon procure electricity from an offsite Solar Generating Station; together these sources will provide more than half of Stanford's electricity.

- Stanford has constructed 816 on-campus housing units that the County has recognized as affordable to low and very low income individuals and that the County credited toward its Regional Housing Needs Assessment as established in the Housing element of its General Plan. Generally, Stanford's student rents are 40% less than what currently is charged in the surrounding rental market.

- Stanford has paid $25.7 million into a fund used to subsidize affordable housing in nearby communities. Upon completion of all of the academic and academic support space authorized by the 2000 General Use Permit, that amount will have grown to approximately $39 million. To date, approximately $13 million of these funds have been disbursed to five projects in Palo Alto and Mountain View, totaling 319 units.

One of the major policy objectives of the Stanford Community Plan is to "allow Stanford flexibility to develop its lands within a framework that minimizes potential negative effects ('flexibility with accountability')."

The Stanford Community Plan and 2000 General Use Permit together have created a regulatory framework that has provided Stanford flexibility as to the types and locations of academic and housing facilities that it

has developed over time, allowing the University to respond nimbly to evolving teaching and research innovations.

For example, while the total amount of academic square footage was defined by the 2000 General Use Permit, the square footage could take many forms – from classroom buildings to art galleries, and even to the new state-of-the-art Central Energy Facility designed to cut greenhouse gas emissions, a facility that could not have been foreseen when the 2000 General Use Permit was approved. Housing similarly could range from undergraduate dormitories to graduate student apartments, to condominiums or small-lot single family homes for faculty.

The framework has held Stanford accountable for potential impacts that could arise from new development. Measurable performance standards and comprehensive impact reduction programs have reduced vehicle trips to and from the campus, prevented excessive water use, ensured that flooding did not occur, and promoted groundwater recharge.

These comprehensive impact reduction programs are more effective than project-by-project mitigation. The combination of flexibility with accountability has ensured that, regardless of the type or specific location of new construction, negative impacts to the surrounding community have not occurred.

Because Stanford believes the existing legislative framework has been successful, Stanford does not seek to change any of the strategies, policies and implementation measures that the Board of Supervisors enacted in the Stanford Community Plan. Further, based on the determinations in the Sustainable Development Study that growth through 2035 can be accommodated within the Academic Growth Boundary, Stanford does not seek to modify that boundary. Stanford seeks only limited modifications to the Community Plan's background text, tables and figures.

Stanford proposes that the County approve a 2018 General Use Permit that continues to implement the Stanford Community Plan's strategies and that is consistent with the assumptions of the approved Sustainable Development Study. The key parameters of the development proposed for the 2018 General Use Permit are:

- continuation of all lawful existing uses
- completion of the academic and academic support space and parking authorized by the 2000 General Use Permit
- construction of up to 2,275,000 additional net new square feet of academic and academic support uses (an amount equivalent to an average 1.2% compound annual growth rate from 2018 to 2035, and similar to the square footage authorized by the 2000 General Use Permit)
- construction of up to 3,150 net new housing units for students, faculty and staff, with more housing subject to Planning Commission approval (also an amount and approach similar to the housing authorized by the 2000 General Use Permit)
- creation of a parking supply reserve

- construction of up to 40,000 additional net new square feet of child care centers and facilities to support trip-reducing uses

- continued use of 50,000 square feet of temporary trailers for surge space during construction

In addition to conditions implementing mitigation measures identified during the environmental review process, Stanford proposes the following conditions of approval to implement the Stanford Community Plan's strategies, policies and goals:

- continuation of the goal of creating No Net New Commute Trips to and from the campus, which Stanford has achieved through innovative alternative transportation programs

- continuation of the housing linkage requirement that ensures campus housing is constructed on pace with academic and academic support space

- recognition that Stanford plans to build affordable on-campus housing that meets the County's Regional Housing Needs Assessment

- continuation of payments to support still more affordable housing in the broader region, with an estimated contribution of $56 million over the life of the 2018 General Use Permit

2.0 PROJECT AREA

While Stanford owns approximately 8,180 acres of contiguous acres across six governmental jurisdictions, Santa Clara County regulates only the 4,107 acres that are within the unincorporated County. Stanford's lands in unincorporated Santa Clara County contain the majority of the University's academic buildings, student housing, and neighborhoods of faculty/staff housing. The remaining contiguous lands are located in 5 other governmental jurisdictions:

- 2,701 acres in unincorporated San Mateo County
- 1,161 acres in Palo Alto
- 114 acres in Woodside
- 111 acres in Menlo Park
- 76 acres in Portola Valley

All of Stanford's contiguous lands are held by the University for possible future academic use.

In Fall 2015, there were 9,617,931 square feet of academic and academic support facilities on the Stanford lands within Santa Clara County's jurisdiction, with an additional 637,460 square feet of such facilities authorized by the 2000 General Use Permit.[1] Existing student housing totaled approximately 11,900 beds, with approximately 2,480 additional beds authorized by the 2000 General Use Permit.[2] There were 937 faculty/staff housing units on campus lands in unincorporated Santa Clara County. The Background Conditions Report (see **Tab 4**) submitted with this application provides additional details about existing land uses on the Stanford campus.

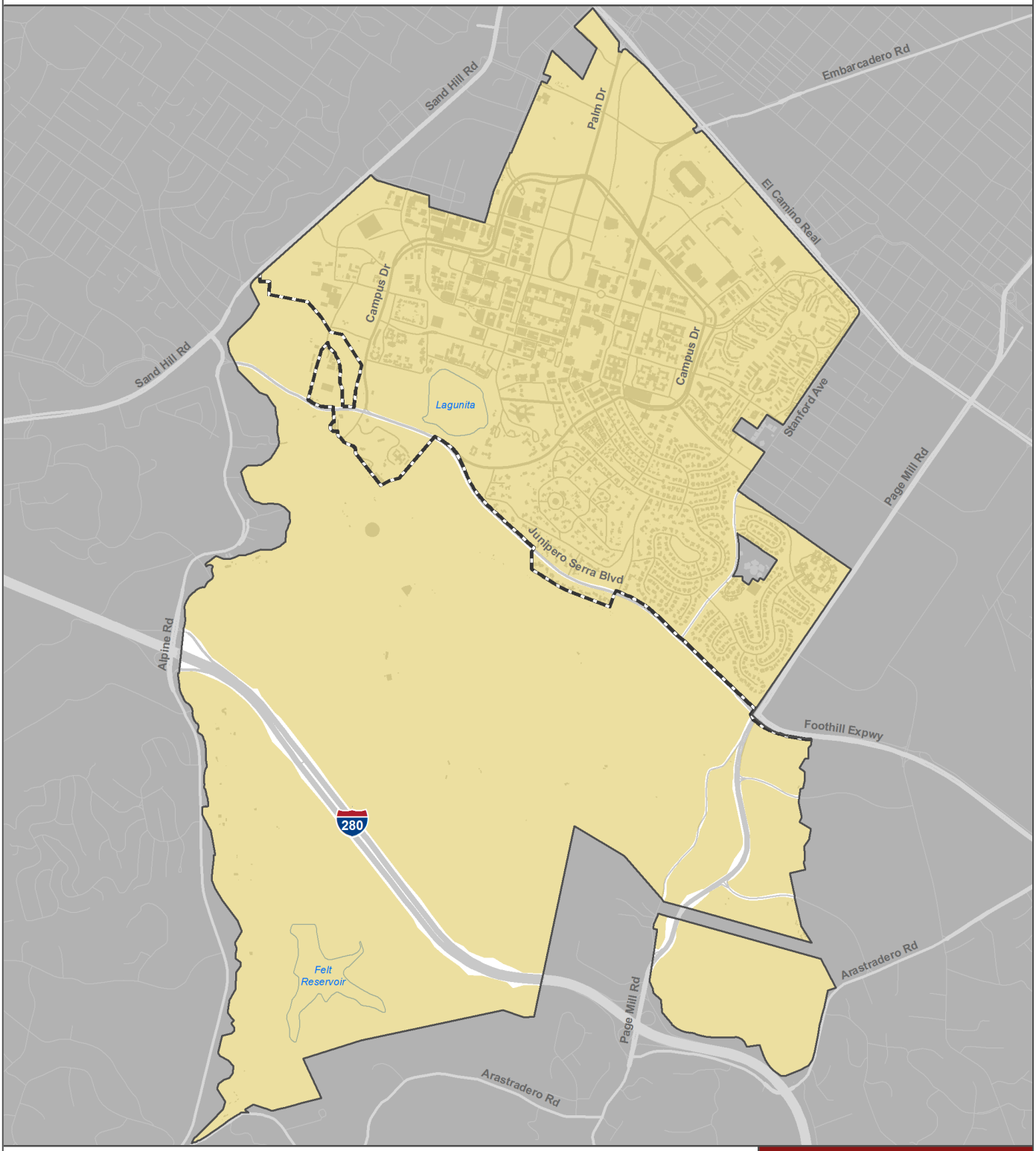
Santa Clara County regulates land uses on the Stanford lands within its jurisdiction through four key mechanisms: the 1985 Land Use Policy Agreement; the Stanford Community Plan; the County Zoning Code; and the General Use Permit. Each of these regulatory mechanisms is discussed in more detail in Section 3.

The proposed 2018 General Use Permit would apply broadly to all land uses throughout Stanford's lands within unincorporated Santa Clara County (see **Figure PD.1**) that require a use permit, Architecture and Site Approval or Planning Commission approval under the Santa Clara County Zoning Code. As explained in Section 6.5, single-family and two-family residences in the faculty/staff subdivision would not be subject to the 2018 General Use Permit's conditions of approval because such uses are permitted by right under the County Zoning Code; however, Stanford proposes that any new housing unit would count toward the total number of net new housing units allowed by the 2018 General Use Permit regardless of where they are constructed and even if allowed by right under zoning.

[1] This total includes buildings for which building permits have been issued but that are not yet completed.

[2] This total includes the 1,450 additional student beds that the Planning Commission approved in March 2016, beyond the 3,018 housing units/beds initially authorized by the 2000 General Use Permit.

Figure PD.1: Stanford Lands in Unincorporated Santa Clara County



Stanford does not seek Santa Clara County authorization for any new structures outside of the Academic Growth Boundary. If Stanford later identifies a need for such a structure, the County would review such an application for compliance with the Open Space/Field Research zoning, which strictly limits uses in this area and requires visual simulations prior to project approval. In addition, all of the conditions of the 2018 General Use Permit would apply to any such structures, and any new academic and academic support square footage would count toward the total number of net new square feet allowed by the 2018 General Use Permit.

3.0 LAND USE POLICY AND REGULATORY FRAMEWORK

3.1 1985 Land Use Policy Agreement and 2000 Protocol

Due to Stanford's multijurisdictional setting, Santa Clara County, the City of Palo Alto and Stanford entered into a three-party agreement entitled the "1985 Land Use Policy Agreement." The agreement defines what land uses may remain in the unincorporated County and what uses must be annexed to Palo Alto. The agreement affords Palo Alto review opportunities for Stanford projects on the unincorporated County lands, and it recognizes that Stanford's lands are held in perpetual trust for educational purposes.

The 1985 Land Use Policy Agreement calls for maintenance of an informational document known as the Protocol, which outlines adopted land use designations, regulations, 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 revision occurring in 2000 after the Board of Supervisors approved the Stanford Community Plan and the 2000 General Use Permit.

3.2 Santa Clara County General Plan

The Stanford Community Plan explains that before the Community Plan was enacted, the County General Plan recognized that the Stanford campus lands are unlike all other urban unincorporated lands in the County in that they:

- are used for academic and related purposes
- are entirely under the ownership of a single landowner that
    - is both a major employer and a major provider of housing
    - provides many of its own urban services and facilities
    - has its own planning staff
- are subject to limitations on their sale (due to restrictions in the Founding Grant)
- are subject to unique interjurisdictional agreements involving the County, the City of Palo Alto and Stanford
- encompass a unique integrated community whose members are all related, in one way or another, to the University

For these reasons, the County decided to adopt a Community Plan to identify General Plan strategies, policies and implementation measures specific to Stanford.

3.3 Stanford Community Plan and Sustainable Development Study

The Stanford Community Plan is part of the Santa Clara County General Plan but is a stand-alone document that guides future uses and development for all of Stanford's lands in unincorporated Santa Clara County. The Community Plan is consistent with the General Plan's principles, and refines how those principles apply to lands owned by Stanford University, superseding the Stanford Chapter contained in Part 4, Book B of the General Plan.

The Stanford Community Plan incorporates key General Plan principals of compact urban development, open space preservation and resource conservation. The Community Plan recognizes that growth and development can have both benefits and disadvantages, and the Community Plan attempts to achieve the appropriate balance between the reasonable expectations of Stanford to use and develop its land with the interests of the public to responsibly manage such growth. One of the Community Plan's key policy objectives is to "allow Stanford flexibility to develop its lands within a framework that minimizes potential negative effects ('flexibility with accountability')." (Stanford Community Plan page, iv.)

The Stanford Community Plan includes seven elements: Growth and Development; Land Use; Housing; Circulation; Open Space; Resource Conservation; and Health and Safety.

3.3.1 Growth and Development

The Stanford Community Plan's Growth and Development element identifies the portion of Stanford's lands that are most appropriate for future development and channels development to those areas through establishment of an Academic Growth Boundary that is to remain in place until a defined level of development intensity has been achieved on lands within the growth boundary.

The Stanford Community Plan requires that, absent a four-fifths vote of the Board of Supervisors, the Academic Growth Boundary must remain in place until 2025 and until the building area of academic and support facilities and student housing reaches 17,300,000 square feet. This amount of square footage represents the approximately 12 million square feet of academic and student housing facilities that existed by 2000, plus an additional 5 million square feet of growth estimated by multiplying Stanford's historic growth rate of 200,000 square feet per year by 25 years.

To further ensure that development of Stanford lands occurs at the level of intensity that promotes compact urban development and resource conservation, the Stanford Community Plan required Stanford to prepare a Sustainable Development Study, with a view beyond the 25-year timeframe of the Academic Growth Boundary. In 2009, the County Board of Supervisors approved the Sustainable Development Study, which demonstrated that three different growth scenarios could be accommodated within the Academic Growth Boundary through the year 2035.

The Stanford Community Plan required that the Sustainable Development Study:

- demonstrate how future development will be sited to prevent sprawl into the hillsides, contain development in clustered areas and provide long-term assurance of compact urban development; and

- provide for protection and/or avoidance of sensitive plant and animal species and their habitats, creeks and riparian areas, drainage areas, watersheds, scenic view sheds and geologic features such as steep or unstable slopes and faults.

The County-approved Sustainable Development Study assesses the potential to site future development within the Academic Growth Boundary through a 2035 planning horizon. The Study presents campus planning principles to promote compact urban development and preserve the quality of the campus. The Study recognizes that, under the 2000 General Use Permit, Stanford's approach has been to increase overall density through infill and redevelopment while applying a range of densities appropriate to different areas of the campus. The Sustainable Development Study applies these principles to the remainder of the 2000 General Use Permit development authorization and to potential additional growth forecasted through 2035.

The Study uses growth rates under three scenarios for future development between completion of the 2000 General Use Permit in about 2018 and the planning horizon of 2035. The growth rates range from 2 million square feet (115,000 square feet per year) of academic, support and student housing facilities in the Minimal Growth scenario to 5 million square feet (300,000 square feet per year) in the Aggressive Growth scenario. In between, the Study models a Moderate Growth scenario of 3.5 million square feet. This scenario represents about 200,000 additional square feet per year from 2018 to 2035, and mirrors the actual growth rate at Stanford, both from 1960 to 2000 and through expected build-out of the 2000 General Use Permit, with the exception of the anticipated Escondido Village Graduate Student Residences project. That unique project will provide student housing facilities at a higher growth rate than the historic rate in order to increase the number of existing graduate students housed on campus.

The Sustainable Development Study demonstrates that continued implementation of Stanford's campus planning principles to redevelop and renovate the campus at densities that have been realized under the 2000 General Use Permit would provide long-term potential development capacity. Even the largest of the hypothetical growth scenarios can be accommodated within the Academic Growth Boundary.

Stanford does not seek to modify the Academic Growth Boundary, or any other strategies, policies or implementation measures in the Stanford Community Plan's Growth and Development element. As described below, Stanford's development proposal reflects the principles articulated by the Sustainable Development Study and corresponds to the Moderate Growth scenario evaluated in that study.

3.3.2 Land Use

The Stanford Community Plan divides Stanford's land uses into six designations.[3] Designations applied to lands within the Academic Growth Boundary include:

- Academic Campus
- Campus Open Space
- Campus Residential – Low Density; and
- Campus Residential – Medium Density

[3] The Stanford Community Plan also has a seventh designation, "Public School," which applies to two parcels owned by the Palo Alto Unified School District and occupied by existing schools.

Designations applied to lands outside the Academic Growth Boundary include:

- Open Space/Field Research
- Special Conservation Areas

The Stanford Community Plan's Land Use element describes the range of allowable uses and development-related policies that apply to each land use designation. **Table 1** outlines the uses allowed within each of the land use designations specified by the Community Plan, which are depicted in **Figure PD.2**.

Table 1: Stanford Community Plan Land Use Designations

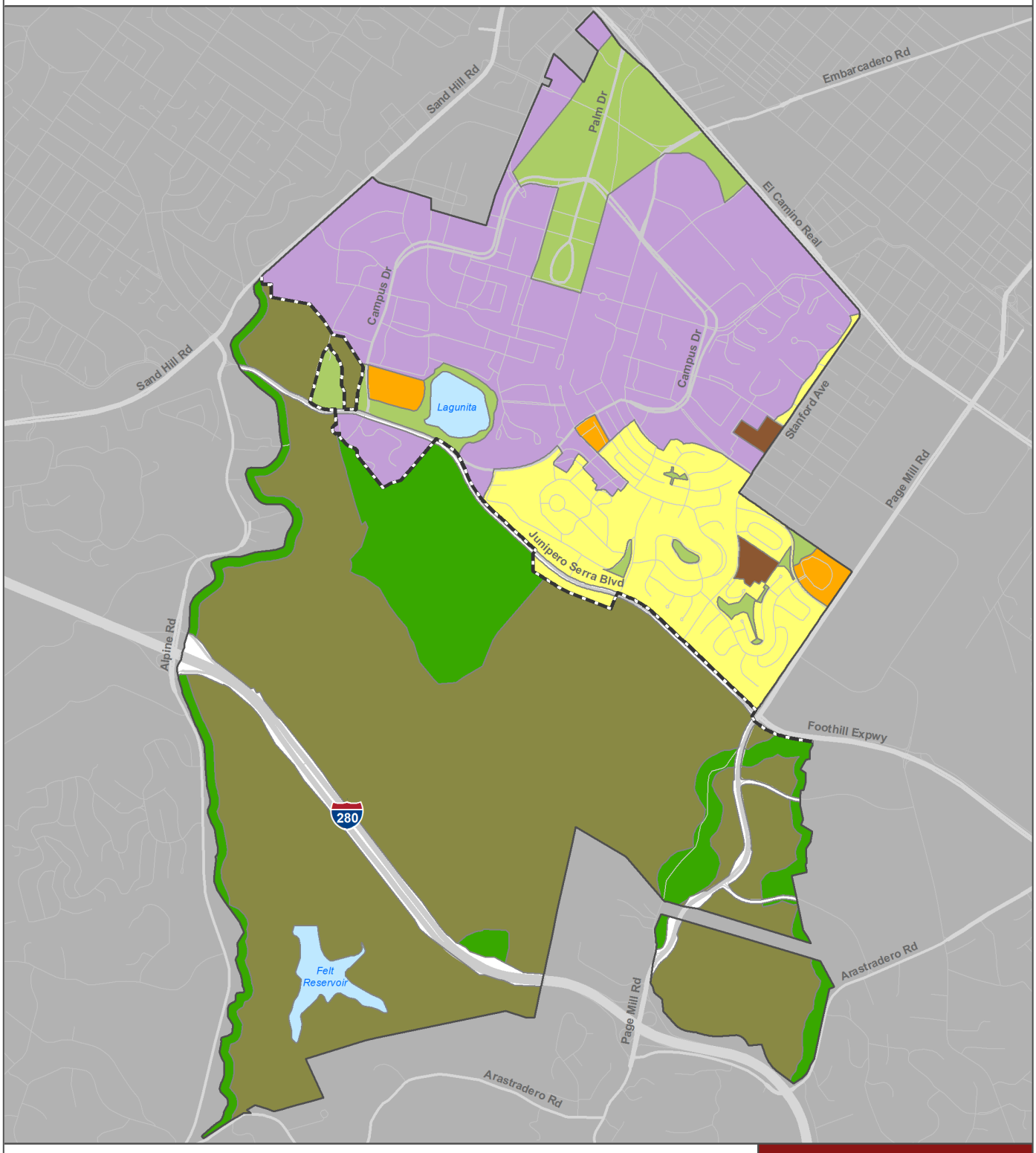
Land Use Designation	Allowable Uses
Within the Academic Growth Boundary	
Academic Campus	Instruction/Research; Administrative Facilities; Student Housing; High Density Faculty/Staff Housing (more than 15 units per acre); Athletics, Physical Education and Recreation Facilities; Support Services (child care, bookstore, etc.); Infrastructure, Storage and Maintenance Facilities; University-affiliated Cultural Facilities; University-affiliated Nonprofit Research Institutions
Campus Open Space	Open Space uses consistent with the individual character of each area, Temporary Activities, Limited Duration Special Events, Recreation
Campus Residential – Low Density	Single-family Housing, Duplexes, and Townhouses for faculty/staff (up to 8 units per acre), Residential Support Services (child care or convenience commercial facilities at a neighborhood-serving level)
Campus Residential – Medium Density	Single-family Housing, Duplexes, Townhouses, Flats, Condominiums and Apartments for faculty/staff (8-15 units per acre); Residential Support Services (child care, recreation services or convenience commercial facilities)
Outside the Academic Growth Boundary	
Open Space and Field Research	Field Study, Utility Infrastructure in keeping with natural appearance, Grazing and Agriculture, Recreation activities consistent with environmental resources, Specialized Facilities and Installations that require a remote or natural setting, Environmental Restoration, Existing Uses may continue, including nonconforming uses.
Special Conservation Areas	Conservation Activities, Habitat Management, Field Environmental Studies, appropriate Agriculture, Recreation consistent with environmental constraints

Stanford does not seek to modify any strategies, policies or implementation measures in the Stanford Community Plan's Land Use element. Stanford seeks two types of revisions to the land use designations shown on Community Plan Figure 2.2.

First, Stanford proposes to re-designate the campus driving range from Campus Residential - Medium Density to Academic Campus. This site presently is used for academic support purposes, and Stanford no longer plans to construct faculty/staff housing at this location. The Academic Campus designation is consistent with the existing and anticipated future uses of this site.

Second, Stanford proposes to amend the land use designation for nine existing faculty houses from Academic Campus to Campus Residential – Low Density. These houses are occupied by faculty members, as are the adjacent houses in the Campus Residential – Low Density land use designation. It appears that their omission when the residential zoning designation was established in 2001 was inadvertent. The Campus Residential – Low Density designation reflects the existing and anticipated future uses of these houses.

Figure PD.2: Land Use Designations - Existing



3.3.3 Housing

The Stanford Community Plan's Housing element includes policies to promote a variety of housing types, develop housing at densities that make efficient use of land and enhance affordability, and streamline housing-related permit applications. The Community Plan encourages and supports Stanford's provision of off-campus housing for its faculty and staff. The Community Plan also establishes an important "linkage" policy to require that new housing development occur on pace with academic development approvals on campus.

The proposed 2018 General Use Permit includes additional housing for faculty, staff and students within the Academic Campus land use designation, which requires densities above 15 units per acre. Stanford proposes to apply the same housing linkage ratio as the County established in the 2000 General Use Permit. Stanford also proposes to promote housing affordability both by recognizing that its graduate student housing meets the County's Regional Housing Needs Assessment requirements, and by providing a monetary contribution that can be used by the County to subsidize affordable housing in the region, along major transit corridors.

Stanford does not seek to modify any strategies, policies or implementation measures in the Stanford Community Plan's Housing element. As described in Section 9.1, Stanford seeks to remove some background text and a diagram depicting specific housing sites proposed under the 2000 General Use Permit, which have become outdated. The County General Plan Housing element contains a more frequently updated description of planned housing supply throughout the County including on Stanford lands. Therefore, the figure and tables in the Community Plan appear to be unnecessary.

3.3.4 Circulation

The Stanford Community Plan's Circulation element recognizes that the Stanford 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, creating extraordinary opportunities for walking, bicycling and transit use. The Community Plan establishes a goal of No Net New Commute Trips, defined to mean no additional trips above a measured base level during the peak commute time in the campus commute direction. The Community Plan recognizes that achieving this goal requires a combination of approaches including increasing the supply of on-campus housing, providing convenient support services on the campus and implementation and expansion of Stanford's transportation demand management programs. The Community Plan also includes a policy to credit Stanford's participation in off-campus trip reduction efforts that benefit the streets surrounding the campus toward achievement of the No Net New Commute Trips goal. The Community Plan recognizes that if Stanford does not achieve the No Net New Commute Trips goal, Stanford must contribute to improvements at impacted intersections or provide equivalent funding toward other transportation impact mitigation efforts.

The proposed 2018 General Use Permit includes continued emphasis on campus housing and trip reduction as means to address traffic congestion and to promote walking, bicycling and transit use. Stanford plans to implement an expanded transportation demand management program designed to achieve the No Net New Commute Trips goal. Stanford also would continue to implement off-campus trip reduction programs as contemplated by the Stanford Community Plan's trip credit policy. Further, Stanford proposes that, per Community Plan policy, if Stanford cannot achieve the No Net New Commute Trips goal through on-campus trip reduction and off-campus trip credits, it would provide funding to the County for other programs to reduce trips in an amount equivalent to its contribution toward improvements at impacted intersections. Stanford does not seek to modify any strategies, policies or implementation measures in the Stanford Community Plan's Circulation element.

3.3.5 Open Space

The Stanford Community Plan's Open Space element states that the Academic Growth Boundary serves to define lands that are to be retained as open areas. Outside the Academic Growth Boundary, land is to remain undeveloped except for uses associated with research activities that require a remote or foothill setting for their functioning. Future development is targeted to areas inside the Academic Growth Boundary. There too, however, designated Campus Open Space areas are identified as locations to remain largely undeveloped to provide important aesthetic and biological functions and recreation.

Stanford does not seek any approvals for development outside of the Academic Growth Boundary, and Stanford proposes to retain all of the Community Plan's designated Campus Open Space. Stanford does not seek to modify any strategies, policies or implementation measures in the Community Plan's Open Space element.

3.3.6 Resource Conservation

The Stanford Community Plan's Resource Conservation element addresses habitat and biodiversity, water quality and watershed management, heritage resources and scenic resources. Habitat and biodiversity policies include protection of habitat in areas outside the Academic Growth Boundary and within the Campus Open Space land use designation. Water quality and watershed management policies include comprehensive approaches to watershed management. Heritage resources policies encourage preparation of an inventory of heritage resources. Scenic resources policies employ the Academic Growth Boundary as a means of conserving scenic resources.

The proposed 2018 General Use Permit includes retention of the Academic Growth Boundary, and continued protection of habitat areas and scenic resources outside the Academic Growth Boundary and within Campus Open Space areas. Stanford plans to continue to address watershed management through a comprehensive program. Further, Stanford will submit a Historic Resources Survey to document historic structures within the Academic Campus land use designation. Stanford does not seek to modify any strategies, policies or implementation measures in the Stanford Community Plan's Resource Conservation element.

3.3.7 Health and Safety

The Stanford Community Plan's Health and Safety element discusses air quality, geological hazards, flooding, hazardous materials, emergency preparedness and response, noise and law enforcement. Air quality policies emphasize transportation alternatives and transportation demand management to reduce vehicle emissions. Geological hazards and flooding policies promote building design and location to avoid or withstand hazards. Hazardous materials policies recognize means to manage materials safely and efficiently. Emergency preparedness and response policies require maintenance of plans for disaster response and recovery. Noise policies prevent or minimize excessive noise. Law enforcement policies permit the Stanford University Department of Public Safety to undertake law enforcement activities on the campus pursuant to an agreement with the Santa Clara County Office of the Sherriff.

The proposed 2018 General Use Permit is consistent with the Stanford Community Plan's Health and Safety policies. Stanford does not seek to modify any strategies, policies or implementation measures in the Community Plan's Health and Safety element.

3.4 Zoning

The portion of the Stanford campus that is developed with academic and support facilities and student housing is zoned "A1" — a County base district that requires a conditional use permit for university-related uses.

In 2001, the County enacted R1S and R3S zoning districts for the faculty/staff neighborhoods designated by the Stanford Community Plan as "Campus Residential – Medium Density" and "Campus Residential – Low Density." These zoning districts establish setbacks and other building standards specific to these neighborhoods and identify the County approval processes that apply to each type of potential development proposal.

In 2003, the County enacted an OS/F zoning district for the largely undeveloped lands designated by the Community Plan as "Open Space and Field Research." The OS/F zoning district requires a comprehensive viewshed analysis and specifies unique County approval processes for new structures within this district. The zoning regulations also state that "Structures shall be consistent with restrictions set forth in the Stanford General Use Permit." [County Zoning Code § 2.50.040(E)]

The current zoning districts on Stanford land are provided in **Table 2** and depicted in **Figure PD.3**.

Some of these lands also fall within the County's slope and scenic roads overlay districts.

Stanford does not seek to change any of the text provisions of the County Zoning Code that apply to its lands. The proposed Project includes a modification to the County zoning map to rezone the Driving Range area from R3S to A1, and to rezone nine existing faculty homes from A1 to R1S. These proposed zoning amendments are consistent with the changes in the Stanford Community Plan land use designations described in Section 3.3.

Table 2: Zoning Districts

Land Use	Code	Allowable Uses
Within the Academic Growth Boundary		
General Use	A1	Agriculture, commercial, residential, schools, colleges and vocational schools, recycling, retail with a use permit
Campus Residential – Low Density	R1S	Residential up to 8 units/acre, institutional, hospital, religious, parks, schools
Campus Residential – Medium Density	R3S	Residential 8-15 units/acre, institutional, hospital, religious, parks, schools
Outside the Academic Growth Boundary		
Open Space and Field Research	OS/F	Field research
General Use (for Special Conservation Area Land Use)	A1	Agriculture, commercial, residential, school university, recycling, retail with a use permit

3.5 General Use Permit

As allowed under zoning, Santa Clara County has issued a series of conditional use permits, called the "General Use Permit" to Stanford since 1962. The General Use Permit has four key functions. The permit:

- establishes the allowed land uses
- specifies the quantity of new academic and academic support square footage and related infrastructure (such as parking spaces) that may be constructed
- specifies the quantity of new housing units and student beds that may be constructed
- identifies conditions of approval that will apply to new construction and campus operations to minimize adverse effects to the surrounding community

The County most recently issued a General Use Permit to Stanford in 2000, at the same time as it adopted the Stanford Community Plan. The 2000 General Use Permit allows:

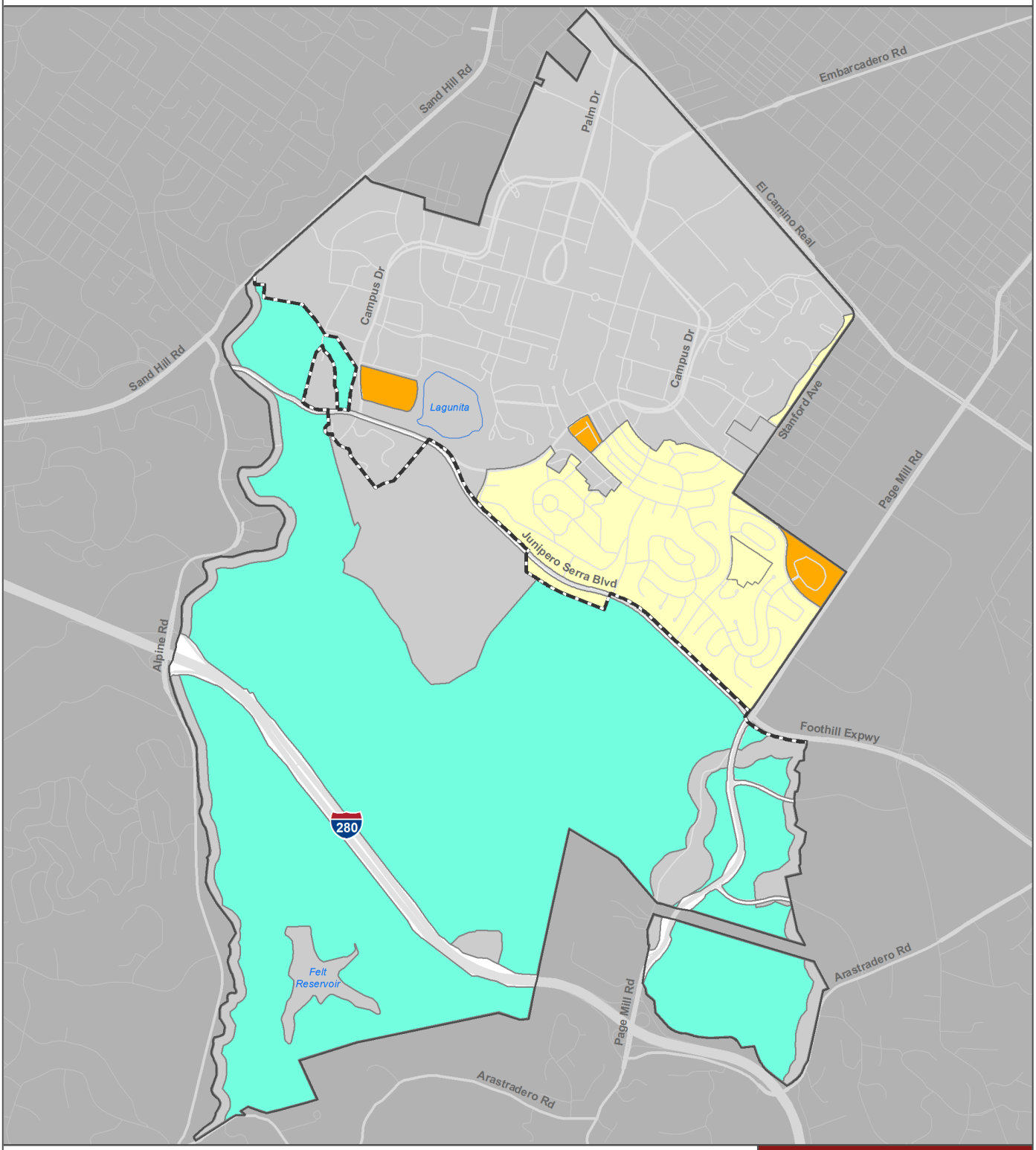
- continuation of all lawful existing uses
- completion of the development allowed under the prior general use permit
- construction of up to 2,035,000 net new square feet of academic and academic support uses
- construction of up to 3,018 net new housing units for students, faculty and staff, with more housing subject to Planning Commission approval[4]
- construction of 2,300 net new parking spaces
- construction of 40,000 net new square feet of child care and community centers
- use of 50,000 square feet of temporary trailers for surge space during construction

The 2000 General Use Permit includes more than 100 conditions regulating construction activities and campus operations, establishing monitoring requirements and identifying project approval processes.

Stanford seeks County approval of the 2018 General Use Permit to authorize the next increment of campus development.

[4] In March 2016 the Planning Commission authorized 1,450 additional student beds at Escondido Village, beyond the 3,018 housing units/beds initially authorized by the 2000 General Use Permit.

Figure PD.3: Zoning Districts - Existing



Zoning Districts

- A1 | General Use
- OSF | Open Space and Field Research
- Academic Growth Boundary
- R1S | Low-Density Campus Residential
- R3S | Medium-Density Campus Residential

Stanford University

0 0.5 Miles

Stanford University, LBRE/LUEP
November 5, 2016

N

4.0 PROJECT NEED

As a center of teaching and research, Stanford seeks to develop academic programs to contribute to knowledge development and solutions to social and global challenges.

4.1 Key Factors Driving Growth under the 2000 General Use Permit

4.1.1 Academic and Academic Support Space

Several factors have driven the expansion of academic space on the campus that occurred under the 2000 General Use Permit.

As knowledge has advanced and new technology has become available, existing fields of study have grown, and entirely new fields have emerged. The last 16 years have seen growth in such disciplines as computer science and information technology, biomedicine, neuroscience and energy and environmental sciences. New fields have also emerged as major disciplines of their own, such as nanoscience and nanotechnology, genomics and proteomics, bioinformatics, and chemical biology.

Meanwhile, the model of teaching and research itself has rapidly evolved. Recognizing that tackling significant global challenges requires faculty and students from multiple fields to work collaboratively in new ways, Stanford has developed several new interdisciplinary programs. These interdisciplinary programs often required new physical spaces with flexible designs to facilitate interaction.

These factors—the expansion of existing fields, the emergence of new academic fields and the unique demands associated with interdisciplinary, collaborative teaching and research—are reflected in much of the work Stanford has done to construct new academic space under the 2000 General Use Permit. For example:

- A new **Science and Engineering Quad** houses departments and programs from four of Stanford's schools: the School of Engineering; the School of Earth, Energy and Environmental Sciences; the School of Humanities and Sciences and the School of Medicine. New interdisciplinary programs housed in the quad include the Woods Institute for the Environment, which conducts teaching and research on a range of pressing environmental and sustainability issues; the Precourt Institute for Energy, which works to accelerate the transition to a low-carbon energy system; and the Stanford Nano Shared Facility, which features advanced nanoscale patterning and characterization capabilities. Within this quad, the **Jerry Yang and Akiko Yamazaki Environment and Energy Building** (Y2E2), built in 2008, is a model for platinum-level LEED sustainability and building design to facilitate interdisciplinary collaboration.

- The **Lorry I. Lokey Stem Cell Research Building**, built in 2010, houses laboratories devoted to a field, stem cell biology, that was nascent 25 years ago. It features open laboratories and communal spaces that encourage interaction and teamwork between scientists and physicians and forms an important cornerstone of a sector of campus being redeveloped to further strengthen integration among science, engineering and medicine. Nearby, a new research center will be built to house two interdisciplinary institutes working to advance human health through better understanding of the brain and of chemical biology—the **Stanford Neurosciences Institute** and **Chemistry, Engineering &**

Medicine for Human Health.

- The 2010 **John A. and Cynthia Fry Gunn Building** houses the Stanford Institute for Economic Policy Research, bringing together in one place scholars from across the Stanford community to study economic policy for addressing critical challenges facing governments and businesses. The institute has a distinctive focus on raising living standards and improving quality of life through more effective economic policy.

- Stanford also has replaced aging buildings with new facilities to meet the modern demands of teaching and research. For instance, the **Knight Management Center** opened in 2011 to provide a new home for the Graduate School of Business, featuring sustainable design and flexible classroom spaces for experiential and team-based learning. The **William H. Neukom Building**, also opened in 2011, provides collaborative open spaces to house the Stanford Law School's innovative clinical practice programs. The 2010 **Li Ka Shing Center for Learning and Knowledge** provides a new center for educational activities in the School of Medicine, including a state-of-the-art center for immersive and simulation-based medical training.

- The Stanford Arts Initiative was not anticipated at the time of the 2000 General Use Permit, but it has provided facilities that have extended new cultural opportunities to the University's neighbors and the broader Bay Area, as well as to students and the campus community. These include the **Anderson Collection**, a free museum containing an outstanding collection of modern American art; the **Bing Concert Hall**, a new performance venue for music and dance; and the **McMurtry Building**, offering unified academic facilities for art and art history.

- The quality of the student experience at Stanford has been enhanced by the addition of recreational and athletic facilities, including the **Arrillaga Center for Sports and Recreation** and the **Arrillaga Outdoor Education and Recreation Center**, which promote fitness and wellness as essential elements of the student experience.

4.1.2 Housing

Over the course of the 2000 General Use Permit, housing has been added on pace with new academic space, including the undergraduate **Humanities Dorm** in Gerhard Casper Quad, new undergraduate dormitories at **Lagunita Court**, the **Munger** and **Kennedy** graduate residences, and **Highland Hall** for Graduate School of Business students. In addition, Stanford obtained County Planning Commission authorization for 1,450 more graduate student beds beyond the 3,018 housing units that the County initially authorized. This authorization will facilitate construction of a new graduate student residential complex within **Escondido Village**.

4.2 Continued Campus Evolution Beyond 2018

Based on its historic annual rate of academic and student housing growth on the Stanford campus, Stanford anticipates that the quantity of new development authorized by the 2000 General Use Permit will be exhausted in 2018–2020.

4.2.1 Growth in Academic and Academic Support Facilities

Stanford anticipates that growth in academic and academic support facilities will continue at a moderate pace comparable to that of the recent past. While it is impossible to detail specific academic and support projects over a nearly two-decade period, Stanford's proposal for the 2018 General Use Permit reflects key considerations around the continued evolution of the Stanford campus. Those considerations include the following:

- **The need for new and expanded academic facilities to accommodate state-of-the-art research and teaching will continue.** Knowledge is expanding and entirely new fields of research proliferating. The explosion of fields such as stem cell research, neuroscience, materials science, cyber technology and artificial intelligence illustrates how quickly academic fields are changing, creating new space needs as they grow.

  In addition, many fields of research that have immense promise today require highly specialized space where experiments can be conducted by teams of researchers and in accordance with stringent safety standards. For example, research into new batteries for more efficient energy systems illustrates how addressing global climate change relies on advances in fundamental materials science. This work requires constructing novel materials from basic elements and investigating their properties using electrochemistry, lasers, x-rays, mechanical tests and other techniques requiring space designed specifically for this purpose. Stanford's leadership in the development of autonomous cars provides another example of research requiring unique space. It is predictable that specific requirements will evolve as particular fields progress in the next decade and beyond.

- **Many fields of research today require larger physical spaces** because research instruments are increasingly larger in scale, and often a suite of tools is needed to accomplish the work. For example, advanced electronics depends on nanofabrication, which must be done in specially built clean rooms that house instruments for scanning electron microscopy, electron beam lithography, materials deposition and others. Research in fluid mechanics, relevant to water and the environment as well as aeronautics, is among many other examples of research that can only be done at scale in larger, shared facilities. Biomedical research has also come to rely on complex instrumentation located in shared facilities and is now far beyond the traditional conception of a researcher at a bench with a microscope. Breakthroughs in medicine can be predicted to revolve around advances in imaging techniques to study the human body in health and disease, extending the revolution that began with magnetic resonance imaging. Having appropriate space to locate these tools is essential because they will be necessary not just for neurosciences, where their use is yielding remarkable new knowledge about learning, aging and disease, but for research in all medical disciplines.

- **Research initiatives in promising academic fields have the potential to expand into ongoing programs with need for dedicated academic space.** Stanford undertakes many new areas of interdisciplinary research first as short-term initiatives that, over time, can develop into more formal institutes of the kind developed over the last 16 years. An example of such a current research initiative is the Stanford Cyber Initiative, launched in 2014, which pursues policy research addressing the opportunities and challenges raised by cyber-technologies in our economic, political and social systems. This initiative explores a wide range of questions, including consumer privacy and cyber-security, new methods of online and mobile authentication to improve upon the traditional password, implications of the digital "gig" economy, the use of technology in physician–patient relationships, and others.

- **Existing academic programs still housed in aging facilities will need new space in the coming years.** For instance, key buildings in the School of Earth, Energy and Environmental Sciences, the Graduate School of Education and the School of Medicine are many decades old, and campus support facilities such as the Public Safety Building that houses the campus police department do not meet today's operational needs.

- **Opportunities will develop over the course of the 2018 General Use Permit that we cannot foresee today**. When Stanford applied for the 2000 General Use Permit, it did not yet foresee constructing a transformative campus energy system that would dramatically reduce campus greenhouse gas emissions, but this was achieved in 2015 with the Stanford Energy System Innovations. Similarly, Stanford did not foresee that it would acquire a major 20th-century American art collection, but the University became home to the Anderson Collection. And in 2000, Stanford had only a glimmer of the possibilities in a range of academic fields that have expanded in the years since.

4.2.1 Growth in On-Campus Housing

In addition to academic space, Stanford seeks authorization for new housing to continue to balance academic and support uses with housing. Because housing needs and priorities change over time, Stanford cannot predict the specific mix of undergraduate dormitories, graduate student apartments, and other housing types that it would need to construct over the next 17 years. Just as occurred under the 2000 General Use Permit, flexibility to respond to changing demands will be important. However, based on the information that is currently available, Stanford seeks authorization for a similar overall amount of housing as was initially authorized under the 2000 General Use Permit. The following planning considerations influenced the requested amount of housing:

- **Stanford plans a modest expansion of undergraduate enrollments**, in recognition of the fact that applications to Stanford have increased while spaces available have not, resulting in one of the lowest rates of admission in the nation. Providing a reasonable increase in the number of talented students for whom a Stanford education is accessible has therefore become an increasing priority. Stanford plans to increase total undergraduate enrollments incrementally, at a rate of roughly 100 students per year. If undergraduate enrollments grow as expected in the coming years, approximately 1,700 new beds will be needed for this population by 2035.

- **Stanford also prioritizes housing on its campus lands for graduate students**. Even with the additional housing authorized by the County for the Escondido Village Graduate Student Residences, a substantial demand will remain for affordable graduate student housing. If graduate student enrollment grows at its historic compound annual growth rate, Stanford estimates that as many as 900 new graduate student beds could be needed by 2035.

- **Stanford seeks authorization to construct high-density, transit-oriented housing** for faculty and staff, including postgraduate students and medical residents. Given the high cost of housing in the Bay Area, provision of a range of housing options on and near the campus is critical to Stanford's ability to recruit world class faculty and other scholars. Stanford estimates that the Quarry Development District, the location best suited for high-density transit oriented housing, can accommodate approximately 550 units.

Stanford prioritizes use of its academic campus lands to house students and faculty because housing students and faculty in close proximity fosters collaboration and learning. With limited exceptions, staff and other affiliated housing has been provided outside of the core academic campus lands, in nearby jurisdictions. Recognizing this pattern, the Stanford Community Plan includes a policy to "Support Stanford's efforts to develop housing on land in other jurisdictions, particularly housing specifically targeted to Stanford faculty, staff, students and other affiliated persons." (Policy H.9)

In addition to constructing housing on the campus, the University is completing 180 faculty units on California Avenue in Palo Alto. It also has submitted an application to the City of Menlo Park to build 215 rental units at 500 El Camino Real that will be made available to faculty and staff.

5.0 PROJECT OBJECTIVES

Stanford proposes that the County approve a 2018 General Use Permit that would authorize continued growth and development of the campus in a manner that implements the Stanford Community Plan's policies and that reflects the growth assumptions in the approved Sustainable Development Study. Specifically, the Project objectives are as follows:

- Continue to implement the policies of the Stanford Community Plan, including policies promoting compact urban development, housing, single-occupant vehicle trip reduction, resource conservation, and health and safety.

- Continue to allow Stanford flexibility to develop its lands within a framework that minimizes potential negative effects on the surrounding community ("flexibility with accountability").

- Authorize continuation of existing academic, academic support and housing uses on the Stanford campus.

- Enable Stanford to further its academic mission, provide state-of-the-art facilities for research and learning, encourage interdisciplinary collaboration, maintain flexibility to respond quickly to changes in educational or research technologies, and provide venues for athletic and cultural experiences by authorizing new and expanded academic and academic support facilities at a growth rate from 2018 through 2035 that is consistent with Stanford's historic annual growth rate for academic and academic support facilities.

- Enable Stanford to meet its needs to accommodate increasing enrollment and balance academic and academic support space growth with student housing growth by authorizing new and expanded student housing units/beds at a growth rate from 2018 through 2035 that is consistent with Stanford's historic annual growth rate for student housing, not including the unique Escondido Village Graduate Student Residences Project.

- Enable Stanford to foster collaboration and learning, and recruit and retain world class scholars and faculty by authorizing 550 transit-oriented high density housing units that can be occupied by faculty, staff, postdoctoral scholars and medical residents.

- Prioritize use of campus lands within unincorporated Santa Clara County for academic and academic support facilities, student housing, and faculty housing.

- Support existing and new academic, academic support and housing uses by authorizing new and improved parking facilities, roadway, utility and infrastructure improvements, child care centers, facilities designed to promote vehicle trip reduction, and temporary trailers for construction surge space.

6.0 DEVELOPMENT REQUEST

Stanford seeks County approval for a 2018 General Use Permit that would authorize an increment of growth that corresponds to the 2035 Moderate Growth Scenario in the Sustainable Development Study. As was the case under the 2000 General Use Permit, incremental authorization for academic and academic support space would be expressed as net new square footage, and incremental authorization for student housing would be expressed as net new units (or beds, in the case of students).

The proposed academic and academic support space and housing units would be constructed on vacant land, infill sites and redevelopment sites within the Academic Growth Boundary. As occurred under the 2000 General Use Permit, existing buildings may be demolished, and the demolished square footage would be added to the inventory of new academic and academic support space and housing units authorized for construction. Construction activities could occur at any location within the Academic Growth Boundary. The rate of construction generally would be consistent with the rate of construction that has occurred over the life of the 2000 General Use Permit.

Site-specific projects and locations have not been identified for the proposed development; however, Stanford proposes that the 2018 General Use Permit identify the distribution of new academic and academic support space and housing units by development districts within the campus, as was done under the 2000 General Use Permit. No new buildings would be constructed in the Campus Open Space land use designation, and no new buildings are proposed outside the Academic Growth Boundary.

6.1 Academic and Academic Support Space Authorization

Stanford seeks the ability under the 2018 General Use Permit to develop new and expanded academic and academic support space -- using a compact infill development strategy within the core campus -- to maintain its leadership in teaching and research in the coming years.

The proposed growth in academic and academic support facilities over the estimated 17-year life of the 2018 General Use Permit (through 2035) is 2,275,000 net new square feet.

This amount is similar to the space authorized in the 2000 General Use Permit. It is also consistent with Stanford's historic growth rate for academic and academic support space. Growth in this amount will result in a 1.2% compound annual growth rate for campus academic facilities.

As occurred under the 2000 General Use Permit, Stanford also proposes to carry over any remaining square footage authorized by the 2000 General Use Permit in the event that Stanford has not received approvals for construction of all of the remaining square footage prior to issuance of the 2018 General Use Permit.

6.2 Housing Authorization

Stanford seeks to provide on-campus housing to meet the increasing student enrollment in coming years, to foster collaboration and learning, and to attract and retain world class faculty and other scholars.

The proposed growth in on-campus housing is 3,150 net new housing units/beds. This amount of housing would enable Stanford to increase student housing at a rate that is consistent with Stanford's historic growth rate. In addition, Stanford would be able to provide up to 550 units of high density housing that could be occupied by faculty, staff, postdoctoral scholars and medical residents.

Consistent with amendments to the 2000 General Use Permit that the County Board of Supervisors approved in 2015, Stanford requests that all 3,150 net new housing units/beds may be occupied by students. However, no more than 550 units could be occupied by faculty and staff absent an environmental assessment to determine whether occupying a greater number of units by faculty and staff would result in new or substantially increased significant environmental effects. Following current practice, postdoctoral students would be able to live in both student housing and faculty/staff rental housing units; medical residents are included in the population that may be eligible for faculty/staff rental housing units. Staff is also eligible for faculty rental housing.

In addition, similar to 2000 General Use Permit Condition F.7, Stanford seeks a condition allowing it to build more than 3,150 housing units/beds upon approval by the Planning Commission and subject to additional environmental assessment.

6.3 Comparison to 2035 Moderate Growth Scenario in the Sustainable Development Study

Stanford's development proposal reflects the academic and student housing square footage assumptions for the 2035 Moderate Growth Scenario in the County-approved Sustainable Development Study. The Moderate Growth Scenario anticipated Stanford would construct a total of 3.5 million square feet of academic facilities and student housing between 2018 and 2035. (The Moderate Growth Scenario did not specify a quantity of faculty/staff housing.)

Stanford has proposed that the County authorize 3,150 net new housing units/ beds, with up to 550 of those units available for faculty/staff. For the purposes of the environmental evaluation, Stanford anticipates 1,700 units would be undergraduate student beds and 900 units would be graduate student beds. Assuming approximate sizes of 350 square feet per bed for undergraduate student housing and 700 square feet per bed for graduate student housing, Stanford would build 1,225,000 square feet of student housing under the 2018 General Use Permit.

Combined with the requested 2,275,000 net new square feet of academic and academic support facilities, Stanford is requesting a total of 3.5 million square feet of academic facilities and student housing. This matches the 2035 Moderate Growth Scenario.

6.4 Development District Boundaries

The 2000 General Use Permit divided Stanford's lands into development districts to estimate the distribution of development within the campus. Stanford proposes to retain the development districts established by the 2000 General Use Permit with two limited modifications.

First, under the 2000 General Use Permit, Stanford constructed the Knight Management Center, which houses the Graduate School of Business (GSB), in the Administrative & DAPER Development District, replacing an older office complex. Because the GSB is more in keeping with the Campus Center academic uses, Stanford proposes that the development district boundary for the Campus Center be altered from its current alignment on Galvez Street, to continue east on Campus Drive East to the intersection with Serra Street. This realignment would capture the rough triangle that includes the Knight Management Center.

Second, Stanford proposes to modify the development district boundary for the San Juan Development District so that it is the same as the boundary for the R1S zoning district.

The proposed realignments are illustrated in **Figure PD.4**, Development District Boundaries. Please also see **Figure PD.5**, Detail of Proposed Residential Boundary Adjustment.

Figure PD.4: Development District Boundaries

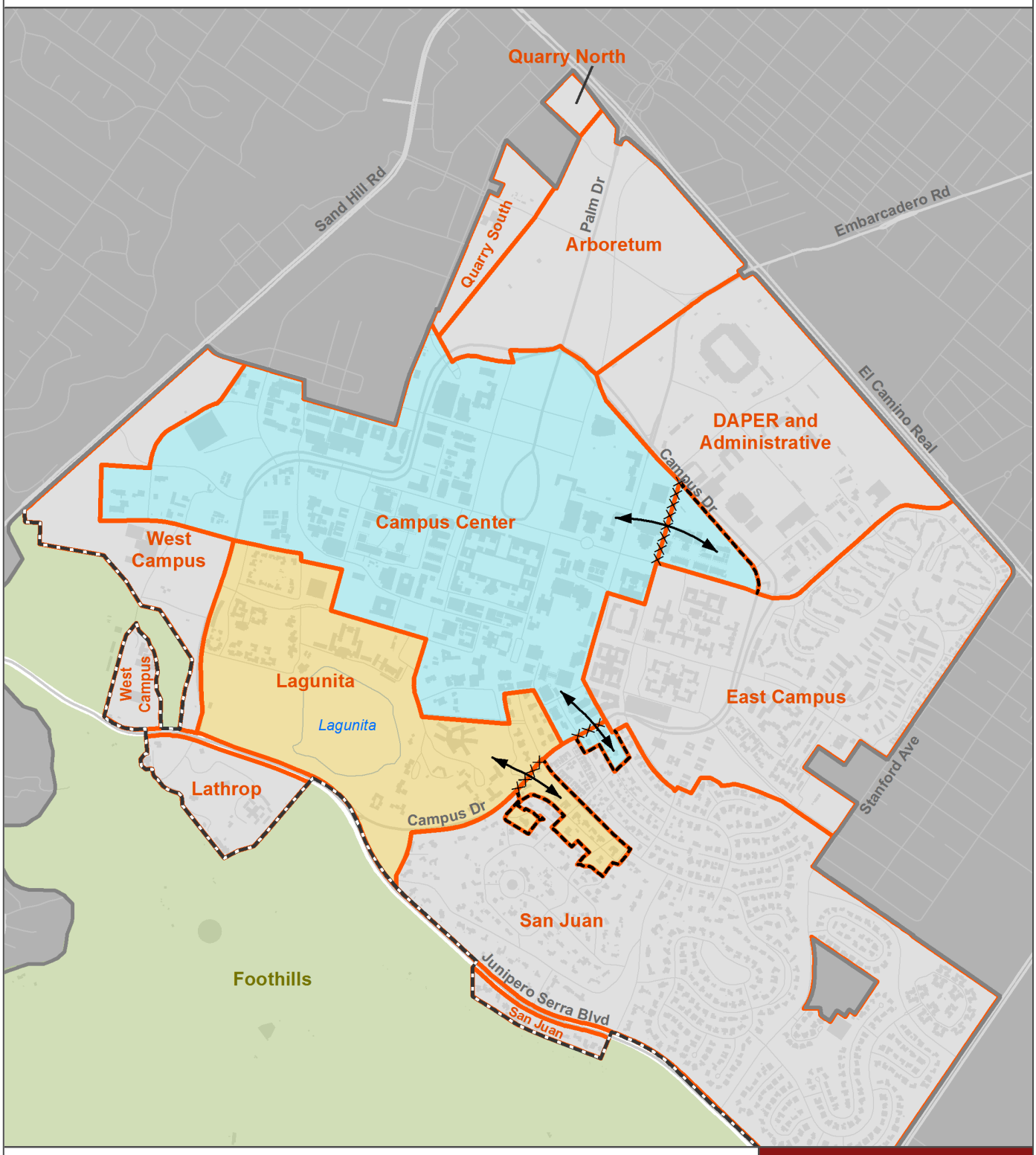
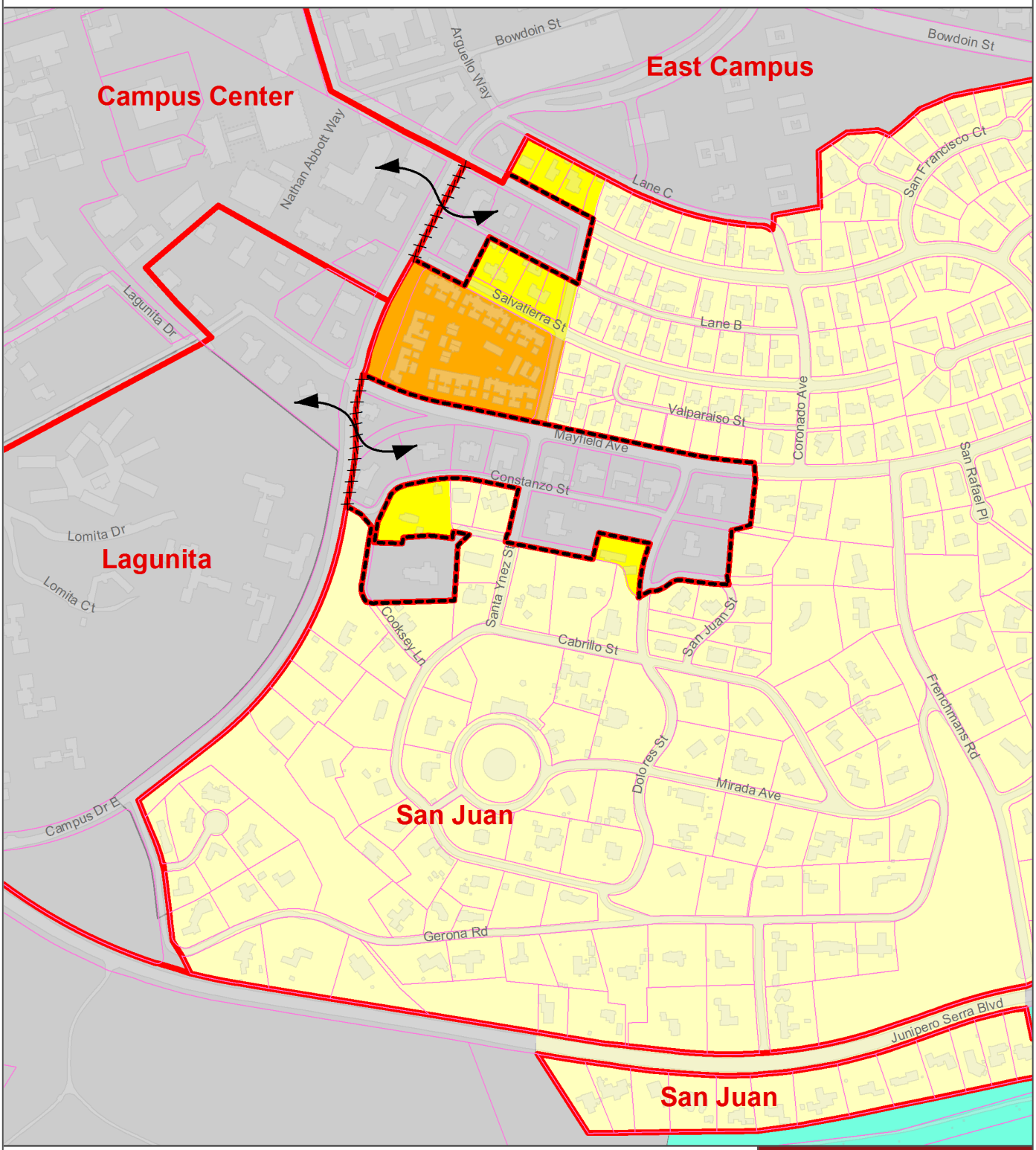


Figure PD.5: Detail of Proposed Residential Boundary Adjustment



6.5 Distribution of Growth by Development District

Using the development districts shown in Figure PD.4, Stanford proposes that all growth under the 2018 General Use Permit would be within the Academic Growth Boundary and would be heavily focused in the Campus Center Development District (see **Table 3**). More than 75% of the anticipated academic and academic support space, or 1,800,000 net new square feet, would occur in the academic core of the campus. Housing would continue to be focused in the East Campus and Lagunita Development Districts, along with new high-density housing in the Quarry Development District.

Table 3: Growth Distribution by Development District

Development District	Housing (# of Units/Beds)	Academic and Academic Support (Net New Square Feet)
Quarry	550	200,000
Arboretum	0	0
DAPER & Administrative	0	200,000
Campus Center	200	1,800,000
East Campus	1,600	20,000
West Campus	0	35,000
Lagunita	800	20,000
Lathrop	0	20,000
San Juan[a]	0	0
Foothills[a]	0	0
Total	**3,150**	**2,275,000**

[a] Future development in these development districts, if any, would occur under R1S, R3S or OS/F zoning. If development in these districts were approved in the future consistent with the zoning requirements, the amount of housing units or square footage of academic and academic support facilities would be subtracted from the 2018 General Use Permit authorization.

Consistent with Conditions E.2 and F.4 of the 2000 General Use Permit, Stanford requests that a significant deviation, in an amount determined appropriate by the County, from the Development District distributions shown on Table 3 would require an additional environmental assessment and approval by the Planning Commission. However, Stanford does not seek the ability to redistribute any additional square footage or any housing units to the Lathrop Development District, or to redistribute any square footage or housing units to the Arboretum Development District.

Stanford requests that the 2018 General Use Permit include a provision that clarifies that the 2018 General Use Permit applies to those land uses that require a use permit, Architecture and Site Approval, or Planning Commission approval under the Santa Clara County Zoning Code. The 2018 General Use Permit would not apply to uses permitted by right under the County Zoning Code.

As explained in Section 3.4, there are four zoning districts that govern land use on Stanford's lands within unincorporated Santa Clara County: the A1 base district that applies to most of the campus lands within the Academic Growth Boundary, two residential districts (R1S and R3S) that apply to low- and medium-density faculty/staff housing neighborhoods inside the Academic Growth Boundary, and the Open Space Field Research (OS/F) that applies to most of the lands outside the Academic Growth Boundary.

The Quarry, Arboretum, DAPER & Administrative, Campus Center, East Campus, West Campus, Lagunita, and Lathrop Development Districts are zoned A1 and R3S. Single-family residences are permitted by right in the A1 zoning district; however, no new single-family residences other than faculty resident units associated with supervision of student housing would be constructed within the A1 zoning district. No applicable land uses are permitted by right in the R3S zoning districts. Therefore, the 2018 General Use Permit would apply to all new and expanded academic and academic support uses, student housing, and faculty/staff housing within the A1 and R3S zoning districts; the 2018 General Use Permit would not apply to modifications to existing single-family residences within the A1 zoning district.

The San Juan Development District is zoned R1S. Within the R1S zoning district, single-family and two-family residences and secondary dwelling units are permitted by right. Other uses require a use permit or Architecture and Site Approval. As a result, within the San Juan Development District, the 2018 General Use Permit conditions of approval would apply to academic and academic support uses, if any, but the 2018 General Use Permit would not apply to modifications to existing single- and two-family residences or new or replacement single- and two-family residences in the R1S zoning district. Any future proposals for single- and two-family residential uses would be subject to the zoning requirements for this district, including all applicable development standards, and reviewed for consistency with the Stanford Community Plan.

Most of the Foothills Development District is zoned OS/F. In the OS/F zoning district, agriculture and field research land uses are permitted by right; however, structures ancillary to such uses require Architecture and Site Approval. Other uses require a use permit, Architecture and Site Approval, or Planning Commission approval. The 2018 General Use Permit conditions of approval would apply to County approval of all structures within the OS/F district. In addition, the requirements of the OS/F zoning district must be followed within this district, including viewshed analysis, California Environmental Quality ACT (CEQA) compliance, Planning Commission review and approval for structures over 1,000 square feet or 35 feet in height, and evaluation for consistency with the Stanford Community Plan.

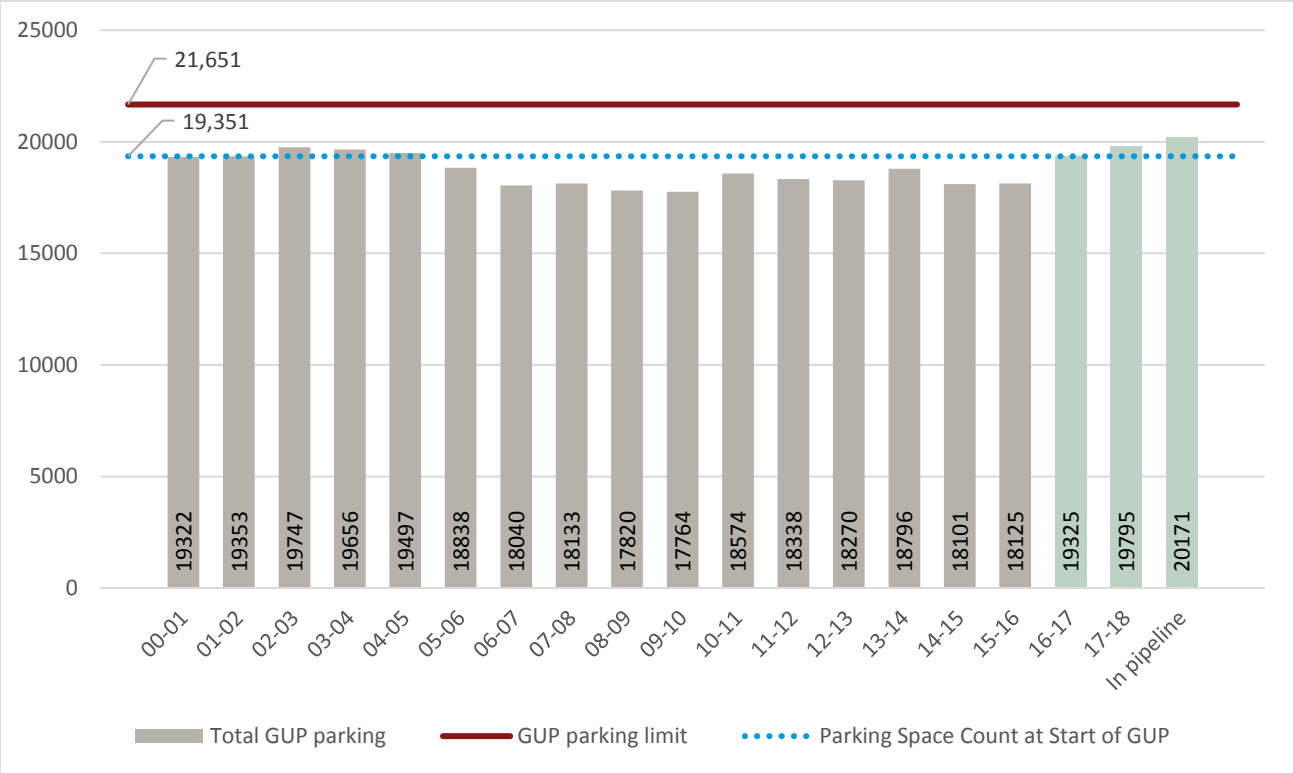
The remaining portions of the Foothills Development District are designated Special Conservation Areas in the Stanford Community Plan. The Community Plan states that no new buildings or structures are allowed within the Special Conservation Areas: “No new permanent development in the form of buildings or structures is allowed, other than construction, modification, and maintenance of improvements to support conservation efforts. Existing nonconforming uses are allowed to remain in accordance with the County’s requirements for nonconforming structures.” (Stanford Community Plan Policy SCP-LU 32.)

Stanford does not seek authorization for any new structures within the San Juan and Foothills Development Districts. Nevertheless, to ensure that the total amount of development within the 2018 General Use Permit boundary does not exceed the development request specified in this application, Stanford proposes that the academic and support space square footage limits and the housing unit limits in the 2018 General Use Permit would apply to these areas so that if Stanford later were to apply to construct a building in these areas (even if permitted by right under zoning) the square footage or unit would count toward the overall 2018 General Use Permit authorizations. For example, if Stanford constructed a single-family residence within the R1S district, that unit would be counted against the 2018 General Use Permit’s housing unit authorization.

6.6 Campus Parking Authorization

The 2000 General Use Permit authorized construction of 2,300 net new parking spaces above the then-current base of 19,351 spaces for a total of 21,651 spaces. Stanford anticipates that by Fall 2018, it will have a total inventory of 20,171 spaces, which is 1,480 spaces under the parking authorization established by the 2000 General Use Permit (see **Figure PD.6**).

Figure PD.6: 2000 GUP Parking Supply and Limit



Stanford has remained well beneath its 2000 General Use Permit parking allocation for two reasons. As explained in Section 5.2.2 of the Background Conditions Report accompanying this project description, car ownership by Stanford students has been trending downward. Similarly, permit purchases by faculty and staff has declined over time, although that rate of decline has flattened out. Both of these reductions are due in part to Stanford's extensive transportation demand management programs. In addition, parking permit rates associated with student housing likely have declined due to shifting preferences among the millennial generation away from automobile ownership.

Stanford proposes to accommodate future demand for parking under the 2018 General Use Permit by carrying over the remaining authorization from the 2000 General Use Permit. Consistent with the 2000 General Use Permit, the total authorized number of spaces would be 21,651 spaces. However, Stanford proposes two changes in approach.

First, Stanford requests that certain types of parking not count toward the numeric parking limit:

- To support Stanford's transportation demand management efforts, Stanford proposes that spaces used for trip-reducing programs not be counted. Current examples of spaces used for trip-reducing programs include spaces dedicated to rental cars and zip cars.

- To support reduction in greenhouse gas emissions and to recognize that electric vehicle charging stations require turnover such that other spaces are needed for the same cars when they are not charging, Stanford proposes that EV charging stations not be counted.

- Stanford proposes that spaces dedicated to police or fire department use not be counted. These spaces are not associated with commute trips to and from the campus.

- Stanford proposes that parking for high-density housing to be occupied by faculty and staff not be counted. 2000 General Use Permit Condition H.1 states that "Parking constructed as part of and to serve new faculty/staff housing in the areas designated Campus Residential – Low Density and Campus Residential – Medium Density shall not count toward the limits. ..." Stanford proposes that the high-density faculty/staff housing allowed within the Academic Campus land use designation be subject to this same exemption.

Second, Stanford requests County approval for a 2,000-space parking supply reserve. This number of spaces is calculated in the same manner as the parking space authorization was calculated under the 2000 General Use Permit. It is based on applying the current (2015) parking demand rate to the number of student housing units and amount of academic square footage proposed under the 2018 General Use Permit. Those rates result in a total demand for 3,479 net new parking spaces, including a 15% vacancy factor to allow a sufficient number of empty spaces distributed over the campus to prevent unnecessary circulation to locate an available space (see **Table 4**). Subtraction of the 1,480 spaces anticipated to remain after completion of the academic and academic support facilities and housing authorized by the 2000 General Use Permit results in a remaining forecasted demand for 1,999 spaces.

Table 4: 2018 General Use Permit Parking Demand Based on Existing Parking Rates

	Development Proposal	Existing Parking Demand Rates	Number of Spaces
Academic and Support Space	2,275,000 net new square feet	0.94 spaces per 1,000 square feet[a]	2,139
Graduate Student Housing	900 beds	0.55 spaces per bed	495
Undergraduate Student Housing	1,700 beds	0.23 spaces per bed	391
Subtotal			**3,025**
Plus 15% vacancy factor			454
Total Demand			**3,479**

[a] The parking ratio is the estimated commuter and visitor demand from the utilization counts (9,025 parking spaces) divided by the academic and support space (9,462,000 square feet).

Stanford does not seek initial authorization for this parking supply reserve because it seeks to discourage automobile ownership and use. Stanford intends to continue to expand its transportation demand management programs to meet the No Net New Commute Trips goal, which in turn should reduce demand for both residential and commuter parking permits. However, Stanford recognizes that it may be necessary to provide more parking than it has initially requested to prevent spillover parking in nearby communities if car ownership by campus residents does not continue to decrease over time or if unforeseen circumstances occur.

Stanford requests that the 2018 General Use Permit allow Stanford to request Planning Commission approval to construct parking spaces in the parking supply reserve under one of three circumstances:

- Stanford is achieving the No Net New Commute Trips goal;
- the proposed additional parking spaces serve a purpose that is not likely to result in a substantial increase in peak hour commute trips (such as visitor and/or residential demand); or
- unforeseen circumstances occur due to changes in background conditions such as prolonged or permanent disruption of transit service that requires provision of additional parking.

6.7 Child Care/Trip Reducing Uses

The 2000 General Use Permit authorized 40,000 net new square feet of child care and community center space in order to encourage fewer vehicular trips by providing these services on campus. Stanford proposes that the 2018 General Use Permit similarly authorize 40,000 net new square feet for these uses, further refining the description to be for child care and other facilities that support transportation demand management programs (for example, a transit hub).

6.8 Construction Surge Space

Stanford proposes to continue to utilize the 50,000 square feet of construction surge space that was authorized in the 2000 General Use Permit.

6.9 Infrastructure Improvements

Under the 2000 General Use Permit, Stanford constructed a variety of campus infrastructure projects to support both existing and new and expanded uses.

Infrastructure improvements included replacement of 22 miles of underground pipes and the retrofit of 155 buildings to convert the campus to a steam to hot water based heating system – improvements that enabled dramatic reductions campus air pollutant and greenhouse gas emissions. As another example, Stanford installed roundabouts at three intersections on Campus Drive: the Escondido Roundabout, which opened in September 2014, and the Bowdoin and Santa Teresa roundabouts, which opened in September 2015. A fourth roundabout is currently being constructed at Galvez Road. These roundabouts improve bicycle mobility and safety, while also improving vehicular circulation.

Stanford proposes that the 2018 General Use Permit continue to afford flexibility to enable construction of campus infrastructure improvements. While the full scope of such improvements is unknown, Stanford has identified one set of improvements that it intends to construct under the 2018 General Use Permit.

Stanford proposes to construct the improvements on its lands in unincorporated Santa Clara County that have been identified by the Palo Alto Unified School District (PAUSD) and the City of Palo Alto as the Suggested Routes to Schools shown on the Walkabout Maps for Nixon and Escondido Elementary Schools. These improvements would benefit both pedestrian and bicycle circulation in the immediate area of both schools.

The City of Palo Alto has a partnership with the PAUSD and Palo Alto Parent Teacher Association to reduce risks to students and encourage more families to walk and bike or use other alternatives to driving. Between 2012 and 2014, the City and PAUSD completed Walkabout Maps for most of the schools in the District. The Walkabout Maps propose improvements to biking and walking routes to each school that can be used to help direct where public funds are spent.

Circulation improvements on Stanford lands in unincorporated Santa Clara County, in and around Nixon Elementary School, could include such items as, improved crosswalks with high-visibility yellow markings, pavement markings, additional signage, and wayfinding signs.

Circulation improvements in and around Escondido Elementary School similarly could include such items as, improved crosswalks with high-visibility yellow markings, pavement markings, additional signage, additional traffic control. Specific improvements on Stanford property could include an enhanced mid-block crosswalk on Escondido Road.

7.0 PROPOSED CONDITIONS OF APPROVAL

Stanford anticipates that, through the environmental review process required by the California Environmental Quality Act, the County will identify mitigation measures designed to reduce the significant impacts of development under the proposed 2018 General Use Permit. Those mitigation measures would be incorporated into the 2018 General Use Permit as conditions of approval. Stanford proposes that the County also include conditions of approval designed to implement the policies of the Stanford Community Plan, similar to the conditions included in the 2000 General Use Permit.

7.1 No Net New Commute Trips Goal

As explained in Section 3.3, the Stanford Community Plan establishes a goal to achieve No Net New Commute Trips, defined to mean no additional trips above a measured base level during the peak commute time in the campus commute direction. The Community Plan also include a policy to credit Stanford's participation in off-campus trip reduction efforts that benefit the streets surround the campus towards achievement of the No Net New Commute Trips goal. (Policy C-8.) The Community Plan recognizes that if Stanford does not achieve the No Net New Commute Trips goal, Stanford must contribute to intersection improvements at impacted intersections or provide equivalent funding toward other transportation impact mitigation efforts. (Implementation Measure C(i)(9).)

Stanford proposes to continue to mitigate the transportation impacts of its additional development by implementing a transportation demand management program designed to achieve the No Net New Commute Trips goal. Stanford's award-winning program to reduce traffic and its related impacts is one of the most comprehensive in the country. Stanford's transportation demand management program has decreased the drive-alone rate from 72% in 2002 to 50% today.

Stanford also proposes to continue to implement off-campus trip reduction programs as contemplated by the Stanford Community Plan's trip credit policy. Further, Stanford proposes that, per Community Plan policy, if Stanford cannot achieve the No Net New Commute Trips goal through on-campus trip reduction and off-campus trip credits, it would provide funding to the County for other programs to reduce trips in an amount equivalent to its contribution toward improvements at impacted intersections.

7.1.1 Proposed adjustments to compliance methodology

Stanford does not propose to change the No Net New Commute Trips goal or the flexibility afforded by the 2000 General Use Permit to modify its transportation demand management programs. However, Stanford proposes some adjustments to the methods used for demonstrating compliance.

Monitoring

Under the 2000 General Use Permit, a boundary, or cordon, was established around the campus to identify campus entryways where sensor tubes could be installed to measure vehicle trips into and out of the campus. In 2001, an independent consultant acting under the direction of the County Planning Office conducted baseline counts at 16 gateways to the campus. The initial baseline counts were taken three times during the year in order to determine the peak hour and measure the traffic volumes during that hour. Since then, similar counts have been taken twice every year for a total of eight weeks of measurements. Trips

coming through campus to the hospital or to other non-campus destinations have been factored out of the cordon counts.

Stanford proposes that under the 2018 General Use Permit, traffic counts continue to be taken at the current cordon count locations. However, Stanford proposes to update the monitoring methodology so that monitoring can be conducted through automated means (e.g., imbedded loop detectors in the pavement in each travel lane, video detection or license plate recognition) as approved by the County. All vehicular entrances to the campus would continue to be included in the monitoring; and transit vehicles, motorcycles, cut-through traffic and hospital-related trips would continue to be excluded from the counts. Stanford would be solely responsible for paying all costs related to monitoring, including, but not limited to, development, installation, maintenance and repair of all monitoring equipment. Testing and calibration of new equipment would require coordination with the County, not unlike the establishment of the cordon baseline in 2001. Stanford also requests that a County approval process be established for replacement of monitoring equipment with new technologies as they become available.

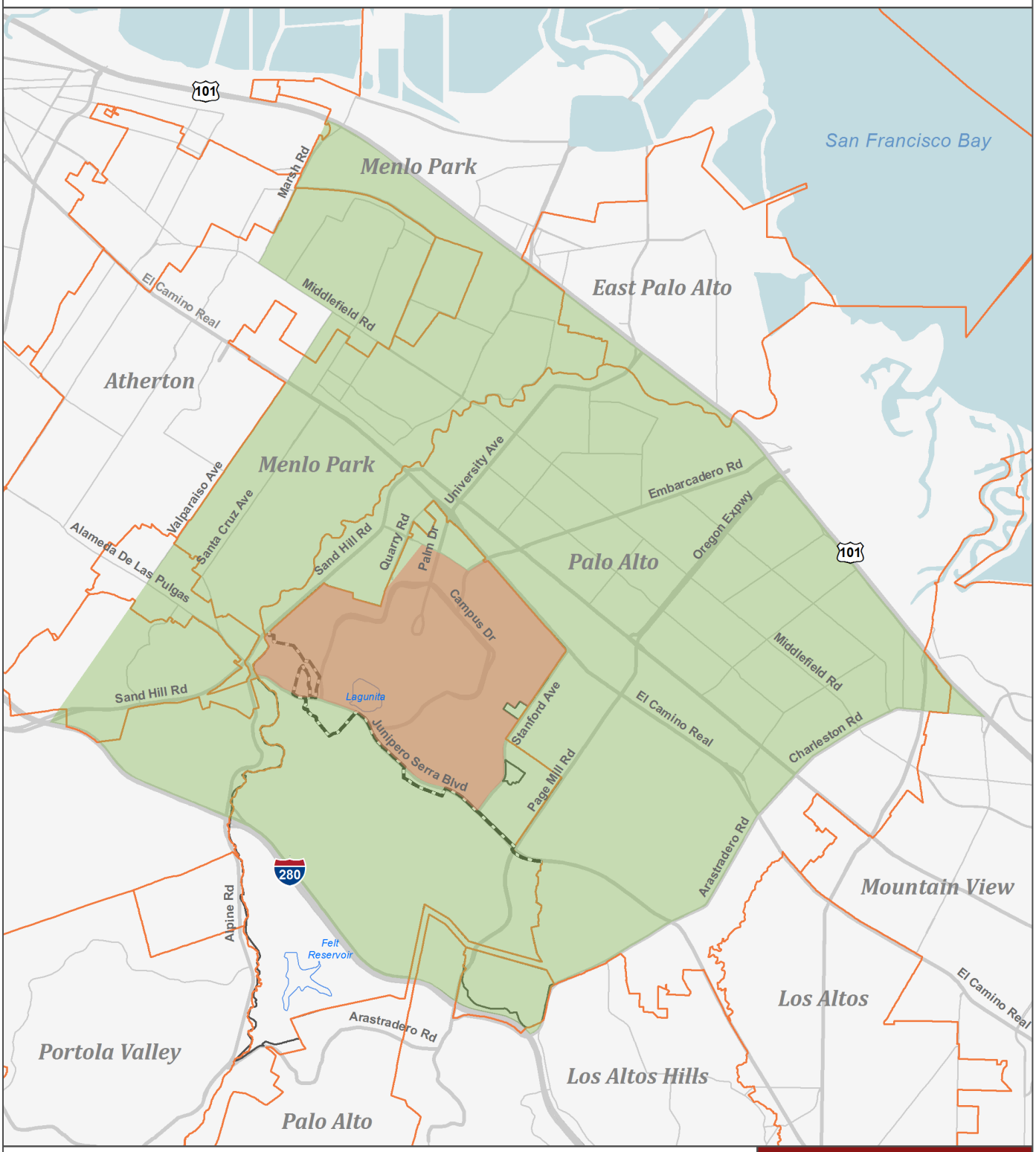
Trip Credits

As required by Community Plan policy C-8, 2000 General Use Permit Condition G.8 specified that the County will recognize participation by Stanford in off-campus trip reduction efforts and credit reduced trips towards Stanford's attainment of the No Net New Commute Trips goal. Under this condition, Stanford can receive credits commensurate with the predicted or actual number of trips reduced and the proportion of the cost of the program that Stanford is contributing. Trip reduction must occur in the area between U.S. Highway 101, Valparaiso Avenue/Sand Hill Road, Marsh Road, Interstate 280, and Arastradero Road/Charleston Road (see **Figure PD.6**). The County Planning Office determines the appropriate trip credit and monitoring methodology for each program in which Stanford proposes to participate, and proposals are presented to the Community Resource Group prior to any determination by the County Planning Office.

Stanford proposes to continue to recognize credits for off-campus trip reductions efforts as specified by Community Plan policy C-8 and 2000 General Use Permit Condition G.8 with two minor modifications. First, Stanford proposes a clarification that reduction of an off-campus trip can be recognized as long as one terminus for the trip is within the boundary described by the condition. For example, if Stanford runs a shuttle to East Palo Alto and an East Palo Alto resident rides that shuttle to a business in Palo Alto, a vehicle trip will have been removed within the targeted geographic boundary.

Second, Stanford proposes that funding of off-campus circulation infrastructure improvements may qualify for trip credits as long as the improvements would enhance safety or increase mobility for pedestrians, bicyclists or transit users within the local impact area. For example, funding roadway widening or modifications to add transit vehicle or bicycle lanes or to add signals to improve pedestrian or bicycle safety could qualify for trip credits under this approach if approved by the County. Any proposal for such credits would be accompanied by evidence demonstrating how the infrastructure project would remove vehicular trips from the local impact area.

Figure PD.6: Cordon Credit Area



Funding for Off-Campus Trip Reduction Programs

Under the 2000 General Use Permit, if the cordon counts, as modified by trip reduction credits, exceed the baseline volume by 1% or more for any two out of three consecutive years, mitigation of impacts to intersections is required.

The Stanford Community Plan includes an implementation recommendation (measure C(i)(9)) specifying that if Stanford does not meet the No Net New Commute Trips goal, the County should require Stanford's contribution toward intersection improvements at impacted locations "or equivalent funding toward other transportation impact mitigation efforts, to a degree proportional to the effect of the new development on future traffic levels."

Because trip reduction is preferable to intersection improvements, Stanford proposes that, for the 2018 General Use Permit, it's first priority would be to take steps within its own control to reduce trips through trip reduction measures and trip credits; however, if it cannot achieve the No Net New Commute Trips goal using those two means, Stanford would be given the option of achieving No Net New Commute Trips by funding other entities' trip reduction programs before applying such funds to its proportionate share of intersection improvements. Payment would be made to an account managed by the County Planning Office that would be used to fund off-campus projects that encourage and improve use of alternative transportation modes or otherwise reduce peak period traffic, including but not limited to transit improvements, that directly or indirectly would benefit the local impact area. This fund also could be used for transportation improvements that increase safety and mobility for pedestrians, bicyclists and transit users.

Stanford proposes that the amount of the payment for each exceeded trip be based upon the dollar amount that otherwise would be expended for intersection improvements required to mitigate the effects of development under the 2018 General Use Permit. Such a payment program is consistent with Stanford Community Plan implementation measure SCP-C (i)(9).

To calculate the annual payment on a per-trip basis, the total amount of Stanford's fair share contribution to all intersection improvements would be divided by 17, to reflect the number of years that the 2018 General Use Permit is expected to be in effect. The resulting quotient would then be divided by the number of peak hour, peak direction vehicle trips anticipated to occur absent the No Net New Commute Trips goal. That per-trip dollar amount times the number of trips exceeding the goal would constitute the payment necessary. In no event would Stanford be required to pay cumulatively over the time period of the 2018 General Use Permit more than the total amount of its fair share contribution toward improvements at impacted intersections and roadways.

7.2 Housing Linkage

The Stanford Community Plan recognizes that provision of on-campus housing reduces vehicle trips and helps in achieving the No Net New Commute Trips goal. The 2000 General Use Permit ensured that Stanford construct on-campus housing on pace with academic growth by including a housing linkage ratio. Stanford proposes to maintain the same housing linkage ratio as was identified by Condition F.8 in the 2000 General Use Permit (see **Table 5**). Stanford would be required to build housing units at the rate of one unit/bed per 826 net new square feet of academic development, or a total of 2,753 housing units/ beds by the time of completion of the requested academic square footage. Interim milestones must be met at each 500,000 square feet of academic development to ensure housing keeps pace with academic facility growth.

Table 5: Proposed Housing Linkage

Academic and Academic Support Space (net new gsf)	Housing Units/Beds at 1/826 net new gsf	Cumulative # of Housing Units/Beds
0 – 0.5M	605	605
0.5 – 1.0M	605	1,210
1.0 – 1.5M	605	1,815
1.5 – 2.0M	605	2,240
2.0 - 2.275M	333	2,753

7.3 Affordable Housing

7.3.1 Affordable Housing on Stanford Lands

Stanford anticipates continuing to build affordable housing on its campus lands. The two recent Santa Clara County General Plan's Housing elements quantify the affordable housing units that Stanford constructed since 2000 and recognize that Stanford provided 816 graduate student housing units at the low and very low income affordability level from 2000-2014. The General Plan's Housing element states that the County credited those 816 affordable housing units toward its Regional Housing Needs Allocation (RHNA). Stanford charges student rents that are 40% below the rents currently charged in the local market.

Of the 3,150 housing units/beds that Stanford has applied for, Stanford estimates that 900 new beds would be used to house graduate students. For RHNA purposes, an affordable housing unit is defined by a unit that contains both beds and a kitchen. Based on past graduate student housing projects at Stanford, 900 new graduate student beds conservatively would equate to approximately 450 affordable units.

The value of providing affordable housing can be quantified by calculating the subsidy required to construct such a unit, which is the cost of the unit minus the return one would expect from the below market rental income to be charged. The estimated value of the affordable housing subsidy required to construct 450 units affordable to moderate income residents is $103 million.

The subsidy for each affordable housing subsidy per unit is estimated to be approximately $229,325. This estimate is based on affordable housing and supportable debt at the moderate income level, as shown in **Table 6**. The average development cost for a two-bedroom unit is estimated to be $534,525, based on development budgets for six comparable affordable housing projects in California. The amount of supportable debt per unit, or the amount of private financing a rental unit can undertake based on rent charged, is estimated to be $305,201 per unit based on maximum affordable rent at the moderate-income

level, less vacancy and operating expenses, and assuming a debt coverage ratio of 1.25, an interest rate of 4.86%, and 30-year mortgage term. The difference between the $534,525 development cost and the $305,200 supportable debt amount is the $229,325 per unit subsidy required to provide these units to moderate income residents. 450 units is multiplied by $229,325 yields approximately $103 million in affordable housing subsidies.

Table 6: Affordable Housing Subsidy

Total Affordable Unit Development Cost for a 2-Bedroom Unit[a]	**$**	**534,525**
Moderate Income (81-120% AMI), Santa Clara County, 2016		
Maximum Monthly Rent	$	2,807
Annual Income	$	33,687
Less Vacancy	$	(1,684)
Less Operating Expense per Unit	$	(7,574)
Annual Net Operating Income per Unit	$	24,428
Supportable Debt	$	305,201
Affordable Housing Subsidy Needed ("Unsupportable Debt")	$	229,325

[a] Unit development costs and net operating expenses per unit are based on development budgets for six affordable housing projects totaling 368 units that submitted requests for funding to the California Tax Credit Allocation Committee in 2015. Household incomes are based on those published by the California Department of Housing and Community Development for 2016. Supportable debt refers to how much private financing a rental unit can undertake, based on rent charged. Assumptions include a debt coverage ratio of 1.25, an interest rate of 4.86% and a 30-year mortgage term.

By dividing the $103 million subsidy amount by the 2,275,000 square feet of academic and academic support space proposed for the 2018 General Use Permit, the construction of 450 affordable graduate student units equates to approximately $45 in affordable housing subsidies provided per square foot of net new academic and academic support space.

7.3.2 Affordable Housing Contribution to County-Administered Fund

In addition to building affordable housing, Stanford is also offering to continue its contribution to the Stanford Affordable Housing Fund, maintained and distributed by the County to subsidize affordable housing in the community.

Commercial linkage fees are adopted at the local level and are imposed on development projects to generate funds for another entity, most often a nonprofit housing developer, to build affordable housing within a community. The linkage fees are determined through a nexus study that shows how there is a connection between the construction of new commercial buildings and need for affordable housing, and that the proposed fee is roughly proportional to the impact the project is creating. Each nexus study adjusts the fees for a specific community, based upon the feasibility of being able to pay the fee and still make a profit.

Here, Stanford already provides affordable housing on its campus. Further, it is important to note that nonprofit institutions, including college and universities, rarely are asked to pay affordable housing linkage fees. For example, City of Palo Alto expressly exempts colleges, universities and hospitals from the City's affordable housing linkage fee. Almost no cities in California charge fees to educational or institutional facilities. Santa Monica does charge an affordable housing fee for new educational and cultural facilities; that fee is $10.23 per square foot.

The 2000 General Use Permit tied development of academic and academic support facilities to the City of Palo Alto for-profit developer commercial linkage fee. That fee rose dramatically shortly after approval of the 2000 General Use Permit, increasing from an initial amount of $4.12 per square foot to $15 per square foot in the second year of the 2000 General Use Permit. The fee then increased with inflation each year thereafter.

The affordable housing fee that other jurisdictions require for-profit commercial developers to pay varies, with some cities such as San Diego and Sacramento charging a nominal fee of approximately $2 per square foot for office development. The fee is higher in Oakland and West Hollywood, ranging from $5 to $8 per square foot. Locally, Cupertino and Redwood City's fees are currently $20 per square foot, and Menlo Park and Sunnyvale's fees are currently $15 per square foot. The highest fee for office development is in Mountain View at $25 per square foot. Palo Alto's fee is currently $20.37 per square foot. The City of Palo Alto is considering raising its fees for office and research and development space, but not for other types of commercial development.

In order to provide greater certainty with regard to academic facility planning compared to being tied to the Palo Alto commercial fee, and to recognize that, unlike for-profit commercial developers, Stanford builds affordable housing units on its campus that qualify for Regional Housing Needs Assessment credit, Stanford proposes to contribute $20 per net new square feet of academic and academic support space to the County-administered Stanford Affordable Housing Fund, subject to an annual increase with inflation.

Assuming 2,275,000 square feet of net new academic and academic support space over the life of the 2018 General Use Permit, taking inflation into consideration, this proposed contribution is expected to generate an estimated $56 million in total subsidies that Stanford would contribute to the County-administered Stanford Affordable Housing Fund over the life of the 2018 General Use Permit.[5]

Stanford further proposes that this contribution towards affordable housing should support development of affordable housing within one-half mile of a major transit stop or a high-quality transit corridor [as defined by Senate Bill (SB) 375], and should not be limited to within a six-mile radius of campus as it is under the 2000 General Use Permit. SB 375 defines a high-quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. By encouraging affordable housing near major transit corridors, the fee not only would promote affordable housing, it also would be consistent with statewide programs for reduction of greenhouse gas emissions.

[5] The contribution is increased annually by inflation, which was calculated based on the 10-year historic average based on data from the US Bureau of Labor Statistics, 1.95%.

8.0 OTHER COMMITMENTS

8.1 Sustainability Programs

Stanford incorporates sustainability practices and innovation into every aspect of campus life. The University has undertaken major ongoing initiatives to reduce energy and water use, apply stringent environmental standards to all new buildings, encourage sustainable living, promote low-impact transportation, conserve natural resources and decrease waste, while growing during the 2000 General Use Permit.

Please see Section 8.8 of the Background Conditions Report for a description of Stanford's current sustainability programs.

Stanford plans to continue to implement sustainability programs to continue its commitment to sustainability. In addition, to minimize impacts of development under the 2018 General Use Permit, Stanford commits as follows:

- During the life of the 2018 General Use Permit, Stanford will meet final Tier 4 standards for all construction equipment, except for chainsaws and paving phase equipment.
- All Marguerite buses will be electric by 2035.
- 70% of Stanford Land Buildings and Real Estate and Bonair fleet vehicles will be electric by 2035.
- During the life of the 2018 General Use Permit, Stanford will rely heavily on low-water-demand, native plants for new landscaping.

8.2 Contribution to Off-Campus Recreation Facilities

Stanford analyzed whether the 2018 General Use Permit's impacts to park and recreation facilities would be significant, such that substantial physical deterioration of the facility would occur or be accelerated. Please see Tab 16 for additional information on this topic.

Stanford provides excellent sports, fitness and recreation facilities for its faculty, staff and students. In addition, designated Campus Open Space provides park and recreation facilities in excess of planning standards for residential communities. The 2018 General Use Permit would not necessitate new park and recreation facilities.

Occasionally, some campus residents visit public park and recreation facilities in neighboring communities. Data from a survey of Stanford campus residents were analyzed to estimate the potential for increased visitorship to these public facilities resulting from growth in campus residents under the proposed 2018 General Use Permit. This analysis suggests that there will be no substantial deterioration of public park and recreation facilities associated with the proposed 2018 General Use Permit.

While no park would experience substantial deterioration as a result of the 2018 General Use Permit, Stanford recognizes that increased daily visits to the four College Terrace parks combined would be higher

than the increase in visitors experienced at other neighborhood parks. This is likely due to the proximity of these parks to the areas of the campus in which families with children are most likely to reside. Stanford also recognizes that these small neighborhoods parks are not managed by reservation systems or other controls and that uncontrolled visitorship may result in some additional maintenance costs not previously identified by the City of Palo Alto. As a voluntary good neighbor measure, Stanford will provide to the City of Palo Alto a one-time payment equivalent to the capital maintenance budget needs previously identified by the City of Palo Alto (approximately $300,000) to provide for an additional maintenance cycle and ensure that these parks remain in good condition.

Improvements identified in the Palo Alto Capital Budget were:

- Tennis court upgrade ($215,000 planned for both Terman Park and Weisshaar Park, this good neighbor offer assumes half the cost, or $107,500, is for Weisshaar Park), planned for FY 2021.

- Planned infrastructure improvements to upgrade and renovate safety and accessibility of the playground and other features in Cameron Park, $159,994, planned for FY 2020.

9.0 PROPOSED COUNTY APPROVALS

Stanford requests the following County approvals.

9.1 Stanford Community Plan Amendments

Stanford does not seek to modify any strategies, policies or implementation measures in the Community Plan.

Stanford requests the following amendments to the Community Plan's figures, tables and background text:

Stanford requests an amendment to the Community Plan land use designation of the Driving Range Site from Campus Residential – Medium Density to Academic Campus to reflect existing and future use of the site (see **Figure PD.7**).

Stanford requests an amendment to the Stanford Community Plan land use designation for nine faculty houses from Academic Campus to Campus Residential – Low Density to reflect the existing and future use of these houses (see Figure PD.7).

Stanford proposes the following changes to the Housing chapter:

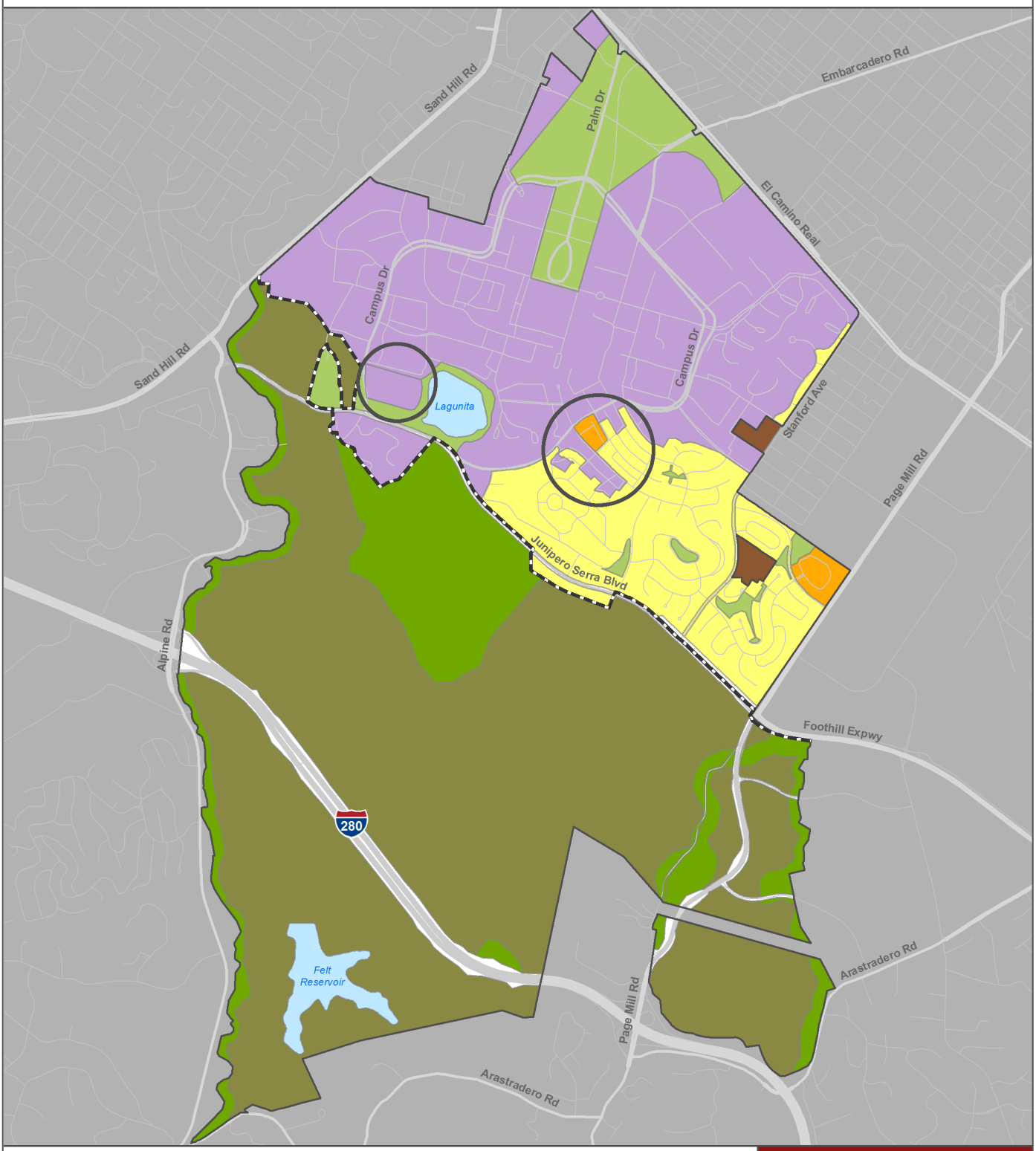
- Remove outdated text under Strategy #1 of the Housing chapter, Figure 3.1 showing Potential Housing Sites and associated Tables 3.2 and 3.3.

- Remove references in SCP-H 2 to Table 3.2 and Figure 3.1.

The text, figure and tables proposed for deletion are shown in **Appendix A**. They describe the housing sites, types and distribution anticipated when Stanford applied for the 2000 General Use Permit. Several of those sites were not developed with housing and are no longer anticipated to be used as housing sites. The text, tables and figure identifying specific housing sites is not necessary. The County General Plan Housing element contains a more frequently updated description of planned housing supply throughout the County, including on Stanford lands. The most recent Housing element update was completed in 2015, and the next will be completed in approximately 2023 (reflecting the approximate 7-year planning cycle). The County's 2015 Housing Element (pages 99 to 102) includes a capacity chart and capacity map showing the number of units built and approved, and remaining housing capacity on Stanford lands in unincorporated Santa Clara County. The capacity chart and map replaces the function of Figure 3.1 and Tables 3.2 and 3.3 in the Stanford Community Plan Housing element.

The redlined pages from the Housing chapter are provided in Appendix A.

Figure PD.7: Land Use Designations - Proposed



Land Use Designations

- Academic Campus
- Campus Residential - Low Density
- Campus Residential - Medium Density
- Campus Open Space
- Open Space and Field Research
- Special Conservation
- Reservoir
- Public School
- Proposed Changes
- Academic Growth Boundary

Stanford University

0 0.5 Miles

Stanford University, LBRE/LUEP
November 5, 2016

N

9.2 Zoning Map Amendment

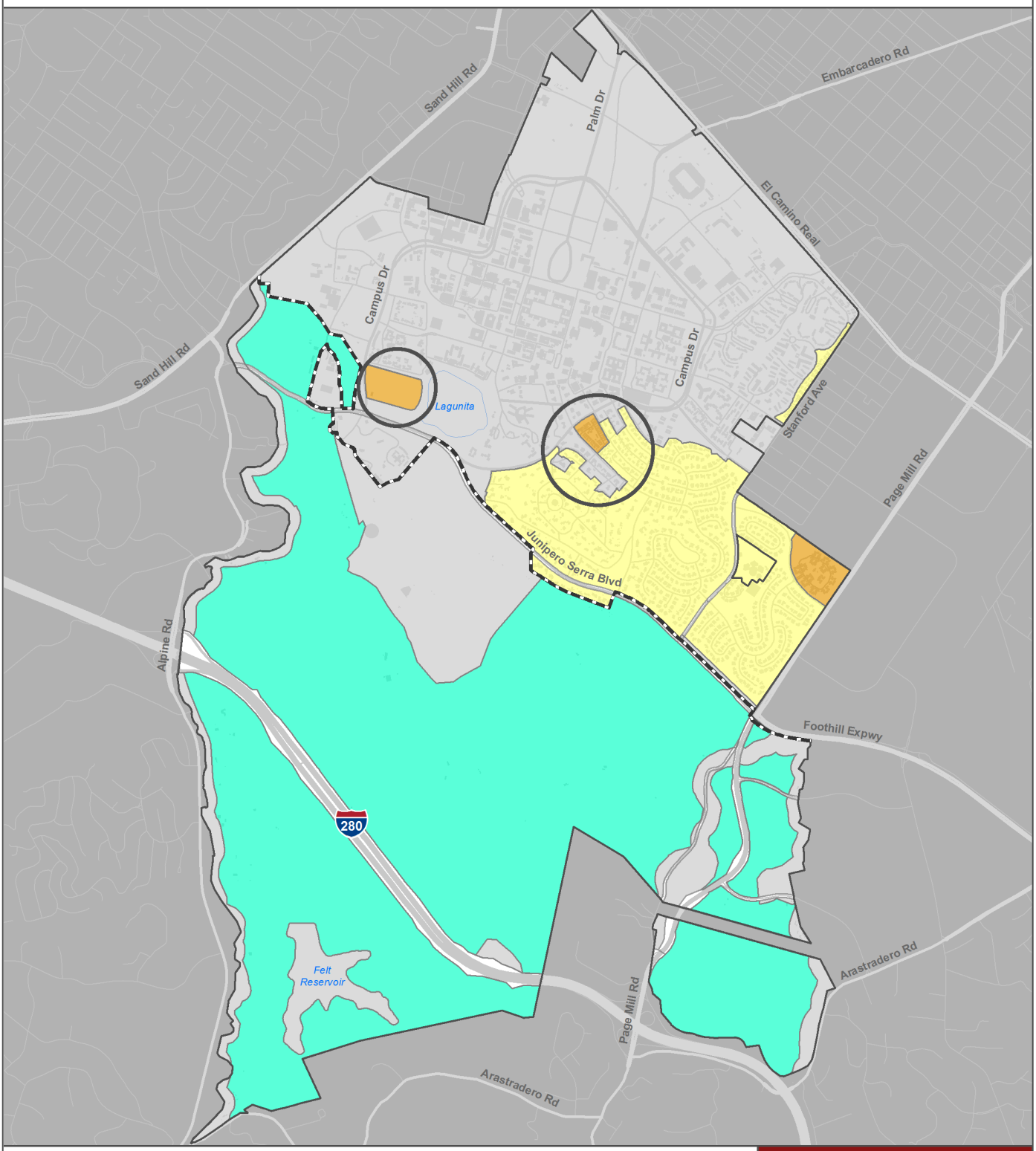
Stanford requests an amendment to the County zoning map to change the Driving Range Site from R3S to A1 to reflect existing and future use of the site (see **Figure PD.8**).

Stanford also requests an amendment to the County zoning map to change nine faculty houses from A1 to R1S to reflect existing and future use of these sites (see Figure PD.8).

9.3 2018 General Use Permit

Stanford requests that the County issue a new General Use Permit authorizing continuation of existing uses and Stanford's development proposal described in Section 6.0. Stanford also requests that the 2018 General Use Permit include the conditions of approval described in Section 7.0.

Figure PD.8: Zoning Districts - Proposed



Zoning Districts

- A1 | General Use
- OSF | Open Space and Field Research
- Academic Growth Boundary
- R1S | Low-Density Campus Residential
- R3S | Medium-Density Campus Residential
- Proposed Changes

Stanford University

0 0.5 Miles

Stanford University, LBRE/LUEP
November 5, 2016

N

APPENDIX A

Proposed edits to the Community Plan Housing chapter

Strategies, Policies and Implementation

Strategy #1: Increase the Supply and Affordability of Housing

The Stanford campus provides one of the most significant opportunities for substantial amounts of new housing development in Santa Clara County. This strategy expresses the fundamental objective of the Community Plan to increase the general supply of housing on campus. Sub-strategies similar to those contained within the Housing Chapter of the General Plan for countywide housing issues elaborate on the principal strategy. These involve planning for housing, expediting the actual construction of needed housing, and augmenting affordability programs.

Sub-Strategy # 1A: Plan for a More Adequate and Balanced Housing Supply

Planning for a more adequate and balanced housing supply involves both supplying more housing types that meet various Stanford population needs as well as providing housing that is more affordable to the target populations. Strategy 1A emphasizes the importance of designating lands for housing development, as a necessary precursor to actual development. 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.

Specifically, the Community Plan provides for increased housing supply to students and faculty, the two groups which have traditionally been the priority populations for campus housing. The Plan also provides more balance in priorities for various populations, such as increased housing for medical residents and postdoctoral fellows, who have traditionally not been served by campus housing.

This Community Plan further recognizes the differing characteristics between student housing areas and faculty/staff housing areas. 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 uses.

~~Within the Academic Campus land use designation, this plan identifies several locations for new student housing, particularly in Escondido Village and an area near existing student housing known as the "Searsville Block" that is currently occupied by~~

~~13 faculty homes. Other potential sites are also identified near existing student housing areas. The Community Plan also defines locations along Quarry Road for medical resident and postdoctoral fellow housing.~~

In contrast to the student housing areas, the faculty/staff residential areas more closely reflects a traditional residential neighborhood. The density of most single family portions of the area 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.

In recognition of the residents' interest in maintaining the character of the faculty/staff 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. ~~The plan also identifies two major sites for new faculty/staff residential neighborhoods at the medium density designation. The first is located on a field northeast of the Red Barn and is known as the "Stable Site." The second is located on the existing driving range near Lake Lagunita.~~

Developing substantial amounts of additional housing will require development of significant undeveloped sites and/or intensification of use in existing housing areas through redevelopment. ~~Opportunity sites for housing development are identified under this strategy in the table below and should be the focus of future housing development on the campus.~~ The housing sites as shown in ~~this plan in Table 3.2 below~~ the Housing Element of the County's General Plan do not preclude the identification of other locations for housing inside the AGB in the future, particularly within the Academic Campus land use designation. The Community Plan may also be amended to identify other low- and medium-density residential areas appropriate for housing development over time to facilitate appropriate housing development. No amendment to the Community Plan is needed to identify housing areas within the Academic Campus land use designation.

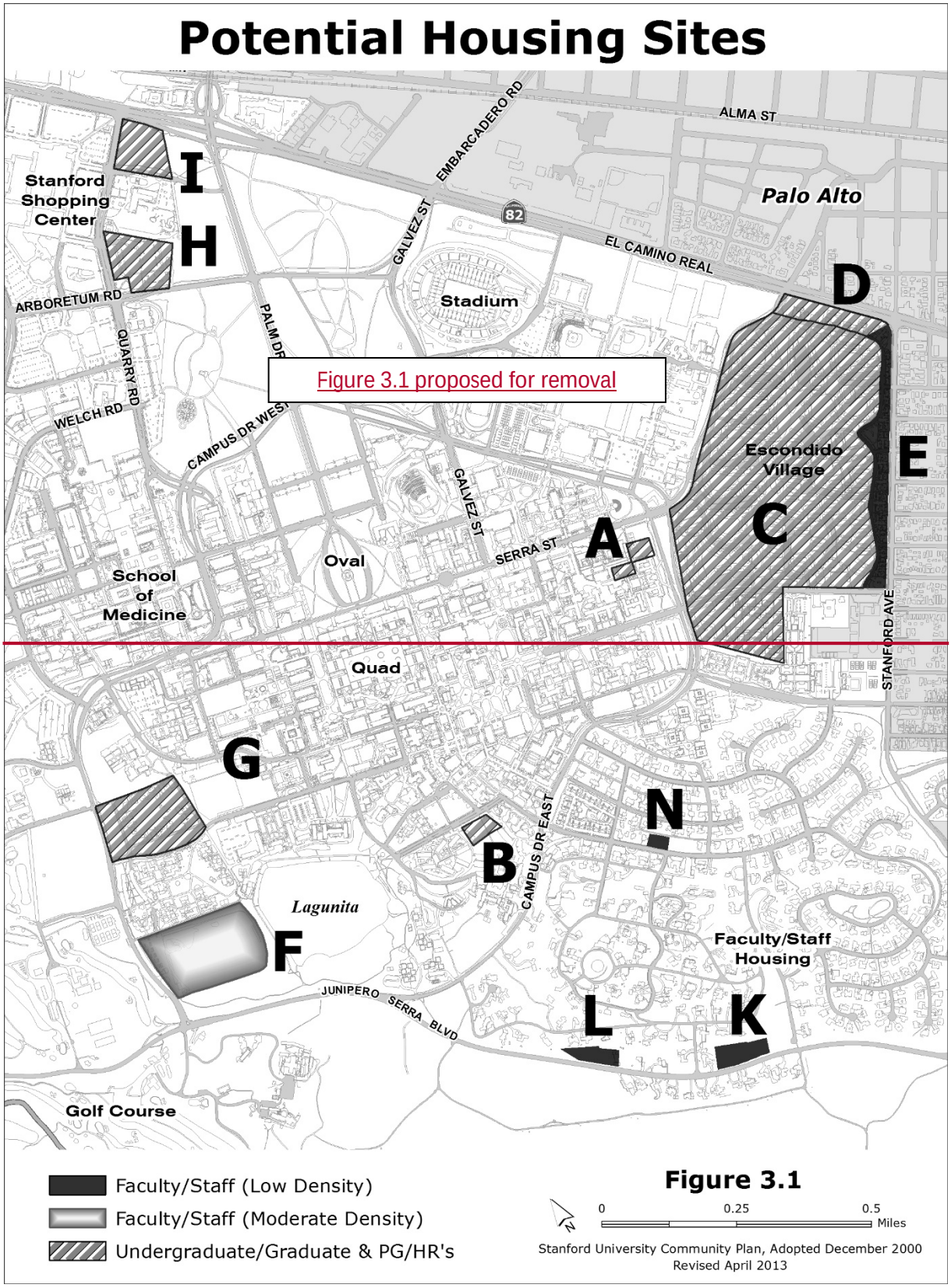
Table 3.2: Proposed Housing Development Potential

Code	Location	Acres	# Units
A	Manzanita	1.6	100
B	Mayfield/Row by Florence Moore area	1.3	125
C	Escondido Village: Infill	116.5	1,495
D	Escondido Village: El Camino Real Frontage	4.3	250
E	Escondido Village: Stanford Avenue	9.4	9-75
F	Driving Range	17.5	102-195
G	Searsville Block W/removal of units	12.8	380 (-13)389
H	Quarry and Arboretum	8.0	200
I	Quarry & El Camino Real	6.2	150
J	The Lower Knoll	---	---
K	Lower Frenchman's	2.2	2-18
L	Gerona/Junipero Serra Blvd.	1.5	1-12
M	Dolores	---	---
N	Mayfield	1.3	1-9
O	Stable Site	---	---
	Totals (14 sites)	**182.6**	**2,824 to 3,018**

Table Notes: Previously identified sites including the Lower Knoll and Dolores sites have been eliminated from consideration. The 200 units of potential housing in the Lower Knoll site have been transferred to within the Escondido Village: Infill site (site C).

The Driving Range (site F) has been converted from graduate student housing as originally identified to faculty/staff housing to compensate for a reduction in the size of the Stable Site. The 350 units identified for the Driving Range site have been transferred to Searsville Block (site G) and Escondido Village: Infill (site C). In 2013, the 372 units identified for the Stable Site were removed from the faculty/staff housing category and added to the student housing category. In 2015, the housing type classifications were removed to provide greater flexibility in meeting campus housing needs; however, the General Use Permit retained the requirement that no more than 668 of the housing units can be constructed for faculty and staff and no more that 350 of the housing units can be constructed for postdoctoral residents and medical residents.

~~**Figure 3.1 – Potential Housing Sites**~~



Potential housing sites by resident category are described in Table 3.3:

Table 3.3: Planned Housing and Sites

Planned Housing	Sites
New housing for single students, including: • apartments or group housing for graduate students or postgraduate fellows, and • dormitory spaces for single undergraduate students.	Escondido Village Mayfield/Row Searsville Block area Manzanita Quadrangle (undergrads)
Apartments for hospital residents and postdoctoral fellows	Arboretum and Quarry Rd. corner Quarry Rd. and El Camino Real
New units for faculty and staff, depending on the mix and densities	Driving Range Escondido Village: Stanford Ave. area Sites in existing campus residential neighborhoods (Mayfield, Lower Frenchman's, Gerona/Junipero Serra Blvd.

Policies

SCP-H 1
Promote a variety of housing types and supply adequate to meet the needs of faculty, staff, students, postgraduate fellows, and hospital residents.

SCP-H 2
Designate sufficient campus land at appropriate densities for student, faculty, and staff housing, as identified in Table 3.2 and Figure 3.1, Proposed Housing Development Potential and Sites.

SCP-H 3
Maintain student and postgraduate housing as an integral part of the academic areas of the campus.

SCP-H 4
Develop housing at densities that make more efficient use of land and enhance the affordability of housing.

4 | Background Conditions Report

SUMMARY OF REVISIONS, APRIL 2017

This April 2017 version of Tab 4 – Background Conditions Report contains the following revisions to the version provided to Santa Clara County in November 2016:

- As directed by Santa Clara County staff, several sections have been revised to exclude the housing units approved for the Escondido Village Graduate Residences project. This project would be under construction by 2018, but is not anticipated to be occupied until 2020.
- Sections 1.0 on Housing has been updated to clarify Fall 2015 and Fall 2016 built housing units.
- Section 4.1.2 on Housing has been updated to reflect students residing on campus, rather than constructed beds.
- Section 5.1.1 has been updated to reflect the latest number of electric vehicle charging stations available.
- Figure 6.4 was updated to correct minor errors and include footprints of recently completed buildings.
- Section 7.2 has been updated to provide water quality information for surface waters, detention capacity estimates for 2018, and clarification regarding compliance under the State Water Resources Control Board NPDES General Permit.
- Section 8.2 has been updated to reference the California Building Code.

1.0 OVERVIEW

This Background Conditions Report serves two primary functions. First, it describes how Stanford has implemented the strategies and policies of the Stanford Community Plan through compliance with the 2000 General Use Permit over the course of the past 15 years. Second, it updates text, tables and figures in the Stanford Community Plan where such updated information may be relevant to environmental review of Stanford's application for the 2018 General Use Permit.

The Background Conditions Report describes the academic and academic support facilities, housing, parking spaces, and child care and community centers constructed since 2000, as well as the quantities anticipated through completion of the development authorizations in the 2000 General Use Permit. It also reports on compliance with the 2000 General Use Permit's conditions of approval, including achievement of the No Net New Commute Trips goal and Stanford's comprehensive programs to minimize water use, prevent flooding and recharge groundwater. Key information includes the following:

Growth Rate
Of the 2,035,000 net square feet of new academic and academic support uses authorized by the 2000 General Use Permit, Stanford has constructed or obtained building permits for approximately 1.4 million net square feet of new and expanded facilities.
During this same period, Stanford constructed approximately 900,000 square feet of student housing facilities and 65 faculty/staff residences.
Stanford estimates that it will secure permits for the academic square footage and housing authorized by the 2000 General Use Permit by 2018. Assuming completion in 2018, Stanford's rate of growth over the duration of the 2000 General Use Permit for both academic space and student housing (exclusive of the Escondido Village Graduate Student Residences project) will equal Stanford's historic growth rate, which has averaged about 200,000 square feet per year.
Compact Development Patterns
This growth has occurred almost entirely within the Academic Growth Boundary established by the Stanford Community Plan.
As required by the Stanford Community Plan and General Use Permit, in 2009 Stanford prepared and the County approved a Sustainable Development Study. That Study demonstrated that even if Stanford were to grow at a rate substantially higher than its historic growth rate, Stanford can continue to site its new facilities within the Academic Growth Boundary through 2035.
The Sustainable Development Study found that Stanford's practice of renovating underutilized sites by placing parking below ground and increasing building intensity has resulted in compact development patterns that promote sustainable land uses and protect open space and natural resources.

Monitoring
The County Planning Office has prepared annual reports documenting Stanford's development activity and compliance with the 2000 General Use Permit. The Community Resource Group established by the Board of Supervisors reviewed each plan before it was presented to the Santa Clara County Planning Commission for its review and acceptance.
The 2000 General Use Permit divides the Stanford campus into 10 development districts. The County has tracked development activity by development district and has approved requests to redistribute square footage where required. Redistribution has not resulted in new or more severe significant impacts than were described in the 2000 General Use Permit Environmental Impact Report.
New Zoning Districts
The County created three new zoning districts on the Stanford campus. The majority of the land within the Academic Growth Boundary remains zoned A1, a general base district. However, as required by the Stanford Community Plan, the County enacted low-density and medium-density residential zoning for specific campus residential neighborhoods. The County also enacted Open Space/Field Research zoning for most of the land outside the Academic Growth Boundary. That zoning carries strict restrictions on land uses and heightened requirements for visual simulations prior to development of new structures in the Stanford foothills.
Housing
Under the 2000 General Use Permit, Stanford constructed approximately 2,019 net new housing units/student beds by Fall 2015, and 2,404 net new housing units/student beds by Fall 2016. Housing construction has kept pace with academic development, as required by the County's linkage policy specifying that by the time each 500,000-square-foot increment of academic and academic support facilities is constructed, Stanford must have constructed approximately 600 housing units/student beds.
As permitted by the 2000 General Use Permit, Stanford recently obtained authorization for an additional 1,450 student beds beyond the 3,018 housing units/student beds initially authorized by the 2000 General Use Permit. This additional authorization will be used to provide housing for graduate students, enhancing housing affordability and minimizing commute trips to and from the Stanford campus.
The Board of Supervisors approved two amendments to the Stanford Community Plan and General Use Permit to provide greater flexibility as to the type of housing constructed on campus. It also changed the designation of one of the medium-density residential sites to the Academic Campus designation.
The Santa Clara County General Plan's Housing element recognized that Stanford constructed a total of 816 affordable units during the 2000 GUP, comprising 298 graduate student housing units recognized as affordable to very-low-income individuals and 518 graduate student housing units affordable to low-income individuals. The County credited all of these units toward its Regional Housing Needs Allocation in the Housing Element of its General Plan.

Stanford also has used its land to provide substantial amounts of housing near the campus, including:

- 628 units at the Stanford West apartments
- 388 independent living senior housing units at the Vi
- 180 condominiums and 68 single-family residences under construction on California Avenue in Palo Alto; and
- 70 below-market housing units on El Camino Real.
- Stanford also is pursuing approvals for transit-oriented housing in Menlo Park.

Stanford has contributed $25.7 million to fund additional affordable housing in the surrounding communities. To date, $13.3 million has been disbursed to five projects totaling 319 units. Stanford anticipates that by completion of the 2000 General Use Permit it will have contributed a total of $39 million to this fund.

Transportation and Parking

Through its award-winning transportation demand management programs, Stanford has decreased its drive-alone rate from 72% in 2002 to 50% today. These programs have enabled Stanford to achieve the Stanford Community Plan's goal of adding no net new commute trips.

Stanford, Stanford Campus Residential Leaseholders and Santa Clara County have completed designs for traffic calming improvements on Junipero Serra Boulevard to solve existing noise, access and safety issues.

Stanford has installed roundabouts at three internal intersections to improve safety, reduce congestion, and reduce pollution and fuel use.

Of the 2,300 net new parking spaces authorized by the 2000 General Use Permit, Stanford anticipates that by 2018 it will have constructed 820 spaces; 1,480 spaces will remain. Stanford has seen decreases in car ownership by students residing on campus and in the ratio of parking permits purchased by commuters compared to the square footage of campus academic and academic support facilities.

Open Space

Stanford has maintained approximately 260 acres of designated Campus Open Space, including the Arboretum, the Oval and the area surrounding Lagunita.

Although the 2000 General Use Permit contemplated up to 15,000 square feet of new academic and academic support facilities outside of the Academic Growth Boundary, Stanford has limited new square footage outside the Academic Growth Boundary to a 42-square-foot gatehouse near the Dish Trail and restoration of an existing 4,690-square-foot mothballed brick building on the campus side of Junipero Serra Boulevard.

The Stanford Community Plan prohibits new structures on lands outside of the Academic Growth Boundary designated as Special Conservation Areas. Stanford prepared, and the County approved, a Special Conservation Area Plan to document mechanisms for protecting habitat and addressing geological hazards in these areas.

Resource Conservation
Stanford has obtained U.S. Fish and Wildlife Service approval of a Habitat Conservation Plan to establish a conservation program that minimizes adverse effects on protected species and provides compensatory mitigation for remaining effects. Based on the requirements of the Habitat Conservation Plan, USFWS issued an Incidental Take Permit in 2013. The California Department of Fish and Wildlife has determined that the Incidental Take Permit is consistent with the California Endangered Species Act. The Habitat Conservation Plan provides compliance with both the federal and state endangered species acts; Santa Clara County has determined the Habitat Conservation Plan replaces the relevant conditions in the 2000 General Use Permit to protect the California tiger salamander.
Stanford has prepared and implemented a comprehensive Water Conservation Reuse and Recycling Master Plan. The Plan demonstrated that Stanford could remain within its San Francisco Public Utilities Commission water allocation through completion of the development authorized by the 2000 General Use Permit. Stanford has far exceeded that goal. Stanford has decreased its potable water use by 30% (2.73 million gallons a day (mgd) in 2000-01 to 1.89 mgd in 2014-15) through a comprehensive program to identify and implement water conservation measures and through replacement of the campus-wide heating and cooling system.
Stanford has addressed storm-water runoff and potential flooding through a comprehensive Storm Drainage Master Plan. Stanford constructed new drainage basins in each campus watershed, creating sufficient capacity to offset increased runoff due to all new impervious surfaces that have been constructed under the 2000 General Use Permit.
Stanford has addressed groundwater through a Campus-Wide Plan for Groundwater Recharge, using Lagunita to infiltrate a greater cumulative amount of water than the amount lost due to impervious surfaces.
Stanford and the County have developed procedures for evaluating campus buildings to determine whether they are historic resources and for ensuring alterations meet the Secretary of the Interior's Standards for Rehabilitation. Eighty-seven properties have been evaluated to determine whether they are eligible for listing on the California Register of Historic Places.

The information in the Background Conditions Report is presented in the same order as the elements in the Stanford Community Plan, starting with Growth and Development and ending with Health and Safety.

2.0 GROWTH AND DEVELOPMENT

The Stanford Community Plan identifies three strategies for growth and development:

- Promote compact development and conservation of natural resources through use of an Academic Growth Boundary.
- Maintain cooperative planning agreements and implementation (e.g., 1985 Land Use Policy Agreement, Stanford Community Plan, Stanford Sustainable Development Study).
- Mitigate and monitor the impacts of growth.

The 2000 General Use Permit conditions to implement these strategies include:

- Condition A.1.b authorizing 2,035,000 net square feet of new academic and support uses
- Condition A.2.c authorizing 50,000 square feet of temporary trailers for temporary surge space during construction activities
- Condition A.3.a authorizing 40,000 square feet of additional building area that may be used for the purpose of new child care or community centers
- Condition C.1 requiring the County to prepare annual reports that summarize Stanford's development activity over the preceding year beginning September 1 and ending on August 31, and document compliance with the conditions of the general use permit
- Condition E.2.b establishing a cumulative maximum of 15,000 square feet of building area in the Foothills development district
- Condition E.5 requiring Stanford to complete and submit for Board of Supervisors approval a Sustainable Development Study

2.1 Academic Building Area

2.1.1 Status of 2000 General Use Permit Non-Residential Square Footage Authorizations

Academic Building Area, Temporary Trailers and Child Care/Community Centers

2000 General Use Permit Condition A.1.b authorizes construction of 2,035,000 net square feet of new academic and academic support uses. In addition, Condition A.2.c authorizes up to 50,000 square feet of temporary trailers for temporary surge space during construction; Condition A.3.a authorizes an additional 40,000 square feet that may be used for new child care and community centers.

As of June 30, 2016, Stanford has not exceeded the 2000 General Use Permit's academic building area authorization. Stanford also remained within the temporary surge space and child care/community center space authorizations established under the 2000 General Use Permit.

Annual Report 15 states that Stanford had constructed or received building permits for 1,397,540 square feet of academic and academic support facilities by August 31, 2015, leaving 637,460 remaining academic and academic support square feet authorized for development under the 2000 General Use Permit. Stanford had constructed 20,224 square feet of temporary trailers, leaving 29,776 square feet remaining. Stanford also had constructed 36,362 square feet of child care and community centers, leaving 3,638 square feet remaining.

Stanford forecasts that these square footage totals will be similar by Fall 2016 because several projects that received planning approval in 2015 and 2016 are currently awaiting grading or building permits. Stanford estimates that it will have received building permits for all remaining square feet by Fall 2018.

Rollover from 1989 General Use Permit Authorization

92,229 square feet of net new academic and academic support space were rolled over from the 1989 General Use Permit to the 2000 General Use Permit. This rollover square footage was expended via various projects, including the Lorry Lokey Laboratory; Center for the Study of Language and Information; Education Program for Gifted Youth; and Building 500.

Academic and Academic Support Project Highlights

Academic and academic support projects constructed under the 2000 General Use Permit are summarized in **Table 1** and shown in **Figure BCR.1** and **Figure BCR.2**.

Table 1: 2000 General Use Permit Academic and Academic Support Project Highlights[a]

Key to Figure BCR.1	Project	Built Area[b]	Reported in GUP Annual Report
Academic Buildings			
1	Carnegie Global Ecology Center	18,000	3
2	Lucas Center Expansion	21,000	3
3	Varian 2	64,000	5
4	Jerry Yang and Akiko Yamazaki Environment and Energy Building	164,000	6
5	Lorry I. Lokey Stem Cell Research Building (SIM 1)	199,000	8
6	Li Ka Shing Center for Learning and Knowledge	104,000	8
7	Spilker Engineering and Applied Sciences Building (previously Center for Nanoscale Science and Technology)	99,000	8
8	Jen-Hsun Huang School of Engineering Center	126,000	8
9	John A. and Cynthia Fry Gunn SIEPR Building	32,000	8
10	Knight Management Center	331,000	9
11	Neukom Building	61,000	10
12	Bioengineering and Chemical Engineering	196,000	12
13	Satellite Research Animal Facility	21,000	12
14	Science Teaching & Learning Center	68,000	15
Arts			
15	Bing Concert Hall	78,000	10
16	Anderson Collection at Stanford	30,000	13
17	McMurtry Art – Art History	84,000	13
Sports and Recreation			
18	Maples Pavilion Addition	18,000	4
19	Arrillaga Family Recreation Center	75,000	4
20	Football Stadium Renovations	33,000	6

21	Arrillaga Outdoor Education and Recreation Center	75,000	12
22	Arrillaga Family Sports Center Addition	28,000	13
Academic Support, Administration, Utilities			
23	Student Services	20,000	2
24	Replacement Central Energy Facility	15,000	13
25	408 Panama Mall	57,000	14

Note:

[a] Table 1 serves as the key to Figure BCR.1.

[b] Project square footage represents new construction and is rounded to the nearest 1,000 gsf. Some of these projects replaced existing academic buildings that were demolished.

Figure BCR.1: 2000 General Use Permit Academic Project Highlights

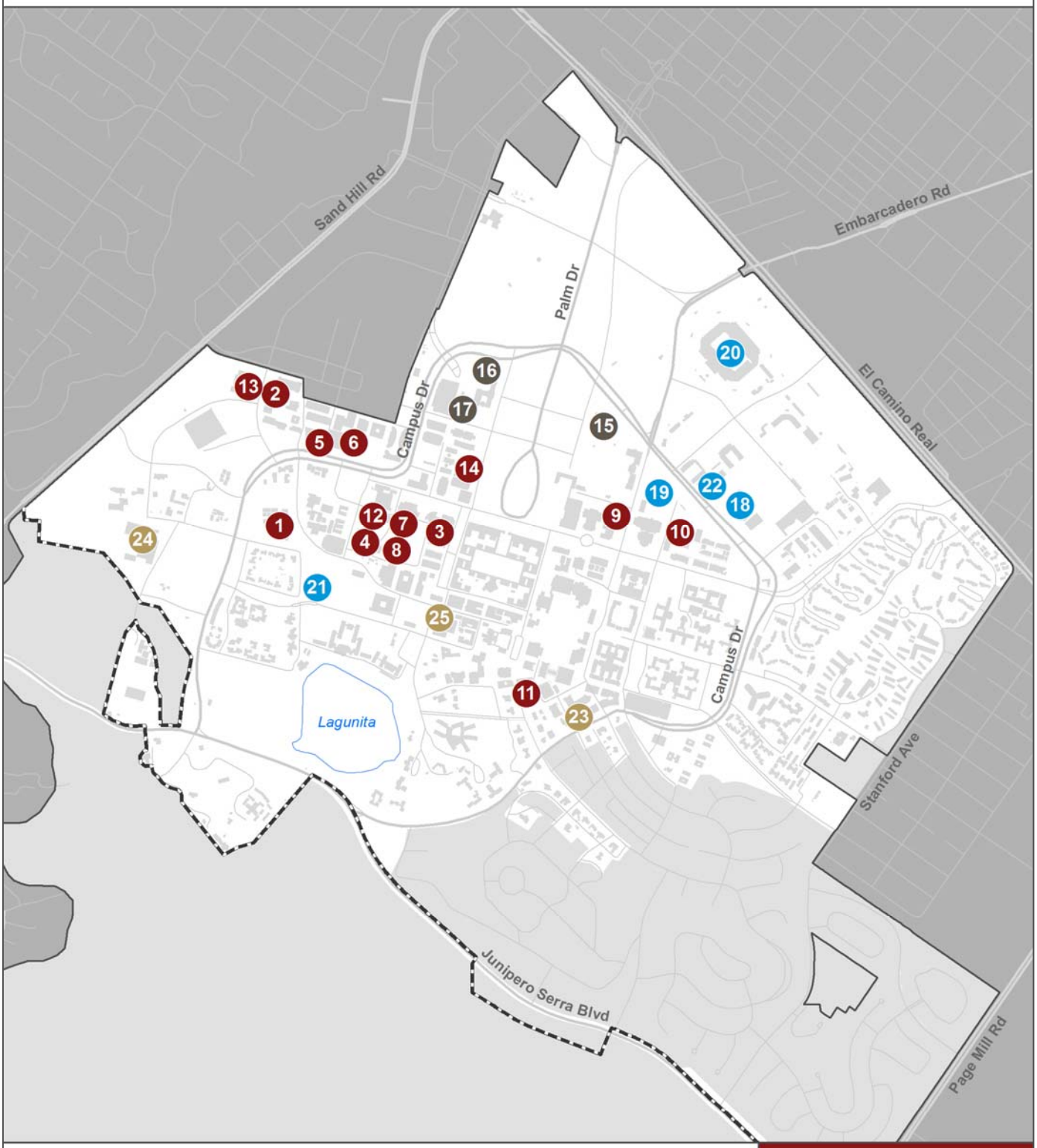


Figure BCR.2: Images of 2000 General Use Permit Academic and Academic Support Project Highlights

Science and Engineering Quad

Arrillaga Outdoor Educational Recreation Center

Lorry I. Lokey Stem Cell Research Building

Knight Management Center

Li Ka Shing Center for Learning and Knowledge

Replacement Central Energy Facility

Bing Concert Hall

McMurtry Art & Art History

2.1.2 Update to Location and Setting Information in the Stanford Community Plan

On pages 2−11, the Stanford Community Plan provides background information regarding the location and setting for future growth at Stanford. This section updates the relevant tables, as of the most recent Annual Report, which provided growth statistics through Fall 2015.

Update to Stanford Community Plan Table 1.1 − Distribution of Stanford Lands across Jurisdictions

Stanford Community Plan Table 1.1 provides acreages of Stanford's lands in Santa Clara County and San Mateo County. Stanford acquired a 35-acre office park in Redwood City in 2005. The acreage of all other Stanford lands in Santa Clara County and San Mateo County has stayed the same.

Updates to Growth Statistics

Stanford Community Plan Table 1.2 provided incremental and cumulative square footages for academic and academic support facilities and student housing during five-year periods from 1875−2000. Faculty/staff housing units are not included in these square footage totals.

Table 2, below, shows the updated incremental and cumulative academic, academic support and student housing square footages at Stanford University. Unlike the original table in the Stanford Community Plan, the square footages in the updated table have been divided into academic and academic support building area and student housing building area. The academic building area totals are based on the square footage of academic and academic support facilities for which building permits had been obtained by September 1 of each relevant year. The student housing totals are based on the square footage of student housing that had been constructed through the framing phase by September 1 of each relevant year. Table 2 presents this information in 10-year time periods.

Table 2: Update to Stanford Community Plan Table 1.2 – Building Area at Stanford 1875–2015 (Permitted Square Feet)

Time Period	Academic Building Area Added	Cumulative Academic Building Area	Student Housing Building Area Added	Cumulative Student Housing Building Area
1875-1960	2,790,913	2,790,913	1,466,041	1,466,041
1961-1970	1,547,313	4,338,226	840,784	2,306,825
1971-1980	1,222,839	5,561,065	420,022	2,726,847
1981-1990	1,309,660	6,870,725	533,412	3,260,259
1991-2000	1,349,666	8,220,391	626,257	3,886,516
2001-2010	826,444	9,046,835	629,778	4,516,294
2011-2015	571,096	9,617,931	263,007	4,779,301

Source: Stanford University Land Use and Environmental Planning Office, 2001-2015 data obtained from 2000 General Use Permit Annual Reports.

The square footages for the 2000–2015 time periods match the amounts reported in the 2000 General Use Permit Annual Reports. Please also see Section 2.1.3, Calculation of 2000 General Use Permit Square Footage, for the definition of General Use Permit square footage and for an explanation of minor adjustments to square footages previously presented for time periods prior to 2000.

Table 3, below, provides estimates of academic, academic support and student housing building area for the 2016–2018 and 2018-2020 time periods. These quantities are authorized by the 2000 General Use Permit. The academic and academic support square footage authorized by the 2000 General Use Permit is anticipated to constructed prior to commencement of the proposed 2018 General Use Permit; however, the proposed 2018 General Use Permit includes a provision allowing remaining square footage to be carried over. The Escondido Village Graduate Student Residences project, for which the Santa Clara County Planning Commission authorized 1,450 housing units/student beds beyond the 3,018 housing units initially authorized by the 2000 General Use Permit, would be fully approved before commencement of the 2018 General Use Permit but would not be occupied until 2020. Because 1,450 of the net 2,020 student beds at Escondido Village constitute an exception to Stanford's historic growth rates and also because this project will not be occupied until 2020, the square footage associated with this project is presented as a separate line item.

Table 3: Building Area at Stanford – 2016 to 2020

Time Period	Academic Building Area Added	Cumulative Academic Building Area	Student Housing Building Area Added	Cumulative Student Housing Building Area
2016–2018 (without Escondido Village Graduate Student Residences)	637,460	10,255,391	203,769	4,983,070
2018-2020: 2,020 net additional beds at Escondido Village Graduate Student Residences, of which 1,450 are beyond the amount of housing initially authorized by the 2000 General Use Permit	NA	NA	1,655,000	6,638,070

Source: Stanford University Land Use and Environmental Planning Office, 2016.

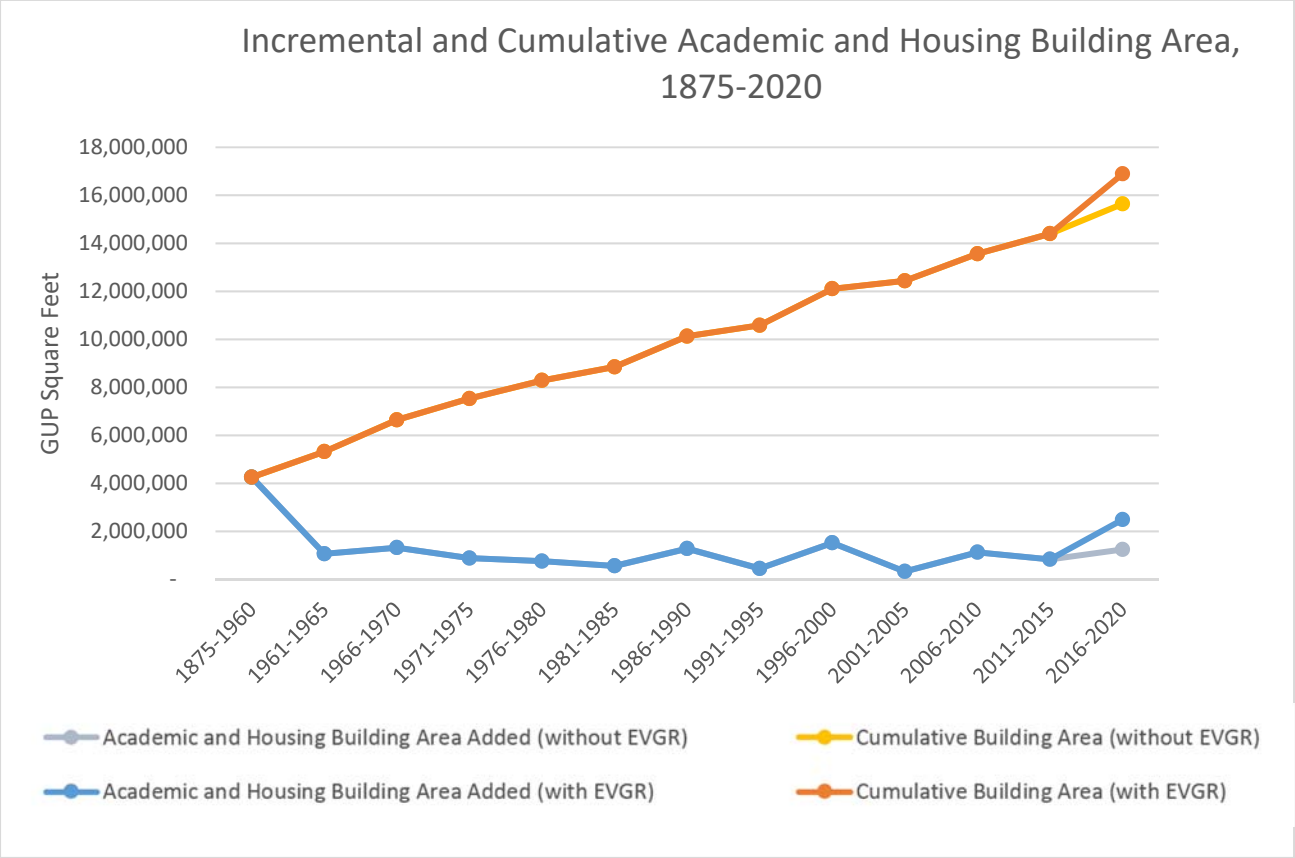
Note: The student housing building area added from 2016-2018 includes the New Residences at Lagunita, GSB Residences (Highland Hall), and two Row House renovations. The student housing building area added from 2018-2020 only includes the Escondido Village Graduate Residences project.

On page 10, the Stanford Community Plan states that the combined rate of increase for academic, academic support and student housing building area represented an average annual addition of approximately 200,000 square feet per year. Without the Escondido Village Graduate Student Residences project, the combined rate of increase for academic, academic support and student housing building area upon completion of the 2000 General Use Permit in Fall 2018 similarly is forecasted to represent an average annual addition of approximately 200,000 square feet per year.

The majority of the Escondido Village Graduate Student Residences project is considered to be unusual and is not indicative of future growth rates at Stanford.

On page 10, the Stanford Community Plan graphically depicts the incremental and cumulative totals for academic, academic support and student housing building area. **Figure BCR.3**, below, extends the Community Plan's figure to Fall 2020, both with and without the additional 1,450 graduate student beds at the Escondido Village Graduate Student Residences project that reflects growth beyond the number of housing units initially authorized by the 2000 General Use Permit. While the Escondido Village Graduate Student Residences project will not be occupied until 2020, construction will be underway by 2018.

Figure BCR.3: Update to Stanford Community Plan Figure Showing Incremental and Total Building Area



Source: Stanford University Land Use and Environmental Planning Office, 2016

2.1.3 Calculation of 2000 General Use Permit Square Footage

In 2009, the Santa Clara County Planning Office issued an interpretation of the calculation of square footage constructed under the 2000 General Use Permit. The definition of "chargeable covered and enclosed space" in Government Code Section 65995(b)(2) is used to calculate square footage under the 2000 General Use Permit. This definition applies to the calculation of square footage for all buildings demolished and constructed, affordable housing in-lieu payments and school impact fees.

The Stanford Community Plan refers to square footage as "gross square feet". This generally is consistent with the 2000 General Use Permit interpretation issued by the County Planning Office. However, the square footage calculations in the Community Plan do not precisely match the calculations presented in annual reports prepared for the 1989 General Use Permit and 2000 General Use Permit.

In Table 1.2, the Stanford Community Plan indicates that the total combined academic, academic support and student housing square footage in 2000 was 12,294,230 gross square feet. Stanford reviewed the square footages of buildings constructed prior to 2000 to ensure that the square footage totals accurately reflected the publicly reported quantities. This review process resulted in adjustments totaling approximately 188,000 square feet, including the removal of a parking structure from the database as it should not have been counted toward academic and academic support building area. The combined permitted square footage that existed as of Fall 2000 has been revised to 12,106,907 gross square feet.

It is important to note that square footage totals presented in the Stanford Community Plan and in the annual reports prepared for the 2000 General Use Permit represent academic and academic support facilities for which building permits have been obtained plus student housing that has been completed through the framing phase of construction. In some cases, environmental analyses in the 2018 General Use Permit application are based on occupied space rather than on fully permitted space. In the technical reports calculating energy use, criteria pollutant and greenhouse gas emissions, trip generation and vehicle miles traveled, occupied academic and academic support space and occupied housing units/student beds are used rather than permitted square footage. Occupied space as of December 2015 and predicted as of Fall 2018 is shown in **Table 4.**

Table 4: Occupied Academic and Academic Support Square Footage and Housing at Stanford.

	Occupied Academic and Academic Support Square Footage	Occupied Student Housing Square Footage
Fall 2015 (Dec 2015 datapoint)	9,517,505 [a]	4,779,301
Fall 2018	10,286,859 [a]	4,983,070
Fall 2020	10,286,859 [b]	6,638,070

Note:

[a] Includes projects that obtained their own use permits outside of the General Use Permits (Carnegie Foundation and Hillel Foundation).

[b] Assumed to remain the same as that of Fall 2018.

2.2 Academic Growth Boundary and Sustainable Development Study

2000 General Use Permit Condition E.5 required Stanford to complete and submit a Sustainable Development Study prior to County acceptance of applications for nonresidential development that would result in a cumulative total of more than one million net new square feet. The requirement stems from the

Stanford Community Plan's strategy to promote compact urban development, protect important resources and engage in cooperative planning and implementation.

The Stanford Community Plan established an Academic Growth Boundary which divides the University's lands in unincorporated Santa Clara County into two areas: the Central Campus (designated Academic Campus, Campus Open Space, Campus Residential − Low Density and Campus Residential − Medium Density); and the Foothills (designated Open Space and Field Research and Special Conservation Areas). The Community Plan requires the Academic Growth Boundary to remain in place for a minimum of 25 years (to 2025) and until the University reaches 17,300,000 square feet of academic, academic support and student housing facilities. This amount of square footage represents the approximately 12 million square feet of academic and student housing facilities that existed by 2000, plus an additional five million square feet of growth estimated by multiplying Stanford's historic growth rate of 200,000 square feet per year by 25 years.

Santa Clara County recognized that in order to accommodate development on the Central Campus as allowed under the 2000 General Use Permit, it would be necessary for Stanford to increase campus density. The Sustainable Development Study was a mechanism to review the location and manner for future development at approximately the halfway point in the 2000 General Use Permit implementation. The condition addressed concerns that development at a low density might consume land within the Academic Growth Boundary too quickly, resulting in pressure to place academic development into the Foothills prior to 2025. The Stanford Community Plan required that the Sustainable Development Study:

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

The Sustainable Development Study's timeframe extends beyond the 25-year timeframe of the Academic Growth Boundary, to 2035.

The Sustainable Development Study assesses the potential to site future development on the Central Campus during the 2035 planning horizon. The Study presents campus planning principles to promote compact urban development and preserve the quality of the campus. Under the 2000 General Use Permit, Stanford's approach has been to increase overall density through infill and redevelopment while applying a range of densities appropriate to different areas of the campus. The Sustainable Development Study applies these principles to the remainder of the development authorized by the 2000 General Use Permit and to potential additional growth through 2035.

The Sustainable Development Study uses growth rates under three scenarios for future development between anticipated completion of the development authorized by the 2000 General Use Permit in 2018 and the planning horizon of 2035. The growth rates range from two million square feet (115,000 square feet per year) of academic, academic support and student housing facilities in the Minimal Growth scenario to five million square feet (300,000 square feet per year) in the Aggressive Growth scenario. In between, the Study models a Moderate Growth scenario of 3.5 million square feet. This scenario represents about 200,000 additional square feet per year from 2018 to 2035 and mirrors the actual growth rate at Stanford both from 1960 to 2000 and through expected build-out of the 2000 General Use Permit, with the exception of the anticipated Escondido Village Graduate Student Residences project. The Escondido Village project will provide student housing facilities at a higher growth rate than the historic rate in order to increase the number of existing graduate students housed on campus.

The Sustainable Development Study demonstrates that continued implementation of Stanford's campus planning principles to redevelop and renovate the campus at densities that have been realized under the 2000 General Use Permit would provide long-term potential development capacity. Even the largest of the hypothetical growth scenarios can be accommodated within the Academic Growth Boundary.

The Sustainable Development Study also describes planning principles for the Foothills, principles that are designed to ensure that natural and scenic resources are protected over the long term. The Foothills include a variety of natural landscape types as well as a mix of existing uses: radio telescope "dishes," the campus radio station, a solar observatory building, outdoor recreation features and facilities used by agricultural tenants. While Stanford has no plans to build additional facilities in the Foothills, the Stanford Community Plan required that the Sustainable Development Study identify developable areas outside the Academic Growth Boundary. The Study accomplishes this by identifying protected areas and applying a land sensitivity analysis to the remaining lands to identify natural and scenic resources and physical features.

Finally, while not required by the Stanford Community Plan, the Study discusses the University's broader environmental sustainability programs. Stanford plays a critical leadership role in research and education concerning solutions to the global environmental crisis; the credibility of these efforts depends in part on the success of its efforts to manage its own operations sustainably.

After several public hearings, the County Board of Supervisors approved the Sustainable Development Study in 2009.

2.3 Population

The Stanford Community Plan and 2000 General Use Permit do not identify campus population totals. Rather, compliance with 2000 General Use Permit conditions is monitored through measurement of actual effects on the surrounding community: the number of vehicles crossing a defined cordon, the amount of water used on campus, etc. Population may be relevant, however, to forecasting future environmental impacts in an Environmental Impact Report. **Table 5**, below, provides a summary of Stanford's students, faculty and staff populations as of October 2015. Other population categories relevant to calculation of vehicle miles traveled are presented in Tab 5 – Anticipated Changes to Population, and Tab 8 – Transportation – Vehicle Miles Traveled, an accompanying technical report prepared by Fehr and Peers.

Table 5: Student, Faculty and Staff Populations at Stanford - Fall 2015

Affiliation	Population in Fall 2015
Undergraduate students	6,994
Graduate students, including PhDs	9,196
Postdoctoral students	2,264
Faculty	2,959
On-campus staff	8,612
Other (non-matriculated students)	918
Total	**30,943**

Source: Stanford University Land Use and Environmental Planning Office, 2016

Generally, Stanford's student, faculty and staff populations are expected to continue to increase at their historic growth rates during completion of the development authorized by the 2000 General Use Permit. The anticipated populations at commencement of the proposed 2018 General Use Permit are calculated in **Table 6**, below, by applying the historic (15-year) compound annual growth rates (CAGR) to each of these populations with a few exceptions. Postdoctoral students (postdocs) are expected to grow at a less vigorous rate than they have historically, due to leveling growth trends and other key limitations such as the number of faculty and funding. Hence, half of the historic CAGR was applied to postdocs to calculate the anticipated Fall 2018 population. Non-matriculated undergraduate students are capped at five students, and a portion of the faculty (Other Teaching) is expected to flatline.

Table 6: Anticipated Student, Faculty and Staff Populations at Stanford - Fall 2018

Affiliation	Anticipated Population in Fall 2018
Undergraduate students	7,085
Graduate students, including PhDs	9,528
Postdoctoral students	2,403
Faculty	3,073
On-campus staff	8,985
Other (non-matriculated students)	977
Total	**32,051**

Source: Stanford University Land Use and Environmental Planning Office, 2016

2.4 Monitoring and Reporting

The Stanford Community Plan includes a policy and an implementation recommendation (SCP-GD 15 and SCP-GD (i) 7, respectively) to establish a Community Resource Group (CRG) comprising eight to 12 persons selected by the County Planning Office in consultation with the County Supervisor for the Fifth Supervisorial District. The purpose of the CRG is to promote the ongoing exchange of information between the County and the local community regarding development activity at Stanford. The CRG has met regularly since the inception of the 2000 General Use Permit.

2.4.1 Process for Review of 2000 General Use Permit Annual Reports

The County Planning Office prepares an Annual Report summarizing Stanford's development activity and compliance with the 2000 General Use Permit over the preceding year (from September 1 to August 31, coinciding with the academic year). The County Planning Office has retained independent consultants for data, analysis and report preparation.

The CRG reviews and discusses these reports at its April meetings and the final reports are approved by the Planning Commission at public hearings in June of each year. The Annual Reports prepared pursuant to the 2000 General Use Permit are available on the 2018 General Use Permit website.

3.0 LAND USE

The Stanford Community Plan divides the campus lands into six land use designations and specifies allowed land uses within each designation. Stanford lands within the Academic Growth Boundary are designated:

- Academic Campus
- Campus Open Space
- Campus Residential − Low Density
- Campus Residential − Medium Density

Stanford lands outside the Academic Growth Boundary are designated:

- Open Space/Field Research
- Special Conservation Area

The Stanford Community Plan also designates two existing school sites owned by the Palo Alto Unified School District as Public School.

The 2000 General Use Permit conditions to implement these strategies include the following:

- Figure 1 in the 2000 General Use Permit further divides the campus into 10 Development Districts. Within the Academic Growth Boundary, Stanford lands are divided into the West Campus, Lathrop, Lagunita, Campus Center, Quarry, Arboretum, DAPER & Administrative, East Campus and San Juan Development Districts. Lands outside the Academic Growth Boundary are in the Foothills Development District.
- Condition E.1 distributes academic and academic support square footage into Development Districts.
- Condition E.2 addresses deviations from the distribution described in Condition E.1.

- Condition F.1 distributes housing into Development Districts.
- Conditions F.2, F.3 and F.4 address deviations from the distribution described in Condition F.1.
- Condition H.1 distributes parking spaces into Development Districts.

3.1 Redistribution between Development Districts

The 2000 General Use Permit includes assumptions about the amount of net new academic and academic support space, housing units/beds and parking spaces that would be constructed in each Development District. Conditions E.2 (for academic space), F.4 (for housing) and H.1 (for parking) identify threshold amounts for redistribution between development districts that require supplemental environmental analysis as described in conditions D.5.and D.6. The environmental analyses are conducted to determine whether the redistribution of development would result in an additional or more severe significant environmental impact beyond the impacts described in the 2000 General Use Permit Environmental Impact Report.

Table 7 provides the redistribution between Development Districts that occurred under the 2000 General Use Permit, as of Annual Report 15.

Table 7: Redistribution between Development Districts under the 2000 General Use Permit

Project	Amount	From District	To District
Brick Barn	4,690 gsf	Campus Center	Foothills
Guard Shack	42 gsf	Campus Center	Foothills
Knight Management Center	120,000 gsf	Campus Center	DAPER & Admin
Oak Road restroom	931 gsf	Campus Center	West Campus
Arrillaga Outdoor Recreation Center	75,000 gsf	Campus Center	Lagunita
Replacement Central Energy Facility	15,000 gsf	Campus Center	West Campus
Educational Farm	864 gsf	East Campus	West Campus
Munger Housing	352 beds	East Campus	Campus Center
Stable Site	372 beds	West Campus	Lagunita and East Campus
Escondido Village Graduate Residences	566 beds	various	East Campus

The academic space and housing unit/bed redistributions identified above did not result in any new or more severe significant impacts than were described in the 2000 General Use Permit Environmental Impact Report.

3.2 New Zoning Districts (Established Since 2000)

3.2.1 Residential Zoning

In accordance with 2000 General Use Permit Condition F.11, the Santa Clara County Board of Supervisors approved R1S (Low-Density Campus Residential) and R3S (Medium-Density Campus Residential) zoning districts in October 2001. Consistent with the Stanford Community Plan, the R1S zoning district provides for urban low-density housing (up to eight units per acre) and the R3S zoning district provides for urban medium-density housing (eight to 15 units per acre). The Stanford Community Plan and 2000 General Use Permit Condition F.2.c also allows high-density housing for faculty and staff in the Academic Campus land use designation (at a density of more than 15 units per acre). **Figure BCR.4** provides a zoning map of Stanford lands.

3.2.2 Open Space and Field Research Zoning

The Santa Clara County Board of Supervisors approved an OS/F (Open Space and Field Research) zoning district in June 2003. The OS/F zoning district was "established to maintain the open space character of those Stanford University OS/F lands outside the Academic Growth Boundary. Allowable uses include utilities, low intensity agriculture, limited agricultural research, field research, and Stanford field studies, limited outdoor recreational activities, recreational trails, environmental restoration, limited ancillary facilities, and Stanford University-specialized facilities and installations, such as astronomical or related facilities."

3.3 2000 Protocol to 1985 Land Use Policy Agreement

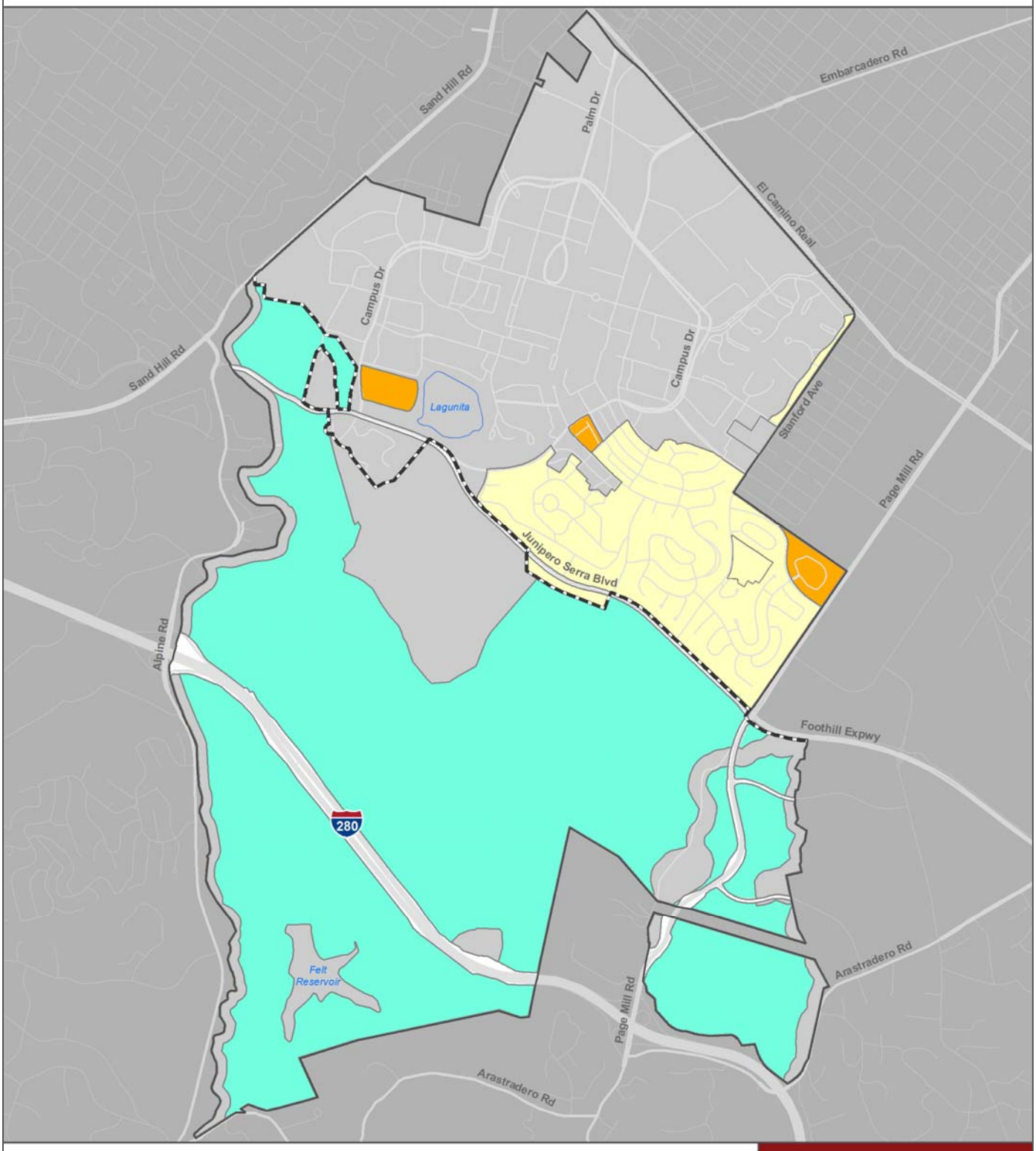
The 1985 Land Use Policy Agreement between Santa Clara County, Stanford and the City of Palo Alto describes policies regarding land use, annexation, planning and development of Stanford lands in unincorporated Santa Clara County. In addition, the Agreement states that "staffs of three parties, in cooperation, will maintain an informational document, known as a protocol, which outlines all adopted land use, designations, regulations, restrictions, and review and referral procedures governing Stanford lands in Santa Clara County" to implement the agreement.

In August 2001, an updated agreement, entitled "Protocol-2000 to 1985 Stanford Land Use Policy Agreement," was agreed to by the parties listed below:

- Santa Clara County Planning Director
- Santa Clara County Secretary to the Architectural and Site Approval Committee
- City of Palo Alto Director of Planning and Community Environment
- Stanford Architect and Associate Vice Provost for Planning

This revised Protocol outlines new policies and implementation procedures to reflect significant changes in policy relating to Stanford which were adopted through the Stanford Community Plan in December 2000.

Figure BCR.4: Zoning Districts - Existing



3.4 Academic Support Definition

In September 2001, the Santa Clara County Planning Commission created an interpretation of "academic support use". Academic support uses include nonacademic uses essential to the daily operation of the University. The following criteria provide further definition:

1. The use directly supports academic or administrative programs necessary for the operation of the University.

2. Service is provided exclusively or primarily to faculty, students and staff of the University.

3. All uses and facilities necessary to the use shall be subject to requirements of the Stanford Community Plan and 2000 General Use Permit.

4. All non-Stanford-run uses shall operate only under contract, lease or license to the University.

5. All contracts, leases, licenses or other permission granted for such uses shall include this "Academic Support Uses" policy, as accepted by the Planning Commission, as a condition for such permission.

3.5 Land Use Designation Change

The Santa Clara County Board of Supervisors amended the Stanford Community Plan land use designation map once since 2000. In November 2013, the Board adopted a Stanford Community Plan amendment that changed the 19.96-acre Stable Site land use designation from Campus Residential – Medium Density to Academic Campus as shown in **Figure BCR.5**. The Board also changed the zoning for this site from RS3 to A1. The Stanford Community Plan and zoning amendment reflected changing academic program needs, including the best use of the 2000 General Use Permit housing allocation and the existing and anticipated future uses of the Stable Site.

4.0 HOUSING

The Stanford Community Plan identifies two housing strategies:

- Increase the supply and affordability of housing (providing different housing types to meet various Stanford population needs, facilitating and expediting housing development through a housing linkage and streamlined permitting, and augmenting affordability programs through construction of additional on-campus housing and support the development of off-campus housing).

- Balance housing needs with neighborhood conservation (when planning new housing, attention is given to on and off-campus neighborhood character and compatibility).

The 2000 General Use Permit conditions to implement these strategies include:

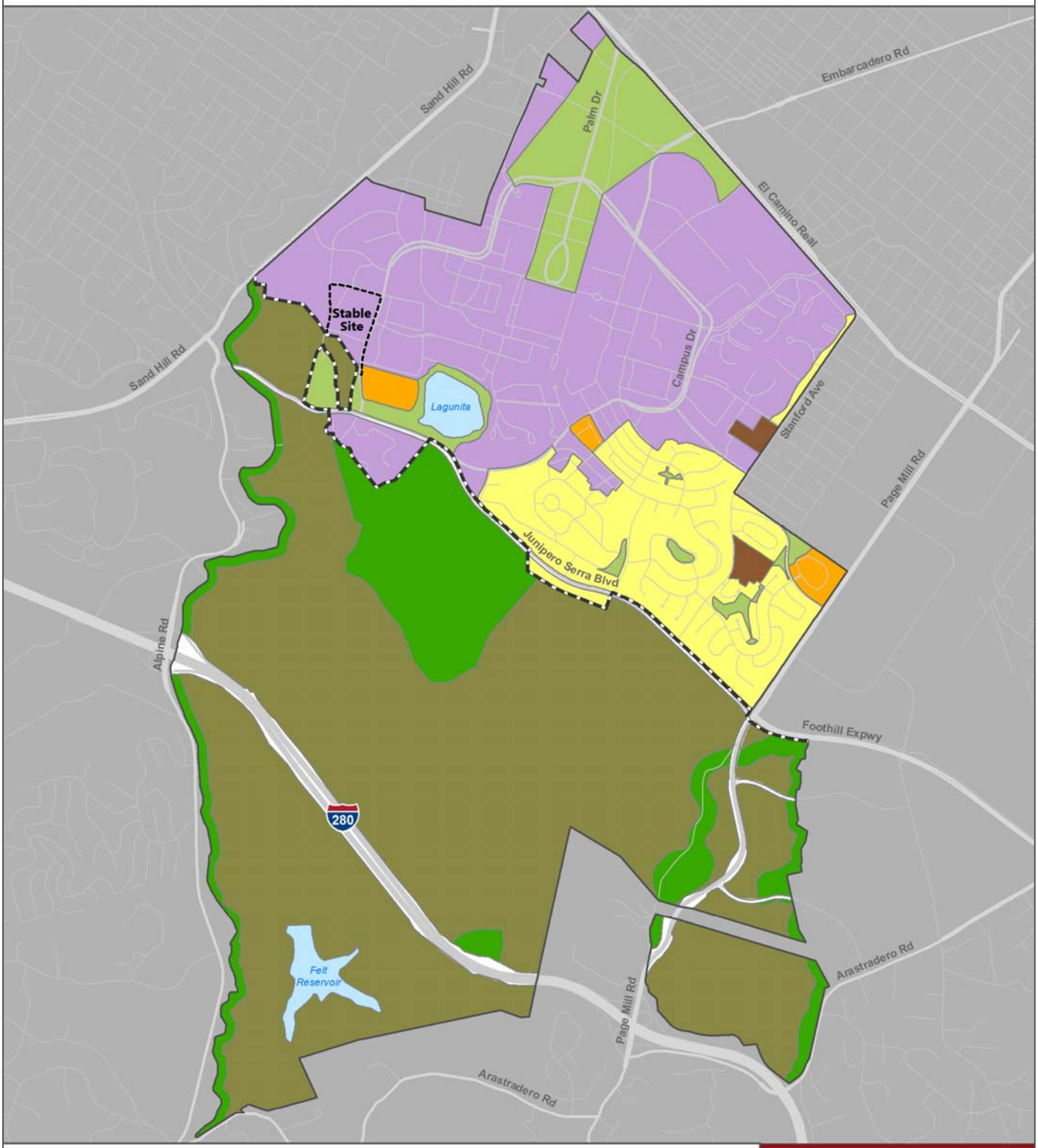
- Condition A.1.c, authorizing 3,018 net new housing units

- Condition F.7, allowing additional housing beyond 3,018 units to be constructed upon approval of the Santa Clara County Planning Commission

- Condition F.8, requiring housing to be constructed commensurate with academic and academic support facilities and establishing linkage ratios

- Condition F.6, requiring construction of affordable housing units or cash payments in lieu of providing the housing units

Figure BCR.5: Land Use Designations - Existing



4.1 Housing Units

4.1.1 Status of 2000 General Use Permit Housing Authorization

The 2000 General Use Permit authorized 3,018 net new housing units and allowed Stanford to seek Planning Commission approval for housing beyond 3,018 units.

Annual Report 15 states that Stanford had completed 2,019 housing units/student beds through the framing inspection phase of construction by August 31, 2015, with another 418 housing units/beds under construction, leaving 581 housing units/beds remaining at that time. In March 2016, the Santa Clara County Planning Commission approved an increase in the initial housing unit authorization by 1,450 for the Escondido Village Graduate Student Residences Project, increasing the total unit authorization to 4,468. Stanford forecasts that it will have obtained building permits for most remaining beds by Fall 2018, and the Escondido Village Graduate Student Residences project would be completed by Fall 2020. Stanford does not currently have plans for 44 units out of the 4,468-unit authorization.

Housing Project Highlights

Under the 2000 General Use Permit, Stanford has developed about 40 housing projects. The projects largely can be grouped into student and faculty/staff housing, but have also followed specific themes and trends over the years. **Table 8** and **Figure BCR.6** capture these general themes and project highlights.

The largest project that Stanford has proposed under the 2000 General Use Permit is the Escondido Village Graduate Student Residences Project. When completed, it would place up to approximately 2,020 net new graduate student beds in the Escondido Village.

Table 8: 2000 General Use Permit Housing Project Highlights[a]

Key to Figure BCR.6	Themes and Projects	Net new beds added
	Intensification of Escondido Village. Several projects within the Escondido Village area intensified the student bed count in this area. The largest project is the proposed Escondido Village Graduate Student Residences Project, expected to be completed around Fall 2020.	
1	Mirrielees – Phase I and II (intensification)	152
2	Escondido Village Studios 5 & 6	281
3	Blackwelder/Quillen Dorms (intensification)	220
4	McFarland (intensification)	63
5	Comstock (Kennedy) Graduate Housing	364
	Miscellaneous projects	(2)
6	*(2015-20) Escondido Village Graduate Student Residences*	*2,020*
	Infill Student Housing. Student housing was added to the Campus Center, East Campus and Lagunita Development Districts. The Munger graduate student housing project is served by an underground parking garage with an at-grade recreational field. The New Residences at Lagunita project repurposes parts of a surface parking lot for housing.	
7	Munger Graduate Student Housing	600
8	Crothers Renovation (intensification)	134
9	Row House and miscellaneous unit renovations	12
10	Manzanita Park Residence Hall	128
11	*(2015-18) New Residences at Lagunita*	*216*
12	*(2015-18) Graduate School of Business Residences*	*200*
	Faculty/Staff Housing. The Olmsted Faculty and Staff Housing projects are examples of small, high-quality single-family and duplex family housing products that meet the needs of Stanford's faculty and staff.	
13	Olmsted Terrace Faculty Housing	39
14	Olmsted Staff Rental Housing	25

	Miscellaneous conversions and RF unit replacements	3
	(2015-18) New Residences at Lagunita RF units	*2*
	Other Projects. Other projects included dining projects that support student housing as well as a unique standalone project converting housing to office.	
	Arrillaga Family Dining Commons and other housing dining projects	NA
	(2015-18) Kingscote Gardens Renovation (Conversion to office)	*(33)*
	Total by Fall 2015	**2,019**
	Total by Fall 2016	**2,404**
	Total by Fall 2020	**4,424[b]**

Notes:

[a] Table 8 is the key to Figure BCR.6.

[b] The current total housing unit authorization for Stanford is 4,468 units, which includes 3,018 units originally authorized, and the additional 1,450 authorized in 2016. 44 units have not yet been planned, and are omitted from the total in Fall 2020.

Source: Stanford University Land Use and Environmental Planning Office, 2016

Figure BCR.6: 2000 General Use Permit Housing Project Highlights

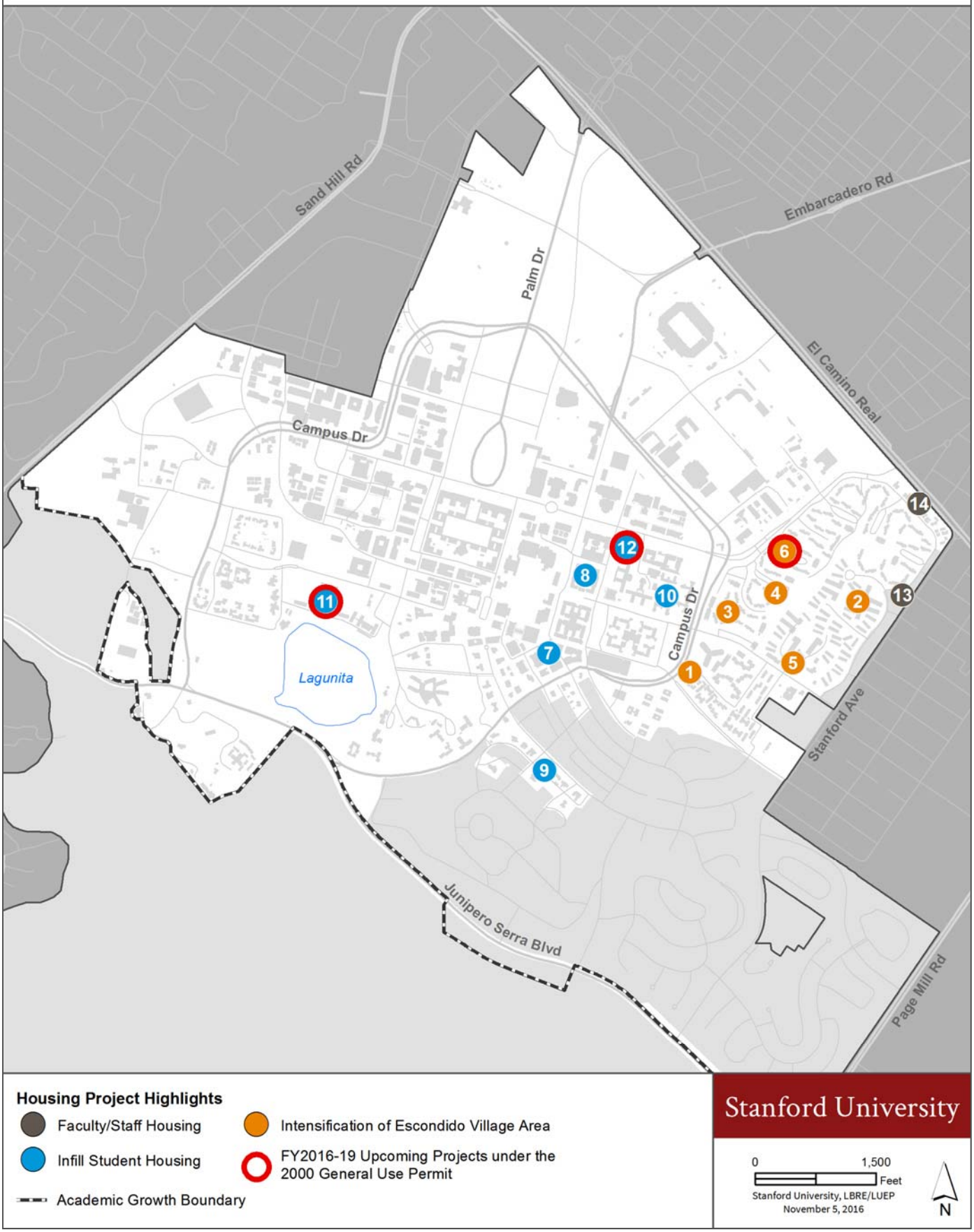


Figure BCR.7: Images of 2000 General Use Permit Housing Project Highlights

Escondido Village Studio 5 and 6

Comstock (Kennedy) Graduate Housing

Manzanita (Gerhard Casper Quad, Ng House)

Olmsted Terrace faculty

Munger and field on garage

Olmsted Staff Rentals

4.1.2 Update to Background Information in the Stanford Community Plan

On pages 40−41, Table 3.1, the Stanford Community Plan identifies the number of students residing on the Stanford campus. **Table 9** below is an update to Community Plan Table 3.1. Tab 5 – Anticipated Changes to Population, includes a section on Campus Resident Population projections, including more information regarding the number of student beds, the number of students residing in student housing (which includes spouses who are Stanford students), and the total population residing in student housing (which includes Stanford spouses, non-Stanford spouses, and children).

Table 9. Update to Stanford Community Plan Table 3.1: Number of Students Residing on Campus

Fall 2000	Fall 2015	Fall 2018	Fall 2020
9,353	11,402	11,822	13,882

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

Note: For purposes of this table, "Students residing on campus" include undergraduate and graduate students living in housing on-campus, including spouses who are also students. Postdoctoral students are not included. See Campus Resident Population Projections found in Table 3, Page 5.6 of Tab 5 – Anticipated Changes to Population for additional information.

4.2 Housing Linkage

2000 General Use Permit Condition F.8 requires Stanford to build housing commensurate with academic development. **Table 10** below shows how Stanford has maintained compliance with the housing linkage ratio established in General Use Permit Condition F.8.

Table 10: Status of Compliance with Housing Linkage

Academic Development Threshold (gsf)	Number of Housing Units Required	Annual Report and Academic Square Footage at which the Threshold Was Exceeded	Number of Housing Units Completed when Threshold Was Exceeded
500,000	605	Annual Report 8 – 627,170 gsf	774
1,000,000	1,210	Annual Report 11 – 1,001,167 gsf	1,448
1,500,000	1,815	Not yet exceeded Most recent Annual Report 15 reported 1,397,540 gsf academic and academic support facilities	2,019
1,500,000 to 2,035,000	2,420	Not yet exceeded	

Source: Stanford University Land Use and Environmental Planning Office, 2016

Condition F.8 requires Stanford to construct a total of 2,420 housing units by the time it completes the 2,035,000 net new square feet of academic and academic support facilities authorized under the 2000 General Use Permit. Stanford is on track to meet the housing linkage requirement.

4.3 Streamlining Process for Additional Housing

The Stanford Community Plan acknowledges the need for housing and supports housing on Stanford lands with strategies to facilitate the approval of housing within the Academic Growth Boundary. The Community Plan also acknowledges Stanford's large population of graduate students with limited incomes, identifying this group to be at a severe disadvantage in the local rental market. A key strategy of the Community Plan is to "Increase the Supply and Affordability of Housing" (page 45).

Under Sub-strategy 1B, Facilitate and Expedite Needed Residential Development (page 50), streamlining of environmental review and permitting processes is discussed as a means to facilitate housing development. The Stanford Community Plan discusses using the program-level Environmental Impact Report to minimize subsequent environmental review of individual projects and using pre-application coordination to achieve time savings in project permitting. Applicable policies include SCP-H 5, SCP-H 6 and SCP-H 8 (page 52).

The 2000 General Use Permit Condition F.7 also specifically supports the development of housing units beyond the 2000 General Use Permit's initial 3,018-unit authorization, with no amendment to the General Use Permit to implement the condition. The Condition states that additional housing beyond 3,018 units may be constructed with approval of the County Planning Commission, subject to further environmental assessment.

To implement these policies, the Santa Clara County Planning Commission approved Stanford's application for 1,450 housing units in addition to the 3,018 units initially authorized by the 2000 General Use Permit.

4.4 General Use Permit Amendments to Eliminate Housing Type Distinctions

The 2000 General Use Permit Condition A.1.c authorized construction of 3,018 net new housing units for "students, postdoctoral fellows, medical residents, faculty and staff." Even though this authorization did not differentiate among various resident categories, Table 2, under Condition F.1, distributed the units geographically by Development District and by unit type (student housing, post doc/medical resident housing, or faculty/staff housing). Over time, it became clear that there was a need to construct more student housing units on the campus than faculty/staff units. Stanford focused its efforts to increase its faculty/staff inventory on off-campus locations.

In November 2013, the Santa Clara County Board of Supervisors approved an amendment to the 2000 General Use Permit to change the unit type for 372 faculty/staff housing units to student housing units. At this same time, the Board approved a Stanford Community Plan Amendment and corresponding Zoning Ordinance Amendment to change a potential housing site, the former Stable Site, from the Campus Residential – Medium Density land use designation and R1S zoning district to the Academic Campus land use designation and A1 zoning district.

The Board amended the 2000 General Use Permit and Stanford Community Plan again in May 2015 to collapse the three separate housing categories (students, faculty/staff and postdocs/medical residents) into one general housing category that would allow Stanford to determine, based on priority and need, how to allocate the remaining housing units. To ensure consistency with the trip-generation assumptions in the Stanford Community Plan/2000 General Use Permit Environmental Impact Report, the amendment allowed all remaining new units to be occupied by students, but no more than 668 of the remaining new units to be occupied by faculty and staff and only 350 of the remaining units to be occupied by postdocs/medical residents.

Condition A.1.c, was amended to read:

> *Construction of 3,018 net new housing units for students, postdoctoral fellows, medical residents, faculty, and staff, with no more than 668 units to be constructed for faculty and staff, and 350 units to be constructed for postdoctoral fellows and medical residents, and 2,950 net new student housing units. Construction of housing units of any one housing unit type may require reducing the maximum allowances for other housing unit types so that no more than 3,018 units are constructed.*

4.5 Santa Clara County Housing Element

Santa Clara County's Housing Element serves as one of the seven mandated elements of the County's General Plan and addresses housing according to state law requirements. One of the mandated components of a Housing Element is an inventory of land suitable for residential development. This serves the purpose of comparing the jurisdiction's Regional Housing Needs Allocation with its residential development capacity.

The County Housing Element inventories (see Page 99 of the 2015 Update) reflect the 2000 General Use Permit housing unit authorization.

The General Plan Housing Element process is duplicative of the Stanford Community Plan's inventory of potential housing locations, as laid out in the potential housing sites map and tables in the Housing Element of the Stanford Community Plan. The General Plan Housing Element is updated every seven years, more frequently than the Community Plan.

4.6 Affordable Housing

4.6.1 Payment of Affordable Housing Fees

The 2000 General Use Permit requires Stanford to comply with a housing affordability requirement. Condition F.6 requires that for each 11,763 square feet of academic development built, Stanford shall either: (1) provide one affordable housing unit on the Stanford campus; or (2) make an appropriate cash payment in lieu of providing the housing unit. As explained in Section 4.6.2, as of Annual Report 15, Stanford constructed 816 units that the County counted toward its Regional Housing Needs Allocation as affordable at the low and very low income levels. Stanford subsequently constructed 107 additional units that the County considers affordable at the moderate income level. This exceeds the requirements of Condition F.6; however, when the 2000 General Use Permit was approved the County had not been counting student housing units toward its Regional Housing Needs Allocation, and Condition F.6 required that affordable housing units credited toward compliance with this condition could not be occupied by students. Accordingly, despite constructing substantial quantities of affordable housing on the campus, Stanford has met this condition with payments. The payment is based on the City of Palo Alto's affordable housing fee for commercial development, which began at $4.12 per square foot in the year 2000, increased to $15 per square foot in May 2002, and increased with inflation to a current rate of $20.37 per net new square foot. With the in-lieu fees, the County established the Stanford Affordable Housing Fund that is managed by the Santa Clara County Office of Affordable Housing. The funds are available to affordable housing projects within a six-mile radius of the boundary of the Stanford campus.

Stanford has contributed $25.7 million to the fund to date; $13.3 million has been disbursed to five projects, totaling 319 units. The projects include:

- Alta Torre Apartments, 3895 Fabian Way, Palo Alto, by Bridge Housing;
- 801 Alma Family Apartments, 801 Alma Street, Palo Alto, by Eden Housing;
- Tree House, 488 W. Charleston Road, Palo Alto, by Palo Alto Housing;

- Stevenson House, 455 E. Charleston Road, Palo Alto, currently managed by the John Stewart Company; and

- 1585 Studios, 1585 W. El Camino Real, Mountain View, by First Community.

An additional $11 million from the fund has been committed to Buena Vista Mobile Home Park in Palo Alto to save an additional 117 units.

It is anticipated that Stanford will contribute an additional $13 million to the fund, for a total of $39 million, by the time Stanford completes the academic and academic support square footage authorized by the 2000 General Use Permit.

4.6.2 Construction of Affordable Housing Units

The 2000 General Use Permit allows Stanford to create dormitory-style group housing, which generally does not count as housing units under the Census Bureau definition even though this type of housing addresses a specific type of housing need and reduces demand on the local housing markets. The 2000 General Use Permit also allows Stanford to construct apartment-style student and faculty/staff housing equipped with kitchens. A student housing unit with a kitchen is treated as a housing unit when determining compliance with the Regional Housing Needs Allocation (RHNA). According to the determination of affordability categories in the California Housing and Community Development Official State Income Limits, Stanford graduate student housing rents have been considered affordable to very-low- and low-income households. Since Stanford's graduate student housing units have kitchens to serve one or two bedrooms, and because the rent currently meets state affordability levels, Santa Clara County has treated these units as affordable housing units for purposes of meeting its RHNA obligation since the County's 2001 - 2006 Housing Element (see **Table 11**).

Table 11: Stanford Housing Projects Resulting in RHNA Units

Housing Projects	Resulting Affordable RHNA Units[a]
1999 – 2006 Housing Planning Period, reported in Santa Clara County 2009 – 2014 Housing Element Update	
Escondido Village Studios 5 & 6 – completed 2002	298 (very low income; 2009 Housing Element)
2007 – 2014 Housing Planning Period, reported in Santa Clara County 2015 – 2022 Housing Element Update	
Munger – completed 2009	286 (low income; 2015 Housing Element) 71 (above moderate income; 2015 Housing Element)
Olmsted Terrace and Rentals – completed 2011	64 (above moderate income; 2015 Housing Element)
Escondido Village – Comstock (Kennedy) – completed 2013	232 (low income; 2015 Housing Element)
2015 – 2022 Housing Planning Period, projected in Santa Clara County 2015 – 2022 Housing Element Update	
Manzanita (Resident Fellow units) – completed 2015	4 (moderate income; projected)
Lagunita (Resident Fellow units) – completed Aug 2016	2 (moderate income; projected)
GSB Residences (Highland Hall) – completed Aug 2016	101 (moderate income; projected)
Total	**816 low and very low income units and 135 above moderate income units completed;** **107 additional moderate income units projected** (not including the Escondido Village Graduate Residences project)

[a] For RNHA purposes, an apartment containing one kitchen and multiple beds is considered one "unit." By contrast, Santa Clara County considers each student bed a "unit" for purposes of counting the amount of housing authorized under the 2000 General Use Permit. Therefore, the unit counts in Table 10 do not match the bed counts presented in 2000 General Use Permit Annual Reports but rather what is reported in the 2009 and 2015 Santa Clara County Housing Element Updates.

4.7 Off-Campus Housing

Stanford has found that not all University-affiliated housing needs to be on-campus in order to serve the different University populations. The Stanford Community Plan recognizes that housing on Stanford's lands in other jurisdictions augments the regional housing supply and therefore contributes to the balance of the area's housing supply (page 50). For this reason, the Community Plan includes a policy to support Stanford's efforts to develop housing on land in other jurisdictions, particularly housing specifically targeted to Stanford faculty, staff, students and other affiliated persons. Further, while Stanford has not requested such credit, the Community Plan allows the County to consider Stanford-developed housing in other jurisdictions eligible to meet quantified housing development requirements on a case-by-case basis (Policy SCP-H9).

There are over 900 single-family or condominium homes on the Stanford campus that house faculty. They are available via long-term leaseholds or as rentals.

In addition to housing on campus, Stanford facilitated the development of housing on Stanford's lands outside of the academic campus. This started in the 1950s with 123 single-family units in the Stanford Hills and Stanford Creek subdivisions in Menlo Park, followed by the construction of Oak Creek Apartments in 1969. These housing communities were developed by ground lessees on Stanford's lands and have been available to members of the public as well as Stanford affiliates from their inception.

In 1987, Stanford added 108 apartments at Welch Road in Palo Alto near the Stanford Hospital, primarily for medical residents, and some faculty and staff. In 2001, Stanford added the Stanford West Apartments with 628 units for faculty and staff, including 156 below-market-rate units. In 2005, the Vi at Palo Alto Senior Housing was completed by a ground lessee and is primarily open to members of the public, with limited priority for Stanford affiliates.

At present, Stanford is constructing 180 units on California Avenue in Palo Alto for faculty to be completed in 2018. Finally, Stanford has submitted an application to the City of Menlo Park to build 215 rental units at 500 El Camino Real that will be made available to faculty and staff.

Stanford prioritizes use of its academic campus lands to house students and faculty because housing students and faculty in close proximity fosters collaboration and learning. With limited exceptions, staff and

other affiliated housing has been provided outside of the core academic campus lands, in nearby jurisdictions.

Since 2000, the following housing projects were built adjacent to campus (see **Table 12**).

Table 12: Off-Campus Housing Projects Built on Stanford Land Since 2000

Project	# of units	Jurisdiction	Description
Stanford West	628	City of Palo Alto	Units house a mix of faculty, staff, post-docs and medical residents. Includes 156 BMR units
Vi at Palo Alto Senior Housing	388	City of Palo Alto	The Vi has 388 independent living units. It has an additional Health Care Center with 38 assisted living units, 24 memory support units, and 44 skilled nursing units (106 units in addition to the independent living units).
University Terrace (under construction)	180	City of Palo Alto	112 condos and 68 single-family units for faculty and staff
2500 El Camino Real (under construction)	70	City of Palo Alto	All BMR units. Priority for people who work in Palo Alto. Stanford may grant up to 30% (21 units) for income-qualifying faculty or staff, to the extent permitted by law

4.8 Beds and Units Interpretation

The Santa Clara County Planning Office has interpreted the housing unit authorization in the 2000 General Use Permit as:

- "One student bed or dormitory unit equates to one housing unit," and
- "One student family unit equates to one housing unit."

This interpretation is solely for the purposes of the 2000 General Use Permit and does not equate to housing units as calculated in the County's General Plan Housing Element and Regional Housing Needs Allocation.

5.0 CIRCULATION

The Stanford Community Plan identifies three circulation strategies:

- Achieve No Net New Commute Trips through land use and transportation demand management
- Alleviate local congestion in the context of commute trip reduction
- Alleviate local congestion during special events

The 2000 General Use Permit conditions to implement these strategies include:

- Condition G.3 requiring Stanford to mitigate the transportation impacts of its additional development and population growth either through a program of No Net New Commute Trips or through proportional funding of mitigation measures for specified impacted intersections
- Conditions G.4, G.5, G.6, G.7 and G.8 describing compliance monitoring of No Net New Commute Trips
- Condition G.1 requiring Stanford to construct specified intersection modifications
- Condition G.11 requiring preparation of project-specific traffic studies
- Condition G.13 addressing special events
- Condition G.14 requiring Stanford to convene meetings of a multi-jurisdictional group to address existing traffic problems on Junipero Serra Boulevard and to fund traffic calming measures
- Condition H.1 authorizing construction of 2,300 net new parking spaces
- Condition H.2 requiring Stanford to participate in residential parking permit programs

5.1 Transportation

5.1.1 Alternative Transportation/TDM Programs

Stanford's award-winning program to reduce traffic and its related impacts is one of the most comprehensive in the country. Stanford's Transportation Demand Management (TDM) programs have decreased the drive-alone rate from 72% in 2002 to 50% today. Program highlights include the following:

- Stanford was the nation's first Platinum-Level Bicycle-Friendly University. The award was renewed in 2015 and recognizes Stanford's bike infrastructure, incentives and extensive bike safety outreach to 13,000 bicyclists on campus daily.
- Offering Clean Air Cash, free transit passes and more, Stanford Commute Club has grown from 3,600 members in 2002 to more than 9,000 today.
- Ridership on the University's free Marguerite shuttle has risen to 3.2 million annually; the fleet includes electric and hybrid diesel-electric buses.

Stanford quintupled its electric vehicle charging stations in 2016. Eighty charging stations will be available in February 2017 in high-demand parking areas on campus once Roble Field Parking Garage opens.

Stanford's extensive alternative transportation and TDM programs include the following components:

Commute Club (for individuals agreeing not to drive alone to work)

The Commute Club is open to qualified commuters who agree not to purchase a parking pass. The Commute Club serves as a way of bringing various complementary services together. Perhaps most significant of these are the Clean Air Cash and Carpool Credit programs, which provide direct subsidies to commuters who carpool, bicycle or use transit. Other financial incentive programs include pretax payroll deduction for commuters using alternative modes to spend on transportation costs, a Refer-a-Friend Program, which provides a cash reward to existing Commute Club members who recruit a new alternative commuter, and a Permit Return promotion. A number of programs support people commuting by means other than single-occupant vehicles by providing access to vehicles they can use during the workday instead of their own cars. These are car rental and car share programs offered at reduced rates and the Emergency Ride Home program, which allows registered commuters free access to a taxi or rental car in an emergency situation. The intent of these programs is to provide a safety net that will make commuters comfortable not having their own cars on campus and thus more willing to utilize an alternative transportation mode such as transit or carpooling.

By not purchasing a Stanford parking permit and by joining the Stanford Commute Club, Stanford employees and students can help reduce emissions, minimize the number of vehicles traveling to and from campus and benefit financially by not driving alone. Rewards offered to Commute Club members include the following:

- up to $300/year in Clean Air Cash or Carpool Credit
- reserved parking spaces for all carpools/vanpools
- complimentary daily parking passes for carpoolers
- vanpool subsidies
- online Stanford ride-matching services
- commuter buddy program
- pretax payroll deduction for transit passes, Caltrain parking and commuter checks
- Refer-a-Friend program (which pays $50)
- Emergency Ride Home
- up to $102 per year in Zipcar driving credit
- up to 12 free hourly car rental vouchers per year (through Enterprise Rent-a-Car)
- ability to purchase up to eight daily permits per month
- exclusive member gifts
- automatic entry into Commute Club promotion prize drawings

Ridesharing

In addition to the rewards available to Commute Club members, further incentives are available to encourage ridesharing by all members of the Stanford population. Preferential spaces are provided for carpoolers across campus. Premium vanpool parking is provided for free. Stanford's Parking & Transportation Services also has a program that temporarily subsidizes vanpools that have empty seats.

Transit

Transit is the most effective alternative commute mode, and Stanford commuters use both rail and bus. Caltrain and local bus routes provided by Santa Clara Valley Transportation Authority (VTA) and San Mateo County Transit District (SamTrans) stop at the Palo Alto Intermodal Transit Center, which is one mile from Stanford's Main Quad. In order to provide that "last mile" connection, Stanford has multiple bus routes that connect the Transit Center to all parts of campus through its Marguerite Shuttle service.

The Marguerite Shuttle also has some routes that can bring commuters directly from their home communities to campus, such as the AE-F route that serves the East Bay. These are complemented by the Alameda–Contra Costa Transit District (AC Transit) Line U and the East Bay Express, which is sponsored by multiple agencies. To encourage transit use, Stanford sells a variety of transit passes and makes the Go Pass and the Eco Pass available to its commuters at no charge. The Go Pass provides free unlimited use of Caltrain for employees, graduate students and postdocs. The Eco Pass allows for free use of VTA services and the AC Transit Dumbarton Express bus route.

Transit programs at Stanford include the following:

Marguerite Shuttle

Marguerite, Stanford's free public shuttle service, travels around campus and connects to nearby transit, shopping, dining and entertainment. The main shuttle lines traverse the campus Monday through Friday all year (except University holidays). Evening and weekend service is offered from mid-September to mid-June. All buses are wheelchair-accessible and have bike racks. The Marguerite:

- is a free, comprehensive campus shuttle system, open to the public
- connects with local transit and Caltrain (as well as shopping and dining options)
- offers the Midnight Express night safety service
- features new buses running on biodiesel fuel
- has an Automated Transportation Management System, with real-time information on the web

Eco Pass/Go Pass

Stanford provides free Go Passes to eligible hospital and University employees and provides Go Passes at a subsidized price for eligible graduate students and postdocs. The Go Pass allows unlimited travel on Caltrain between all zones. Stanford has increased the number of Go Passes purchased from approximately 9,000 in 2003 to nearly 16,000 in 2015.

Stanford also provides free Eco Passes to eligible hospital and University employees. The Eco Pass allows unlimited travel on the following transit services:

- VTA buses (including express buses)
- VTA light rail
- Dumbarton Express
- Highway 17 Express
- Monterey-San Jose Express (requires MST special service card)

Both the Go Pass and the Eco Pass are valid for the full calendar year, seven days per week. Stanford purchases these passes primarily for use in commuting to Stanford; however, there is no restriction on their use. Stanford pays for passes for all eligible employees, regardless of whether employees use them.

Line U Stanford Express

A Stanford ID provides free use of East Bay express bus that connects BART and ACE train to Stanford.

Altamont Corridor Express (ACE)

Faculty, staff and students receive a 50% discount on ACE train monthly passes or 20-trip tickets.

Bicycle Programs

Stanford is a bicycle-friendly campus with high numbers of students and others using bikes to circulate around campus. In addition to supporting its on-campus bicyclists, Stanford promotes commuter cycling as a transportation demand management strategy. Secure bicycle parking and clothes lockers are offered to make it easy to commute by bicycle. Other resources available for both commuters and intra-campus bicyclists include bike maintenance facilities, safety classes and discounted equipment.

Stanford's bicycle programs include:

- bicycle registration
- complimentary Mid-Peninsula Bike Map, as well as city and county bike maps
- clothes and bike locker rental/shower information and maps
- safety education program (Sprocket Man, helmet safety)
- dorm bike safety road show
- bicycle facilities development
- commute planning/cycling information
- liaison with campus Bike Shop
- bike light giveaways

Vehicle Rentals/ Car-sharing

Stanford offers car-sharing programs to encourage campus residents to live on campus without privately owned vehicles and to provide an option for commuters who use transit, bicycle or pedestrian modes to commute to campus but may need a vehicle for an occasional midday meeting or appointment. Both Zipcar and Enterprise programs are available to faculty, staff and students 18 and older:

- Self-service, on-demand car-sharing program with Zipcar offers discounts and driving credit to Stanford affiliates.
- Short or long-term car rental (through on-campus Enterprise Rent-A-Car office) provides discounts for Stanford affiliates.

Charter Bus Services

Events for large groups may require shuttle services or other transportation. Stanford's Parking & Transportation Services offers convenient charter services at a low cost to the campus community. A variety of bus sizes are available with drivers who are familiar with the Stanford campus:

- group transportation services (conferences, teams, events, student activities, etc.)
- on- or off-campus destinations
- online reservation system

Parking Programs

Charging for parking provides an important disincentive for driving to campus, making sustainable commute options more attractive. Stanford requires that people driving to campus pay for parking. This includes visitors and campus residents as well as commuters. There are a variety of parking locations and types, but in general parking is limited to the periphery of the campus core, allowing for a more walkable and bicycle-friendly campus. Commuter parking permits range from $4.50 to $11 per day and $30 to $81 per month, with academic-year and 12-month permits also available at a rate equivalent to monthly permits.

In addition, Stanford restricts freshmen from bringing cars to campus. By restricting cars in the freshman year, students can take advantage of the many alternative transportation options available to them. In subsequent years, the need for a car will not be as likely.

Education and Information Programs

Stanford's Parking & Transportation Services offers a variety of educational and other programs to provide education and information designed to encourage use of alternative transportation modes. Programs include the following:

- Bike Resources for New Undergraduates: Information provided to new undergraduates, including bike safety, bike registration, and events on campus.
- Transportation Information for New Undergraduates: Information provided about the Marguerite shuttles, on-campus car-sharing and rental cars, public transit, airport shuttles and more transportation options.
- Commute Planning Assistance: Help planning commutes or one-time trips using alternative transportation. Stanford maintains a Commute Planning Assistance webpage to provide origin and destination and other information; Planning & Transportation Services offers customized commute plans.
- Help in identifying alternative transportation options to and from offsite locations or for Stanford events.
- Extensive P&TS website, including a wide variety of service/information links
- Transit pass sales online
- Transportation literature
- New employee orientation
- Regular eUpdates to Commute Club members and parking permit holders
- Alternative transportation promotional events
- Online commute cost and carbon emissions calculator

Bicycling Support

Stanford is a bicycle-friendly campus with high numbers of students and others using bikes to circulate around campus. Secure bicycle parking and clothes lockers are support services offered that make it easier for bike commuters. Other resources available for both commuters and intra-campus bicyclists include bike maintenance facilities, safety classes and discounted equipment.

5.1.2 No Net New Commute Trips Goal

Stanford's successful Alternative Transportation/TDM programs have enabled it to meet the No Net New Commute Trips goal established by the Stanford Community Plan and 2000 General Use Permit. 2000 General Use Permit Condition G.4 defines the No Net New Commute Trips goal as "no increase in automobile trips during peak commute times in the peak commute direction, as counted at a defined cordon location around the campus."

The 2000 General Use Permit gave Stanford the option of meeting the No Net New Commute Trips goal or paying proportional funding toward improvements at 15 nearby intersections where significant impacts were predicted to occur if the goal were not achieved. Condition G.4 states:

> *Stanford shall mitigate the transportation impacts of its additional development and population growth either through a program of "no net new commute trips" or through proportional funding of mitigation measures for specified impacted intersections.*

Since Stanford has chosen the No Net New Commute Trips approach, the University's goal is not to exceed the measured number of vehicles entering and exiting the campus during peak periods over the life of the 2000 General Use Permit.

The 2000 General Use Permit defines how achievement of this goal is to be measured. A boundary, or cordon, was established around the campus to identify campus entryways where sensor tubes could be installed to measure vehicle trips into and out of the campus. In 2001, an independent consultant acting under the direction of the Santa Clara County Planning Office conducted baseline counts at 16 gateways to the campus. The baseline counts established the existing level of commute trips entering the campus during the morning peak commute period and leaving the campus during the evening peak commute period. The peak hours were defined as the highest hourly volume of traffic in the peak direction occurring during the morning peak period (7:00 – 9:00 AM) and evening peak period (4:00 – 6:00 PM).

The initial baseline counts were taken three times during the year in order to determine the peak hour and measure the traffic volumes during that hour. Since then, similar counts have been taken twice every year

for a total of eight weeks of measurements. Trips coming through campus to the hospital or to other non-campus destinations are factored out.

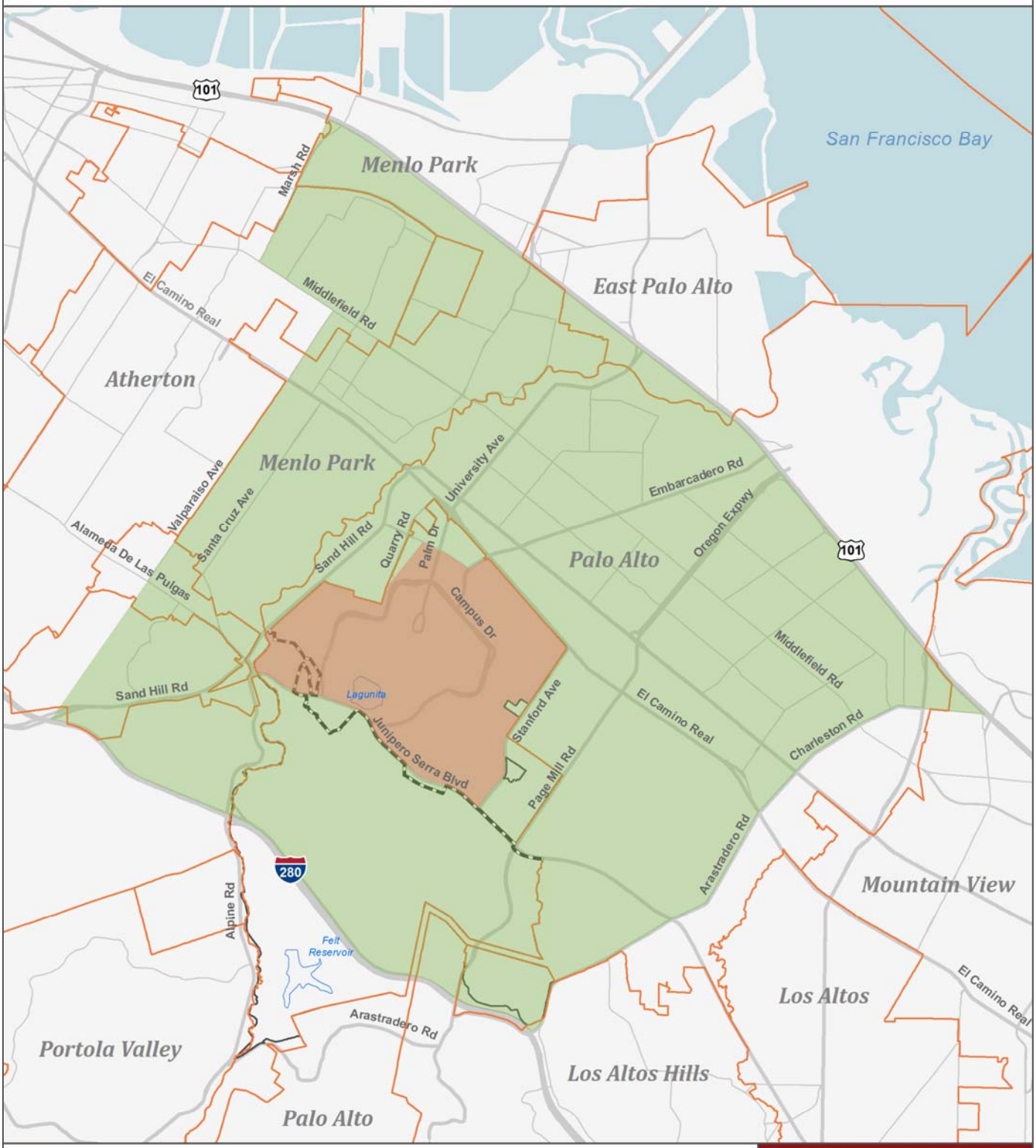
Community Plan Policy SCP-8 and Condition G.8 specifies that the County will recognize participation by Stanford in off-campus trip reduction efforts and credit reduced trips toward Stanford's attainment of the No Net New Commute Trips goal, as they benefit the streets surrounding the campus. Under this condition, Stanford can receive credits commensurate with the predicted or actual number of trips reduced and the proportion of the cost of the program that Stanford is contributing. Trip reduction must occur in the area between U.S. Highway 101, Valparaiso Avenue/Sand Hill Road, Marsh Road, Interstate 280, and Arastradero Road/Charleston Road (see **Figure BCR.8**).

Stanford Traffic Cordon Count Credit Guidelines specify how Stanford's off-campus trip reduction efforts can result in credits. Included are credits for alternative transportation incentives provided to commuters working outside of the cordon area. Initial methodologies for trip credits were established in 2003. The methodology was recently updated and approved by the County's Planning Office in October 2015.

The most recent *Stanford University Traffic Monitoring Report* (2015) performed for Santa Clara County provides a full explanation of the process by which baseline data were collected, shows how the most recent year of data (2015) was collected and presents results (i.e., how the traffic volumes compare to the No Net New Commute Trips goal). Also included is a map showing the 16 cordon count locations and a historical overview of trip calculations since 2001.

The baseline adjusted traffic counts in 2001 were 3,319 trips inbound to campus during the morning peak hour and 3,446 trips leaving the campus cordon during the afternoon peak hour. The No Net New Commute

Figure BCR.8: Cordon Credit Area



Trips goal is not achieved if subsequent cordon counts, as modified by trip reduction credits, exceed the baseline volume by 1% or more for any two out of three consecutive years. An average of 3,439 inbound vehicles during the AM peak and 3,555 outbound vehicles during the PM peak would constitute a 1% increase.

In every year from 2002 to 2015, Stanford has successfully met the No Net New Commute Trips goal in both the AM and PM peak periods (see **Figures BCR.9 and BCR.10**). This is despite growth in academic and academic support facilities and housing and indicates that the Alternative Transportation/TDM programs have worked.

Figure BCR.9: Stanford University Annual Morning Peak Inbound Commute Trips

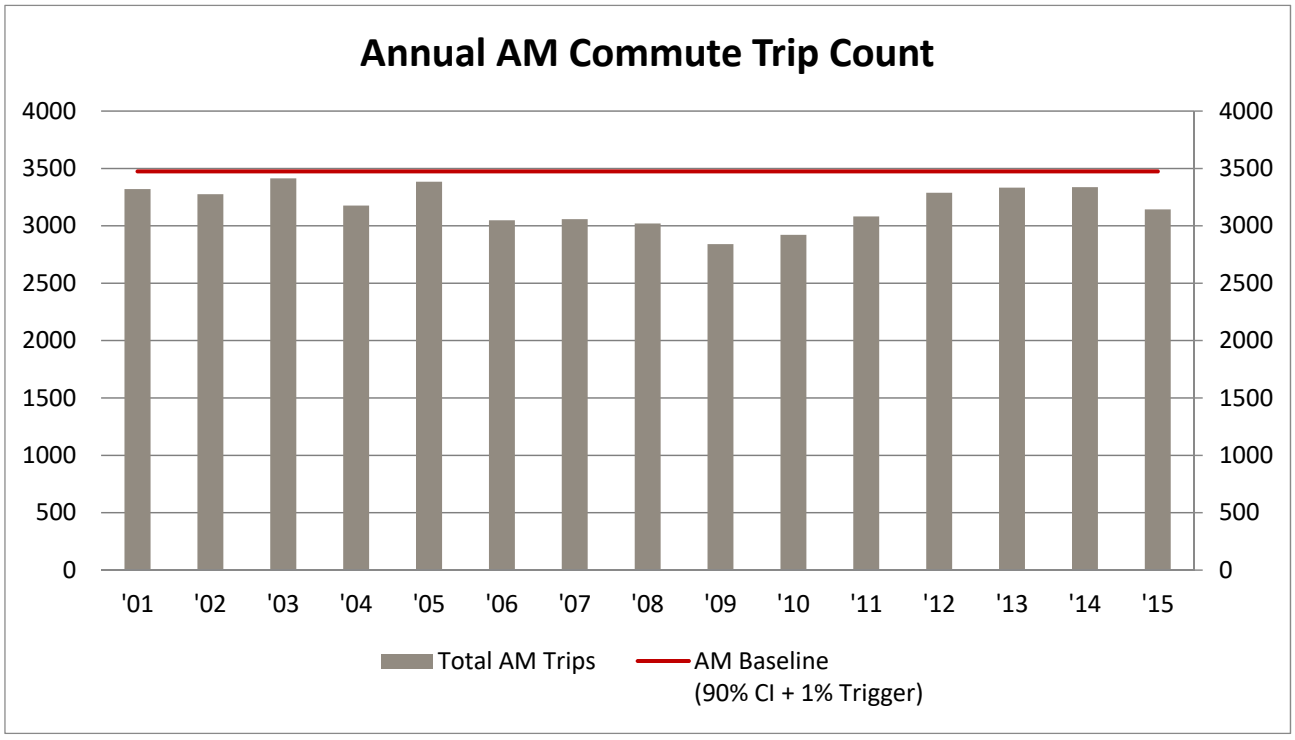
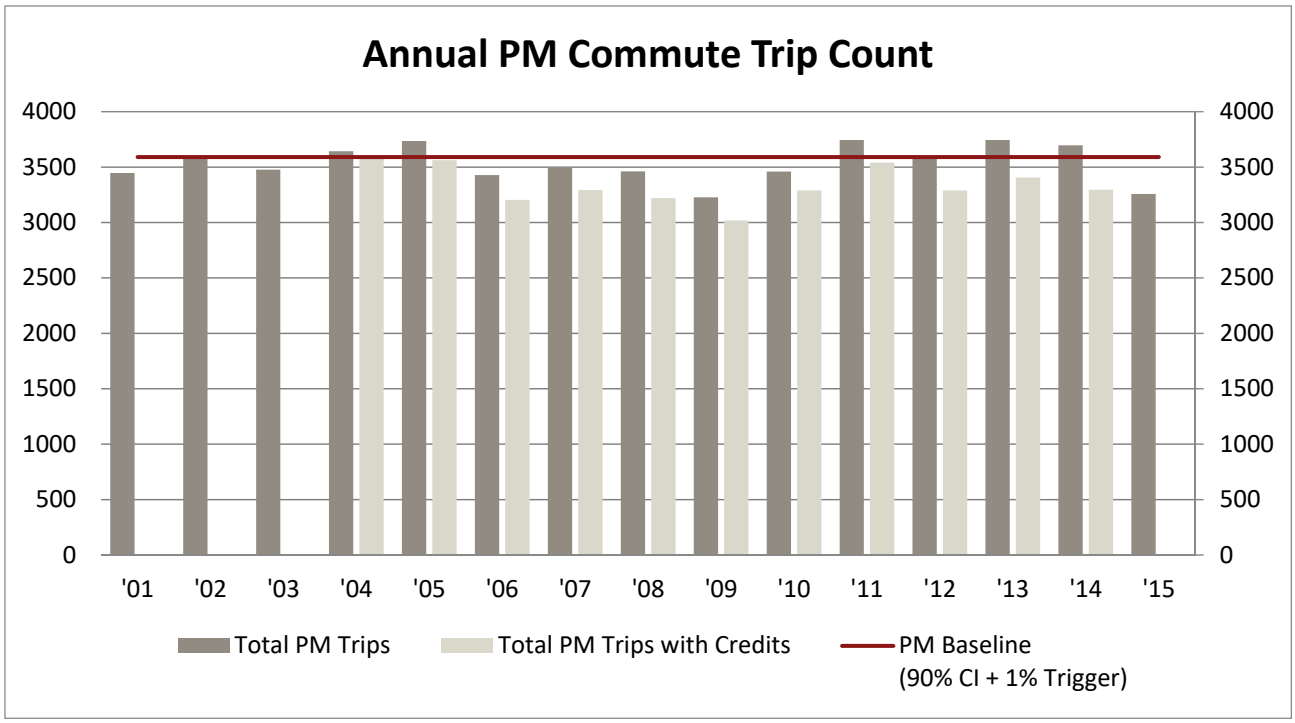


Figure BCR.10: Stanford University Annual Afternoon Peak Outbound Commute Trips



5.1.3 Intersection Mitigation Measures

The 2000 General Use Permit Environmental Impact Report identified 17 intersections that would be operating at unacceptable levels of service (LOS) during the peak hours if peak hour vehicle trips to and from the campus grew commensurate with construction and operation of new academic and academic support facilities and housing authorized by the 2000 General Use Permit. The Environmental Impact Report identified mitigation measures to improve intersection capacity in the adversely affected locations.

The intersection capacity improvements were split into two tiers. Condition G.1 required Stanford to construct Tier 1 intersection improvements regardless of whether Stanford achieved the No Net New Commute Trips goal. These improvements have been constructed at Arboretum Road and Palm Drive and at Welch Road and Campus Drive West.

Condition G.9 requires Stanford to construct Tier 2 intersection improvements (identified on Table 4 of the 2000 General Use Permit) only if Stanford does not achieve the No Net New Commute Trips goal. While Stanford has not been required to construct any of the 15 improvements identified in Condition G.9, four of the improvements were constructed as part of the Sand Hill Road Project and six more have been constructed by other development projects. The following improvements at five intersections have not been implemented:

- El Camino Real/Churchill Avenue (Palo Alto/Caltrans) – Add a new southbound right-turn lane on Churchill Avenue and change the existing shared left-right lane to a left-turn lane.

- Middlefield Road/University Avenue (Palo Alto) – Add a westbound right-turn lane on Middlefield Road.
- El Camino Real/Palm Drive (Palo Alto/Caltrans) – Add a southbound right-turn lane from University Avenue to westbound El Camino Real.

- Junipero Serra Boulevard/Page Mill Road (Palo Alto/Santa Clara County) – Add a second eastbound right-turn lane on Junipero Serra Boulevard.

- Junipero Serra Boulevard/Stanford Avenue (Palo Alto/Santa Clara County) – Add a second southbound left-turn lane on Stanford Avenue.

5.1.4 Project-Specific Traffic Studies

The 2000 General Use Permit Environmental Impact Report estimated the new trips that would be generated by growth under the 2000 General Use Permit and distributed those trips to the adjacent roadway network. Mitigation measures to address the impacts of those trips were developed and conditions of approval were attached to the 2000 General Use Permit. These mitigation measures and conditions approached the impacts in a comprehensive manner such that individual projects under the 2000 General Use Permit would not have to provide additional mitigation. However, under Condition G.11, Stanford is required to provide project-specific traffic studies in connection with certain projects to ensure that new or substantially more severe impacts would not result from those projects.

In January 2002, the methodology to conduct a project-specific traffic impact analysis was approved by the Santa Clara County Planning Office. The project-specific traffic study consists of both a 2000 General Use Permit Environmental Impact Report intersection evaluation and a localized access and circulation study. The first study is meant to assess the external, non-Stanford intersections that were studied in the 2000 General Use Permit Environmental Impact Report; the second study is meant to assess site-specific safety issues at the internal Stanford intersections directly adjacent to or affected by the project.

None of the project-specific traffic impact analyses that Stanford has prepared have indicated that a new or substantially more severe impact would occur, compared to the impacts previously disclosed in the 2000 General Use Permit Environmental Impact Report. Stanford recently submitted a project-specific traffic study in connection with its request for Santa Clara County Planning Commission approval of an addition of 1,450 housing units/student beds beyond the 3,018 housing units/student beds originally authorized by the

2000 General Use Permit. That study found that the trips at the affected intersections (El Camino Real/Serra Street and El Camino Real at Stanford Avenue) would not exceed the 2000 General Use Permit Environmental Impact Report's cumulative projections; the traffic volumes at these intersections were less than the volumes predicted in the 2000 General Use Permit Environmental Impact Report.

5.1.5 Summary of Special Events Traffic Management Plan

As required by 2000 General Use Permit Condition G.13, Stanford submitted a Special Events Traffic Management Plan to the County of Santa Clara Planning Office in December 2001. Consistent with the requirements of Condition G.13, the plan comprehensively addresses traffic planning, public notification and information resources (telephone hotline and website) for special events.

5.1.6 Junipero Serra Boulevard Traffic Calming

2000 General Use Permit Condition G.14 required Stanford to convene regular meetings of a multi-jurisdictional group to address the existing traffic problems on Junipero Serra Boulevard and Stanford Avenue. The group was charged with working toward implementation of feasible solutions to the existing problems, including noise, access from residential driveways and the safety of motorists, pedestrians and bicyclists.

In June 2010, the Santa Clara County Board of Supervisors approved $1.5 million in funding to complete the Junipero Serra Boulevard traffic calming project. County Roads & Airports awarded a design contract in March 2011. Construction documents (30% stage) were issued in August 2011. A draft Initial Study was issued for public review in November 2011. A final CEQA document was adopted in March 2012. CR&A anticipated starting construction in Spring 2012. However, permitting constraints from the Regional Water Quality Control Board delayed the construction process.

Stanford presented a conceptual redesign to County Roads & Airports in the Spring of 2015 that would eliminate the permitting constraints. Stanford conducted neighborhood outreach to share the concept with Stanford Campus Residential Leaseholders representatives. The conceptual design was presented to the County's Bicycle and Pedestrian Advisory Committee on March 9, 2016, as an informational item. An addendum to the Initial Study has been completed. Final design drawings are expected in summer 2016. Based on funding availability (which is subject to change), the County anticipates that construction will commence in 2017.

5.1.7 Roundabout Design and Construction

During implementation of the 2000 General Use Permit, Stanford has installed roundabouts at three intersections on Campus Drive: the Escondido Roundabout, which opened in September 2014, and the Bowdoin and Santa Teresa roundabouts, which opened in September 2015. A fourth roundabout at Galvez Road was completed in October 2016.

Before installing these roundabouts, Stanford consulted traffic engineers, compared the metrics for four-way stop signs, roundabouts and traffic signals, and listened to testimonials from other communities. Stanford hired an expert in international roundabout design to develop the criteria for roundabouts on campus.

All the roundabouts have been constructed with the same single-lane configuration, which means that vehicles and bicycles should travel single file around the circle – not alongside each other. In each roundabout, the rules are the same: vehicles and bicyclists must slow down before reaching the roundabout and yield to oncoming traffic and pedestrians. Bicyclists have two options: either ride in the roundabout or walk their bikes in the crosswalks.

Stanford has a website (https://transportation.stanford.edu/roundabout/) to answer questions about how to use a roundabout, with instructions for pedestrians, bicyclists and drivers. The website includes handouts, quick tips and an instructional interactive video. The website also features statistics from the Federal Highway Safety Administration showing that roundabouts improve safety, reduce congestion, reduce pollution and fuel use and save money. They are quieter – and, with landscaping, more attractive – than four-way stops dominated by asphalt.

Installation of the campus roundabouts was not a requirement of the 2000 General Use Permit. However, these innovative improvements that improve mobility and safety provide examples of the benefits of the flexible approach afforded by the Stanford Community Plan and 2000 General Use Permit.

5.2 Parking

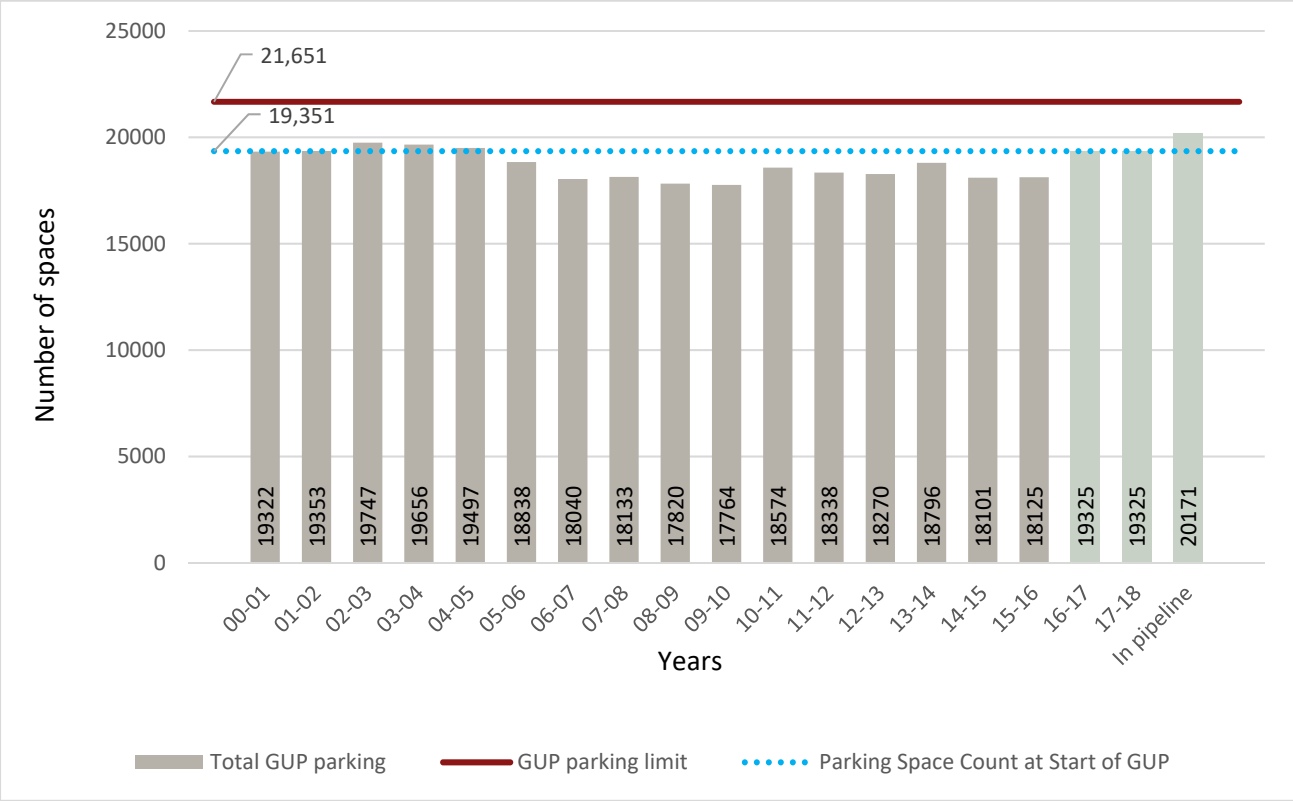
5.2.1 Construction of Net New Parking Spaces and Parking Distribution

The 2000 General Use Permit allows construction of 2,300 net new parking spaces above the then-current campus base of 19,351 spaces for a total of 21,651 spaces. Condition H.1 states that parking constructed as part of, and to serve, new faculty/staff housing in the areas designated Campus Residential − Low Density and Campus Residential − Medium Density do not count toward these limits (see **Figure BCR.11**).

The 2000 General Use Permit established maximum net additional parking spaces per Development District, subject to modification with an environmental assessment.

As of August 2016, the total supply of parking outside the Campus Residential zoning districts is 18,125 spaces. Projects in the pipeline will bring this total to 20,171 spaces, which is 1,480 spaces under the parking authorization established by the 2000 General Use Permit (see Figure BCR.11).

Figure BCR.11: 2000 GUP Parking Supply and Limit



5.2.2 Parking Demand

Stanford's residential and commuter parking demand has been decreasing on a per capita and per square foot basis due to implementation of Stanford's successful Alternative Transportation/Transportation Demand Management programs and nationwide trends of reduced vehicle ownership by the student population.

Millennial Travel Preferences

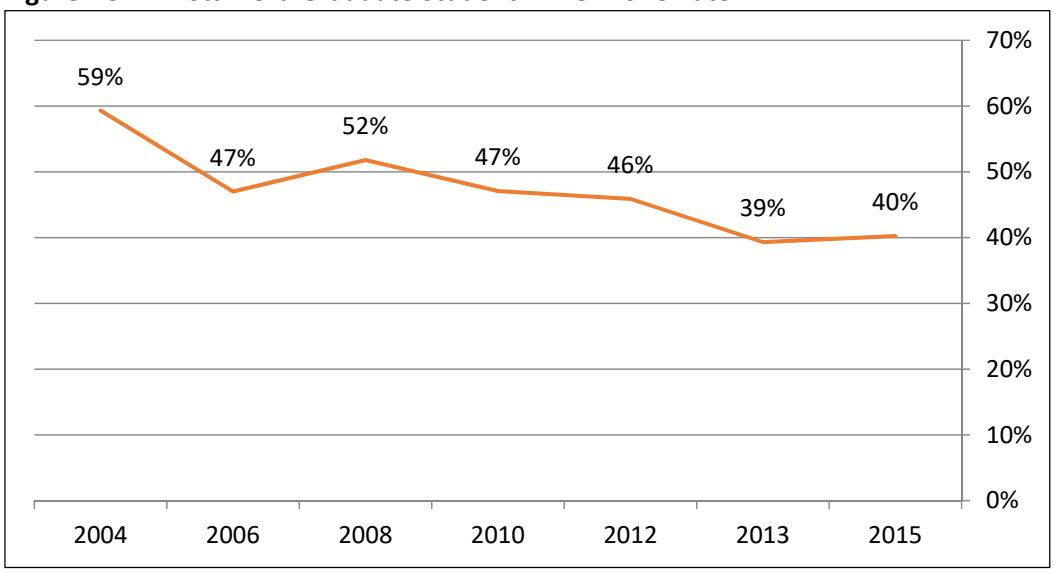
The "millennial" generation is a demographic cohort whose birth years range from the 1980s to the early 2000s. The majority of graduate students matriculating at Stanford for the next 10 years will likely be millennials.

Multiple researchers and media outlets have studied millennials and transportation, focusing on the fact that "automobility" has been declining for millennials and the previous generation, dating back to the 1990s. Noreen C. McDonald, associate professor in the Department of City and Regional Planning at the University of North Carolina at Chapel Hill, addresses this trend in a 2015 paper titled, "Are Millennials really the 'Go-Nowhere' generation?" published in the *Journal of the American Planning Association*. Using data from National Household Travel Surveys, McDonald finds that "automobility declines for all Americans between 1995 and 2009, but the drops are largest for Millennials and younger members of Generation X starting in the late 1990s. Moreover, among young adults, lifestyle-related demographic shifts, including decreased employment, explain 10 to 25 percent of the decrease in driving; millennial-specific factors such as changing attitudes and use of virtual mobility (online shopping, social media) explain 35 to 50 percent of the drop in driving; and the general dampening of travel demand that occurred across all age groups accounts for the remaining 40 percent."

Stanford Graduate Student Mode Shift

National trends in mode and mobility shifts are even more pronounced in Stanford's graduate student population. From 2004 to 2015, commuting graduate students have reduced their drive-alone mode share from approximately 60% to approximately 40% (see **Figure BCR.12**).

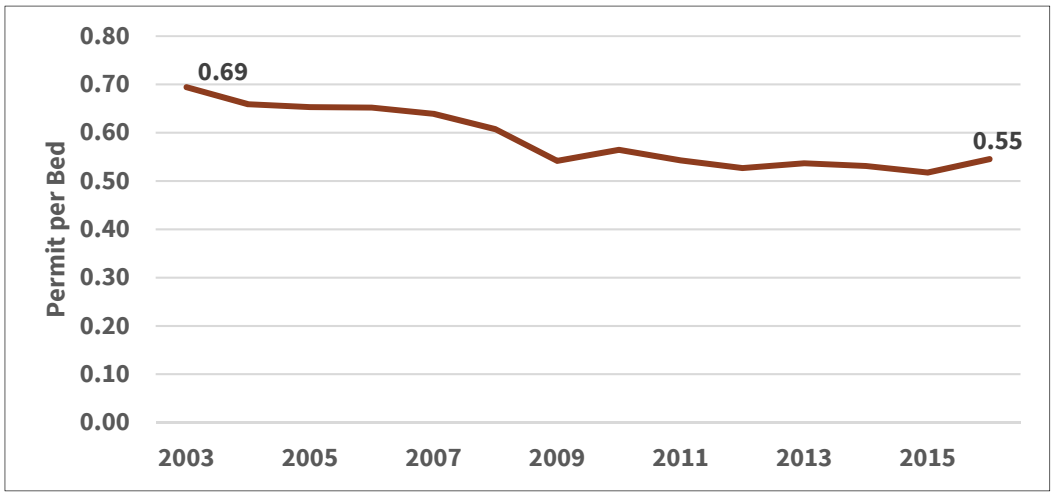
Figure BCR.12: Stanford Graduate Student Drive-Alone Rate



Stanford Residential Parking Permit Trends

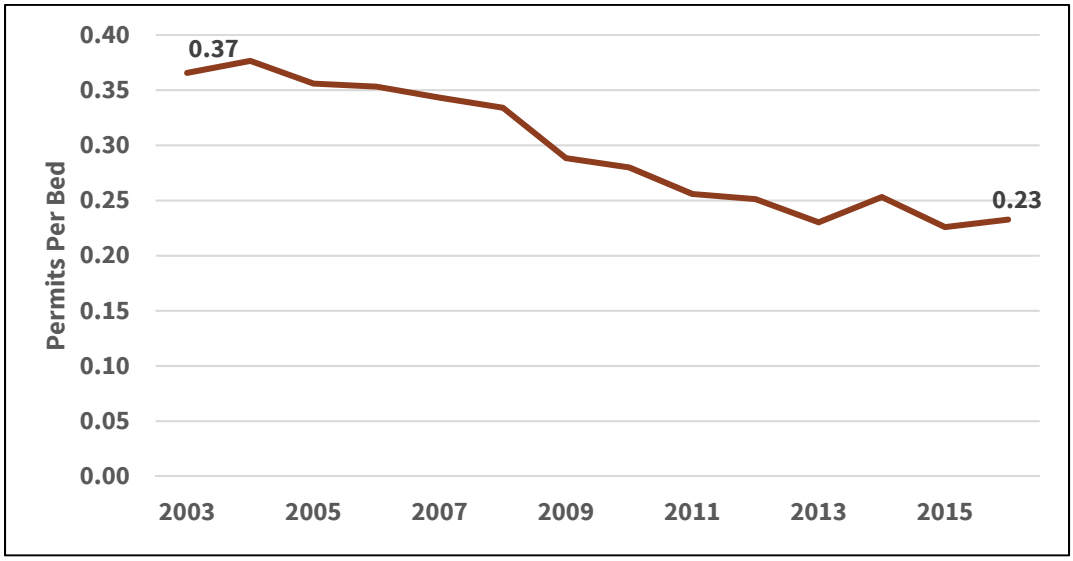
This trend away from personal automobile reliance is also apparent in parking permit sales for Stanford's graduate student residents. Between 2004 and 2015, the total graduate student residential parking permits-to-beds ratio has fallen from 0.69 to 0.55 (see **Figure BCR.13**).

Figure BCR.13: Stanford Graduate Student Parking Permits-to-Beds Ratio



Undergraduate student parking permit sales also declined at a similar rate at Stanford. Between 2003 and 2015, the undergraduate student residential parking permits-to-beds ratio has fallen from 0.37 to 0.23 (see **Figure BCR.14**).

Figure BCR.14: Stanford Undergraduate Parking Permits-to-Beds Ratio

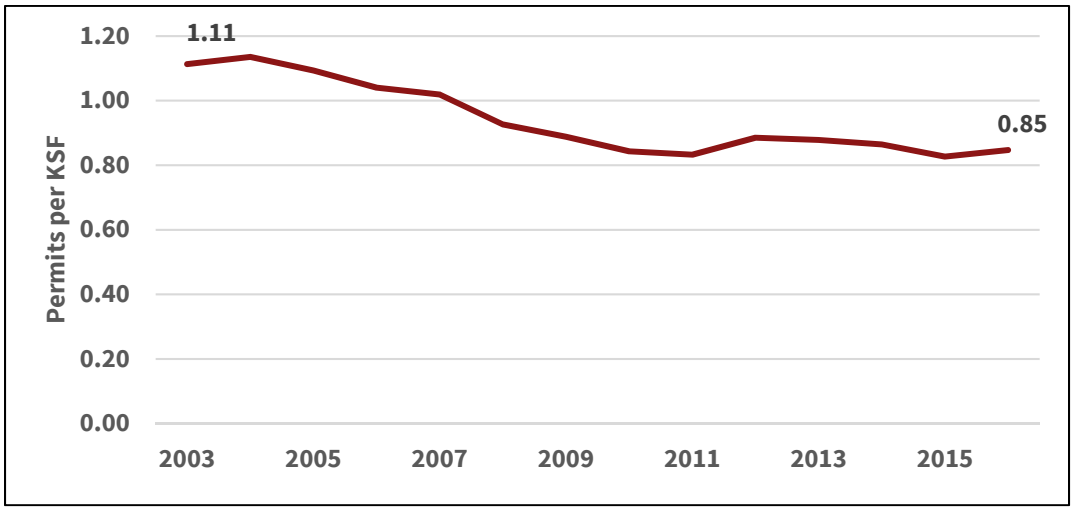


Stanford Commuter Parking Permit Trends

Unlike student permits, commuter permits are not dominated by the millennial generation. Yet Stanford has seen the number of commuter parking permits purchased decline on a per square foot basis, from a rate of 1.11 permits per thousand square feet of academic and academic support facilities in 2003 to a rate of 0.85 permits per thousand square feet in 2015.[1] This decline is likely due to Stanford's successful Alternative Transportation/Transportation Demand Management programs, which are designed to reduce the rate of single-occupant vehicle trips and achieve a goal of No Net New Commute Trips. While Stanford saw a significant drop in its commuter permit-per-square-foot rate between 2003 and 2009, this rate has been relatively flat since 2009 (see **Figure BCR.15**).

[1] The 0.85 is the ratio of commuter permits (8,166 permits) sold divided by the academic and academic support facilities square footage (9,462,000 square feet).

Figure BCR.15: Stanford Commuter Parking Permits-to-Academic Square Footage Ratio



5.2.3 Residential Parking Permit Programs

2000 General Use Permit Condition H.2 required Stanford to participate in residential parking permit programs in neighborhoods within the City of Palo Alto at a total cost not to exceed $100,000. Stanford is in compliance with this condition as it paid the $100,000 to Palo Alto, which used it to implement a parking permit program in College Terrace.

6.0 OPEN SPACE

The Stanford Community Plan identifies three open space strategies:

- Locate additional development inside the Academic Growth Boundary
- Balance recreational use and environmental objectives (implement the identified trails linkages on the Countywide Trails Master Plan with an alignment that protects sensitive habitat areas)
- Plan for parks and open space land within the Academic Growth Boundary

The 2000 General Use Permit conditions to implement these strategies include:

- Condition E.2.b authorizing a cumulative maximum of 15,000 square feet of building area in the Foothills district, with no individual building or facility exceeding 5,000 square feet in size
- Condition E.4 prohibiting academic development within the Arboretum Development District
- Condition I.1 requiring Stanford to improve parks in the San Juan faculty/staff residential area
- Condition I.2 requiring Stanford to dedicate easements for, develop and maintain the portions of two trail alignments that cross Stanford lands shown in the 1995 Santa Clara County Countywide Trails Master Plan (Routes S1 and C1)

6.1 Open Space

6.1.1 Campus Open Space

The Stanford Community Plan describes two different types of lands that serve both academic and open space purposes. Within the Academic Growth Boundary, the Community Plan identifies Campus Open Space. Among other locations, these areas include the Oval, the Arboretum and the area surrounding Lagunita. Under 2000 General Use Permit Condition E.4, no development is allowed in the Arboretum Development District and Stanford has maintained all of the Campus Open Space areas designated by the Stanford Community Plan.

6.1.2 Open Space and Field Research

Outside the Academic Growth Boundary, the Stanford Community Plan identifies Open Space and Field Research and Special Conservation Areas. In 2003, the Santa Clara County Board of Supervisors adopted new zoning for the Open Space and Field Research (OS/F) district. Santa Clara County Zoning Code Section 2.50.010 states:

> *The purpose of the Open Space and Field Research district, also known as the OS/F district, is to implement the December 2000 Stanford University Community Plan (General Plan) policies for the Open Space and Field Research land use designation. This zoning district is established to maintain the open space character of those Stanford University lands outside the Academic Growth Boundary. Allowable uses include utilities, low intensity agriculture, limited agricultural research, field research, and Stanford field studies, limited outdoor recreational activities, recreational trails, environmental restoration, limited ancillary facilities, and Stanford University specialized facilities and installations, such as astronomical or related facilities. Criteria and standards governing activities not defined within the standard use classification tables are addressed in section 2.50.040.*

Under the OS/F zoning, a viewshed analysis is required for any project that requires Architectural and Site Approval Committee approval. In addition, Santa Clara County 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.

Furthermore, new development in the OS/F district cannot be approved unless the following findings can be made:

- The project requires a remote or natural setting and cannot feasibly be located within the Academic Growth Boundary.
- Project design and location afford reasonable protection to environmental resources of the OS/F district, including aesthetic resources.
- All of the following criteria are met, unless infeasible:
    - The development has been sited to minimize visibility.
    - The development has been sited to minimize the need for grading and additional landscaping.
    - The need for additional impervious surface has been minimized.

    - The development incorporates appropriate design and color selection to blend with the surrounding predominantly natural and rural setting.
    - If necessary, and where feasible, mitigation measures have been established that reduce environmental impacts to less than significant levels.

- Project design incorporates clustering concepts where appropriate, both individually and cumulatively (in relation to other projects), to reduce the amount of improvements required for development, conserve natural features or facilitate a more aesthetic and efficient use of open space.

- Lighting has been designed and placed to minimize upward glow, provide high-beam efficiency and provide glare and spill control.

- Project design and siting minimize the need for new access roads.

- Existing trees with a circumference of 37.7 inches, measured 4.5 feet above ground level, have been preserved and integrated into site design and native vegetation has been preserved to the extent possible.

Although the 2000 General Use Permit contemplated 15,000 square feet of net new academic and support facilities in the Foothills Development District, very little development has occurred:

- Stanford restored a 4,690-gross-square-foot mothballed brick building on the campus side of Junipero Serra Boulevard without expanding the building.
- Stanford constructed a 42-square-foot guard shack at the Stanford Avenue gate to the foothills.

6.1.3 Special Conservation Areas

The Stanford Community Plan describes the uses allowed within the Special Conservation Areas designation.

SCP-LU 30 states:

> *The Special Conservation Areas designation applies to lands south of Junipero Serra Boulevard which is deemed unsuitable for development due to natural resource constraints. Accordingly, no physical development other than that which supports conservation efforts may occur in these areas. It may 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 31 states:

> *The use of these 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 32 states:

> *No new permanent development in the form of buildings or structures is allowed, other than construction, modification, and maintenance of improvements to support conservation efforts. Existing non-conforming uses are allowed to remain, in accordance with the County's requirements for non-conforming structures.*

Consistent with these land use designations, Stanford has conducted extensive conservation programs in lands designated both as Special Conservation Areas and Open Space and Field Research.

The Stanford Conservation Program manages biological resources in the Foothills for sustainable academic use and conservation of native biodiversity. Active management of these areas includes native seeding and planting, invasive plant control, removal of invasive aquatic species, assays for wildlife diseases, native species monitoring, habitat enhancement, ecological research, and permitting of research and teaching activities.

6.2 Outdoor Learning and Research

All Stanford lands, including those designated as Open Space and Field Research, Special Conservation Areas, and Campus Open Space, allow for outdoor learning opportunities across disciplines. This gives students opportunities to develop their knowledge and skills in a way that adds value to their everyday experiences in the classroom, which supports Stanford's highest priority of teaching and research.

6.3 Trails

6.3.1 Trail Alignments Shown on the 1995 Countywide Trails Master Plan

When Santa Clara County approved the Stanford Community Plan and 2000 General Use Permit, the County identified a significant impact to recreational opportunities for existing or new campus residents and facility users. One of the mitigation measures to address this impact required Stanford to dedicate easements for two trails shown on the 1995 Countywide Trails Master Plan (Routes S1 and C1). 2000 General Use Permit Condition I.2 expanded on the mitigation measure by also requiring Stanford to construct the portions of the trails that crossed its lands and to enter into an agreement with the County to specify the location and configuration of the trails.

6.3.2 Trails Agreement

In December 2005, Stanford and Santa Clara County entered into a Trails Agreement that described how Stanford would comply with the mitigation measure and 2000 General Use Permit Condition I.2.

- First, the Agreement required Stanford to construct the S1 Trail in a location that the County preferred over the location shown in the 1995 Countywide Trails Master Plan.
- Second, the Agreement determined the location of the C1 Trail shown in the 1995 Countywide Trails Master Plan was along Alpine Road; the Agreement required Stanford to offer money to San Mateo County and Portola Valley for completion of the segments of the C1 Trail in those jurisdictions.
- Third, Stanford agreed to pay to construct a third trail, the C2 Trail, in Los Altos Hills.

Construction and Dedication of S1 and C2 Trails and Portion of C1 Trail

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.

Creation of County Recreation Fund

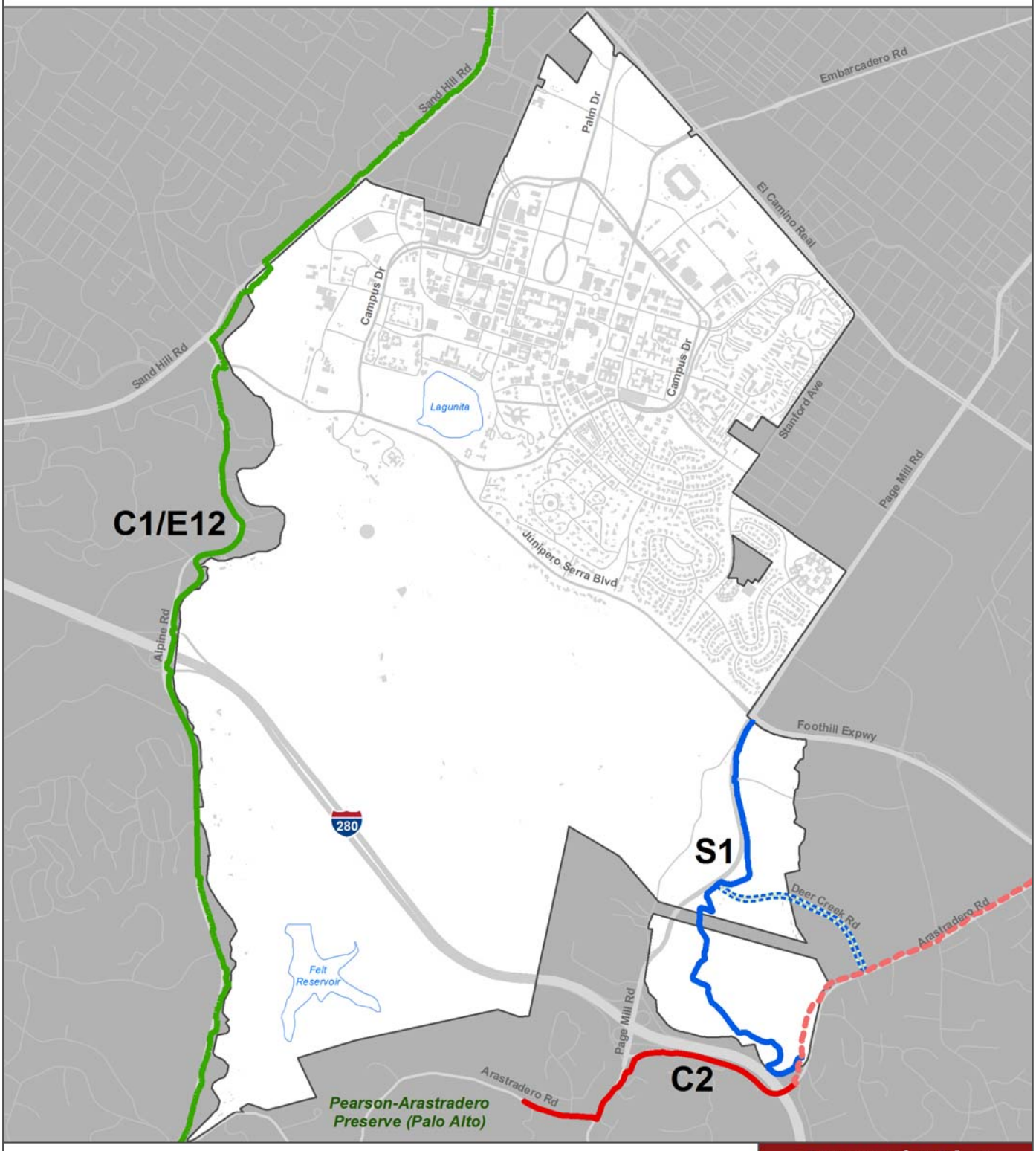
The only jurisdiction that did not accept funding was San Mateo County. The Trails Agreement anticipated this potential outcome and required that, in such an event, Stanford would instead pay to Santa Clara County the amount it was required to offer to San Mateo County to construct the portion of the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

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

Update to Countywide Trails Master Plan Routes in Stanford Community Plan Map

Figure BCR.16 updates Stanford Community Plan Figure 5.3 (Countywide Trails Master Plan Designated Trails) to show the modified locations for the S1 and C1 trail alignments that the Santa Clara County Board of Supervisors approved through the Trails Agreement and to show the additional C2 trail segment that Stanford constructed pursuant to the Trails Agreement.

Figure BCR.16: Countywide Trails Master Plan Designated Trails



Countywide Trail Routes

- C1/E12 - Alpine Trail
- S1 - Matadero Creek Trail
- S1 - Bicycle Lanes
- C2 - Adobe Creek Trail (Stanford Improvements)
- C2 - Adobe Creek Trail (Existing)

Community Plan

Figure 5.3

0 0.5 Miles

Stanford University, LBRE/LUEP
November 5, 2016

N

6.3.3 Stanford Perimeter Trail

The Santa Clara County Board of Supervisors conducted a proposals 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. The City of Palo Alto and Stanford submitted a joint application for use of the County Recreation Fund. In addition to bicycle and pedestrian improvements located in the City of Palo Alto, the application included a new Stanford Perimeter Trail on the edge of Stanford's lands in unincorporated Santa Clara County.

Although the Board of Supervisors selected Stanford as one of the recipients of the County Recreation Fund, Stanford opted instead to construct the Stanford Perimeter Trail at its own expense. The Stanford Perimeter Trail includes new and improved bicycle and pedestrian facilities along El Camino Real and Stanford Avenue. In addition, Stanford improved parking along one side of Stanford Avenue, removed parking along the other side of Stanford Avenue and created replacement parking along Coyote Hill Road. To connect to the Coyote Hill Road parking area, the Stanford Perimeter Trail includes a new pathway along Junipero Serra Boulevard from Page Mill Road to Stanford Avenue. Stanford was not required to construct the Stanford Perimeter Trail to fulfill the requirements of Condition I.2. This was a project that Stanford voluntarily undertook.

6.4 Parks in the San Juan Faculty/Staff Residential Area

2000 General Use Permit Condition I.1 requires Stanford to improve parks in the San Juan faculty/staff residential area to provide equal recreational value as any facilities in this area that would be removed as a result of construction under the 2000 General Use Permit. In 2001, Stanford submitted a draft Program for the Replacement of Recreational Facilities in the San Juan District, which was approved by the County staff in 2003 and the County's Architectural and Site Approval Committee in 2004. No development occurred on the open space areas in the faculty/staff residential area under the 2000 General Use Permit and no park improvements were lost.

Although the requirements of the San Juan Recreation Facilities Plan were not triggered, Stanford's Faculty/Staff Housing Office conducts improvements to parks within the faculty/staff residential area. Since 2000, the following improvements have been made:

- Lathrop Park (benches, pathways and updated play area) at a cost of $230,000
- Frenchman's Park (extensive landscaping, new paths, benches, structural elements including large rocks) at a cost of $300,000

- Kite Hill (pathway work and landscaping) at a cost of $100,000
- Ryan Park (replace and refurbish play structures, expand play area) at a cost of $70,000

6.5 Recreation Facilities Constructed on Campus during 2000 GUP

During the 2000 General Use Permit, Stanford used about 290,000 square feet of its 2,035,000 authorized academic and academic support square footage for new athletic and recreation facilities, and expansion of existing athletic and recreation facilities. Notable projects during this period include the Arrillaga Center for Sports and Recreation (originally called the Arrillaga Family Recreation Center), approximately 95,000 gross square feet, which replaced the former Encina Gym, and the Arrillaga Outdoor Education and Recreation Center, approximately 75,000 gross square feet.

In addition, Stanford has renovated other several varsity and recreational facilities, and also placed two parking garages under recreation fields, during the 2000 General Use Permit. More information on Stanford's recreation facilities can be found in **Tab 16 – Parks and Recreation Facilities Analysis**.

7.0 RESOURCE CONSERVATION

The Stanford Community Plan identifies 10 strategies for resource conservation:

Habitat and Biodiversity

- Improve current knowledge and awareness of habitats and natural areas
- Protect the biological integrity of habitat areas and adequately mitigate impacts
- Encourage and promote habitat restoration

Water Quality and Watershed Management

- Reduce nonpoint-source pollution
- Enhance and restore wetlands, riparian areas and other habitats that improve watershed quality
- Prepare and implement comprehensive watershed management plans

Heritage Resources

- Inventory and evaluate heritage resources
- Protect heritage resources through avoidance, adaptive reuse and sensitive planning and design

Scenic Resources

- Employ growth and development policies that conserve scenic resources
- Maintain and enhance the scenic values of urbanized area settings

2000 General Use Permit conditions to implement these strategies include:

- Conditions J.1 through J.9 establishing mitigation requirements to reduce impacts to the California tiger salamander and authorizing those measures to be superseded by an approved Habitat Conservation Plan

- Condition K.1 requiring special status plant surveys for building projects located in riparian, disturbed riparian, oak woodland, annual grassland-oak woodland, or modified oak woodland, and Condition K.3 requiring restoration of oak woodland affected by development

- Condition K.2 requiring preconstruction surveys for breeding raptors and migratory birds and appropriate setbacks from active nests

- Condition K.4 requiring replacement of protected trees or approval of a vegetation management plan

- Condition K.5 requiring Stanford to delineate jurisdictional wetlands and establishing avoidance and replacement measures

- Condition K.6 requiring Stanford to provide updates to the California Natural Diversity Database records

- Condition K.7 requiring Stanford to prepare a Special Conservation Area Plan

- Condition P.4 requiring Stanford to prepare a water conservation and recycling master plan

- Condition P.5 specifying steps that Stanford must take if it exceeds its water allocation from the San Francisco Water Department

- Condition N.2 requiring Stanford to accommodate the potential for increased storm water through project-specific measures or a comprehensive hydrology and drainage study

- Condition N.4 requiring Stanford to maintain groundwater recharge levels through project-specific measures or a comprehensive groundwater recharge study

- Condition O.2 requiring assessment of structures 50 years old or more, alterations of historic structures following Secretary of the Interior's Standards for Rehabilitation and site-specific assessments and incorporation of feasible mitigation measures prior to demolition of historic structures

- Condition O.3 requiring submission of a confidential map showing the location of all known prehistoric and historic archaeological resources in the unincorporated Santa Clara County portion of Stanford's lands and mitigation measures specific to projects affecting prehistoric and historic archaeological resources

- Condition O.4 addressing discovery of fossilized shell or bone

- Condition L.1 requiring preparation of an El Camino Real streetscape design prior to submitting an application for development along El Camino Real

- Condition L.2 requiring setbacks for development along Stanford Avenue

- Condition L.3 requiring submission of a lighting plan

- Condition L.4 restricting the locations of occupied structures in the Lathrop Development District

7.1 Biological Resources

The 2000 General Use Permit contains 16 conditions of approval concerning biological resources and the California tiger salamander. Additional description of the existing biological resources on Stanford lands is provided in Tab 14 of the 2018 General Use Permit application.

7.1.1 California tiger salamander

In 2000, the California tiger salamander was a federal candidate for listing as a threatened or endangered species and a state species of special concern. The 2000 General Use Permit conditions of approval included nine conditions to address CEQA impacts to the salamander (conditions J.1 through J.9) but also anticipated that the possible future listing of the species could result in Stanford's need to comply with the federal Endangered Species Act (ESA).

The salamander received federal protection under the ESA when it was listed as a threatened species in 2004. In part to address federal ESA requirements pertaining to the salamander, Stanford prepared a Habitat Conservation Plan (HCP) that was approved by the U.S. Fish and Wildlife Service (USFWS) in 2013. The HCP describes Stanford's anticipated operational and development activities that could result in "take" of protected species and a conservation program that minimizes the effects to the species and provides compensatory mitigation for any residual effects. Based on the conservation programs and commitments identified in the HCP, USFWS issued Stanford an Incidental Take Permit (ITP) in compliance with Section 10(a) of the ESA. 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," thereby superseding the conditions of approval related to the salamander as contemplated by 2000 General Use Permit Condition J.9.

The salamander was listed as threatened by the California Department of Fish and Wildlife (CDFW) in 2010. On May 4, 2016, the CDFW determined that the ITP issued by USFWS, including the incorporated measures in the HCP, is consistent with the California Endangered Species Act (CESA), meeting the requirements set forth in Fish and Game Code section 2081 for authorizing take of CESA-listed species (i.e., California tiger salamander).

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 conservation program in the HCP is described in more detail in Tab 14 of the 2018 General Use Permit application.

7.1.2 Special-status Plant Surveys

In compliance with 2000 General Use Permit Condition K.1, special-status plant surveys were conducted for any building projects located in riparian, disturbed riparian, oak woodland, annual grassland-oak woodland or modified oak woodland areas identified in the vegetation map provided in the 2000 General Use Permit Environmental Impact Report. None of the surveys conducted since 2000 have identified any special-status plants. The biological resources description in Tab 14 of the 2018 General Use Permit application provides an updated description of the potential for special-status plants on Stanford lands in unincorporated Santa Clara County.

7.1.3 Breeding Birds

In compliance with 2000 General Use Permit Condition K.2, breeding bird surveys were conducted for projects when construction activities would begin or greatly increase between February 1 and August 31. The Santa Clara County Planning Office issued an interpretation of this condition in 2001.

Compliance with Condition K.2 ensures compliance with the Migratory Bird Treaty Act (MBTA), which makes it unlawful to "take" a migratory bird, its nest or its eggs. "Take" is defined as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect," or to attempt any of these acts. The MBTA does not prohibit the "take" of a nest or eggs that is unintentional and incidental to other lawful activities. The Ninth Circuit Court of Appeals holds that the MBTA's take prohibition applies only to intentional acts and does not apply to incidental take. See *Seattle Audubon Society v. Evans*, 952 F. 2d 297, 303 (9th Cir. 1991).

7.1.4 Oak Woodland

2000 General Use Permit Condition K.3 addresses potential impacts to oak woodland identified in the 2000 General Use Permit Environmental Impact Report. No oak woodland has been removed since 2000.

7.1.5 Protected Trees

2000 General Use Permit Condition K.4 addresses a potential biological impact from loss of trees protected by the Santa Clara County tree ordinance. The potential impact can be minimized either on a project-by-project basis (Condition K.4.a) or on a comprehensive basis (Condition K.4.b). Stanford has historically chosen to address impacts on a project-by-project basis. The Santa Clara County Planning Office and Stanford developed a shared interpretation of Condition K.4.a in 2014, including identification of the categories of trees that trigger replacement ratios and the procedure for obtaining permission to remove protected trees.

On the Stanford campus, trees protected under the County's Tree Protection Ordinance are those trees that were "required to be planted or retained by the conditions of approval for any use permit, building site approval, grading permit, architectural and site approval, design review, special permit or subdivision."

Recently, Stanford has notified the County Planning Office of the intention to prepare a Vegetation Management Plan to comply with Condition K.4 on a comprehensive basis, rather than on a project-by-project basis. The Vegetation Management Plan is expected to provide a description of Stanford's vegetation management zones, including geographic area, objectives and management practices. If the County Planning Office determines that the Vegetation Management Plan provides the same or greater level of tree protection as the project-by-project measures in Condition K.4.a, the Vegetation Management Plan will be used to address impacts to protected trees.

7.1.6 Wetlands

2000 General Use Permit Condition K.5 addresses wetlands. Stanford prepared a jurisdictional wetlands survey that was approved by the U.S. Army Corps of Engineers in 2001, which was approved by the County Planning Office in 2003. In December 2015, the Army Corps of Engineers approved a revised preliminary jurisdictional determination of wetlands and other waters of the United States on the core campus (i.e., within the Academic Growth Boundary). The 2015 delineation is provided in Tab 15 of the 2018 General Use Permit application.

Under the 2000 General Use Permit, three projects affected wetlands and required permitting from the U.S. Army Corps of Engineers and/or the Regional Water Quality Control Board: the Olmsted Terrace Faculty Residences, the Bing Concert Hall and the Museum Way parking project.

7.1.7 California Natural Diversity Database (CNDDB)

In accordance with 2000 General Use Permit Condition K.6 and standard operating practice, Stanford provided updates to the CNDDB in 2003 and 2014.

7.1.8 Special Conservation Area Plan

Stanford submitted a draft Special Conservation Area Plan to the Santa Clara County Planning Office in compliance with 2000 General Use Permit Condition K.7 in 2001. At approximately the same time, Stanford began preparation of a Habitat Conservation Plan. Stanford and the County staff realized that the geographic area and conservation goals of the Special Conservation Areas and the HCP overlapped. In order to achieve consistency between these plans, it was decided that County staff and Stanford would finalize the

Special Conservation Area Plan after completion of the HCP. The HCP was approved in August 2013; the Special Conservation Area Plan was completed and approved in August 2015.

7.2 Water Quality and Watershed Management

7.2.1 Water Usage

2000 General Use Permit Condition P.5 addresses the potential water supply impact of Stanford's total demand after development of academic and academic support facilities and housing under the 2000 General Use Permit exceeding the water allocation of potable water supplied by the San Francisco Water Department (formally called San Francisco Public Utilities Commission, SFPUC). Through this condition, Stanford had three choices to address the potential impact if the annual daily average of water demand exceeded Stanford's 3.033 million-gallon-per-day allocation:

- Reduce water consumption to a level below the allocation.
- Apply for an increase in allocation.
- Seek other sources of water.

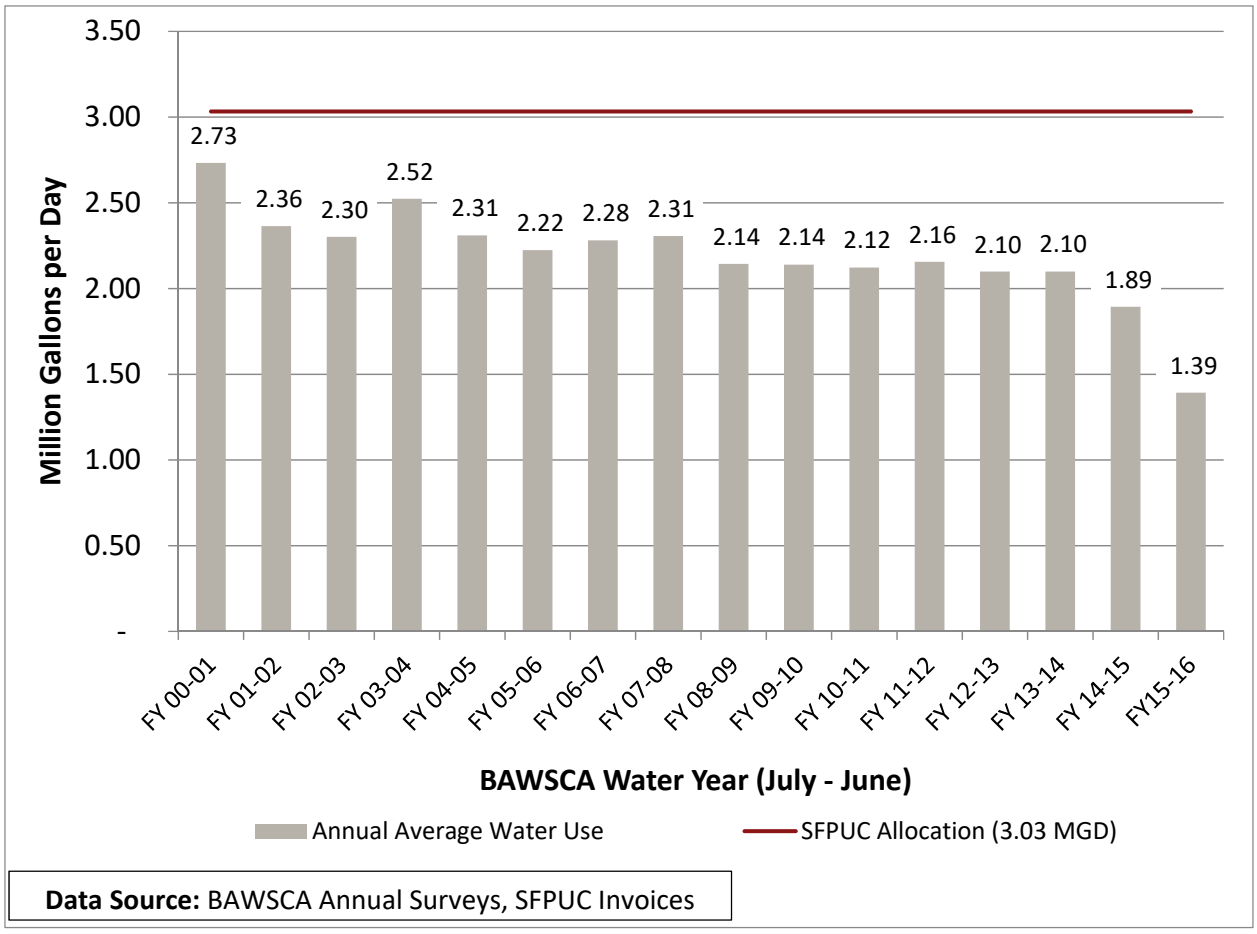
Stanford chose to fulfill this condition through staying below the 3.033 million-gallon-per-day SFPUC allocation.

In accordance with 2000 General Use Permit Condition P.4, Stanford prepared a draft Water Conservation, Reuse, and Recycling Master Plan in 2001, which was finalized and approved by the County Planning Office in 2003. This plan described Stanford's existing water conservation measures, projections of the future water use by facilities and housing that could be developed under the 2000 General Use Permit, and possible water conservation measures that could be implemented. The Master Plan found that it was feasible for Stanford to develop facilities authorized by the 2000 General Use Permit and remain within the SFPUC allocation of 3.033 million gallons per day.

Stanford's average annual potable water use in the first year of the 2000 General Use Permit (2000–01) was 2.7 million gallons per day. This use has steadily decreased through time, despite the construction of new facilities and housing under the 2000 General Use Permit (see **Figure BCR.17**). The types of water conservation measures that have been implemented include:

- Once-through cooling replaced with circulating systems.
- Approximately 13,000 academic and student housing bathroom fixtures replaced with water-efficient upgrades, including low-flow showerheads, sink aerators, toilets and urinals.
- Installation of more than 4,000 high-efficiency toilets and urinals.
- Water-Mizers installed on almost all campus autoclaves and sterilizers.
- Laboratory equipment retrofits or upgrades, such as reuse of reverse osmosis reject water for quenching the discharge from a lab equipment washing process.
- A demonstration program started in 2006 to test new water-efficient technology.
- Computer-operated evapotranspiration monitoring and irrigation control systems installed on campus and implementation of a pilot program of this technology in single-family homes with the highest water use in the residential areas on campus.
- Various nonessential turf areas converted to drought-tolerant landscaping, following construction of a water-wise demonstration garden to showcase drought-tolerant planting.
- Construction and activation of an industrial process wastewater treatment plant and recycled water distribution system in 2009 for reusing cooling tower blow-down wastewater from the Central Energy Facility for flushing toilets and urinals for 20 new dual-plumbed buildings (subsequently discontinued following closure of the Central Energy Facility in March 2015).
- Consistent outreach to the campus community about water-efficient practices and the process for notifying operations staff about potential leaks.

Figure BCR.17: Stanford's Domestic Water Use, 2001-2016



The annual average campus potable water use in 2014−15 as a result of these measures was 1.89 million gallons per day, a decrease of approximately 30% since 2000, despite adding 200,000 gsf in academic, academic support and housing each year. Stanford's potable water use significantly decreased further in 2015−16 to 1.39 million gallons per day, primarily due to the construction of a replacement Central Energy Facility in April 2015, which incorporated an innovative thermal energy approach of heat recovery along with electric chillers that replaced the water-intensive evaporative cooling towers that had been utilized in the previous Central Energy Facility to dissipate heat and produce chilled water to cool campus buildings. The new Central Energy Facility reduced campus potable water usage by 15%. The water use in 2015−16 was also reduced as a result of a four-year drought and reduced indoor and irrigation use.

A more detailed description of the sources of Stanford's water supply is provided in the Water Supply Assessment included in Tab 13 of the 2018 General Use Permit application.

7.2.2 Flooding

2000 General Use Permit Condition N.2 addresses potential surface water hydrology impacts from additional runoff due to development under the 2000 General Use Permit. Through this condition, Stanford was required to assure that the peak storm runoff from development authorized by the 2000 General Use Permit would not increase and that any increased runoff would not cause additional downstream flooding. This assurance could be either on a project-by-project basis (Condition N.2.a) or on a watershed basis (Condition N.2.b). Stanford chose to address the increase in peak storm runoff by engineering and developing detention facilities to mitigate increased peak storm runoff on a comprehensive, watershed-wide basis.

Stanford submitted a Storm Drainage Detention Master Plan in April 2001, which presented an analysis of runoff and a plan for new detention facilities. In 2002, Stanford submitted a calculation procedure for determining the detention basin volume needed to mitigate runoff from increased impervious surface (i.e., roof, concrete and asphalt). The detention basin approach and methodology were approved by the County Planning Office in 2004.

In 2001, Stanford constructed detention basins near the Serra Street/El Camino Real intersection, which also serve as recreation fields (see **Figure BCR.18**). These basins provide detention capacity to offset potential runoff from additional impervious surface of more than nine million square feet in the Matadero Creek watershed.

In 2003, Stanford constructed Phase 1 detention basins near the Stock Farm Road/Sand Hill Road intersection (Figure BCR.17). These basins provide detention capacity to offset potential runoff from additional impervious surface of 450,000 square feet in the San Francisquito Creek watershed. In 2015, Stanford constructed a second phase of detention basins near the Pasteur Drive/Sand Hill Road intersection, which also serve as recreation fields. The Phase 2 basins created detention capacity to offset approximately 2.5 million square feet of additional impervious surface in this watershed.

Stanford provides a report to the County Planning Office each year that confirms that the calculated peak runoff from the cumulative increase in impervious surface is more than offset by the constructed detention basins, thereby ensuring that the increase in peak storm runoff from development under the 2000 General Use Permit does not increase the flooding risk. As of June 1, 2016, the detention capacity remaining in each watershed would offset the following amount of additional development:

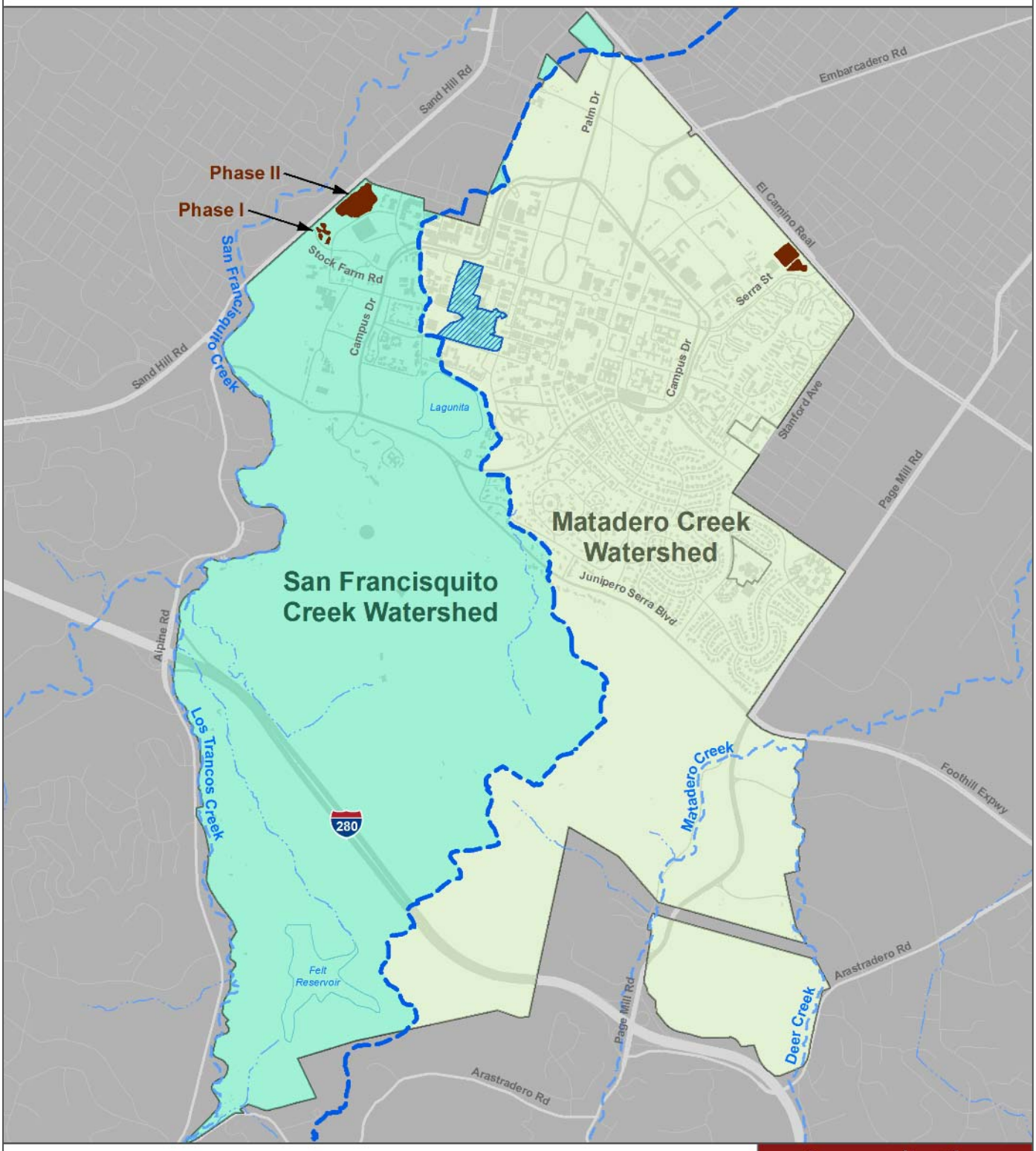
- 2,550,000 square feet of additional impervious surface in the San Francisquito Creek watershed
- 8,480,000 square feet of additional impervious surface in the Matadero Creek watershed

At the buildout of the 2000 General Use Permit (including Escondido Village Graduate Residences), the remaining detention capacity is estimated to accommodate:

- 2,482,000 square feet of additional impervious surface in the San Francisquito Creek watershed; and
- 8,485,000 square feet of additional impervious surface in the Matadero Creek watershed.

In compliance with 2000 General Use Permit Condition N.3, all detention facilities were designed to only store storm water runoff temporarily and not create extended ponding.

Figure BCR.18: Watershed Boundary and Detention Basins



7.2.3 Groundwater Recharge

2000 General Use Permit Condition N.4 addresses potential loss of groundwater recharge that could result from an increase in impervious surface within the groundwater recharge (i.e., unconfined zone) area. Through this condition, Stanford had the option to prepare a site-specific groundwater recharge study for each building project within the unconfined zone (Condition N.4.a) or a comprehensive groundwater recharge study for all development that could occur within the unconfined zone (Condition N.4.b). Stanford chose to develop a comprehensive approach to groundwater recharge.

The Campus-Wide Plan for Groundwater Recharge described Stanford's calculation methodology for groundwater recharge lost by development and Stanford's operational practice of 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. This concept for groundwater recharge was discussed with staff from Santa Clara County and Santa Clara Valley Water District (SCVWD). The methodology was approved by SCVWD and the Groundwater Recharge Study was approved by the Santa Clara County Planning Office in 2015.

The approved report and subsequent calculations of recharge lost by development demonstrate that the cumulative amount of groundwater conveyed to Lagunita is far greater than the cumulative amount of groundwater recharge lost annually, by a factor of more than 100. 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. Based on the findings that recharge operations far exceed groundwater recharge lost by development, further tracking and submittal of groundwater recharge quantities do not appear to be necessary.

7.2.4 State Water Resources Control Board NPDES General Permit Compliance

2000 General Use Permit Condition N.6 addresses the potential impact to surface and groundwater quality from construction activities that could cause contamination of water bodies. The condition requires Stanford to submit a Notice of Intent to the State Water Resources Control Board for each proposed building project to be covered under National Pollutant Discharge Elimination System (NPDES) General Permit CAS000002. This condition duplicates existing regulatory requirements enforced by the State Water Resources Control Board through its statewide General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (current State Board Order No. 2009-0009-DWQ, as amended). The State Board's Construction General Permit requires the submittal of a Notice of Intent and associated documentation, including preparation of a Storm Water Pollution Prevention Plan (SWPPP), for each construction activity that disturbs one or more acres of land or that is part of a larger plan of development that disturbs one or more acres of land. Stanford routinely complies with the State Board requirements for

each applicable construction project on the campus, including preparation of a SWPPP setting forth best management practices for construction activities to protect water quality.

7.2.5 Location of Wells within the Academic Growth Boundary

2000 General Use Permit Condition N.8 addresses potential groundwater quality impacts from construction in the vicinity of improperly abandoned wells. Stanford prepared a preliminary inventory of wells in the central campus in 2001, with a final version prepared in 2003. This inventory/map is consulted as projects are designed and developed under the 2000 General Use Permit. The Bing Concert Hall project was the only project constructed under the 2000 General Use Permit that had the potential for abandoned wells onsite. During construction of that project, Stanford complied with Santa Clara Valley Water District (SCVWD) regulations pertaining to three abandoned wells, which involved submittal of Well Destruction Applications and receipt of Well Destruction Completion Notices following SCVWD inspection.

7.2.6 Updates to Stanford Community Plan Figures

Figure BCR.16 provides an update to Stanford Community Plan Figure 6.2 (Watershed Boundaries). **Figure BCR.19** provide an update to Stanford Community Plan Figure 6.3 (Groundwater Recharge Area). Both maps were corrected in a map refinement effort in 2003 approved by the Santa Clara County Board of Supervisors.

7.3 Cultural Resources

7.3.1 Historic Resources

The Environmental Impact Report for the Stanford Community Plan and 2000 General Use Permit recognized that effects on historic resources could not be fully addressed at the programmatic level because it was not yet known which buildings would be proposed for demolition or alteration. Accordingly, the Environmental Impact Report required, and the 2000 General Use Permit imposed, the following conditions:

Under 2000 General Use Permit Condition O.1, prior to demolition of a structure that is 50 years old or more, Stanford must assess the structure to determine whether it appears to be eligible for listing on the California Register. If the County determines the structure is eligible for listing on the California Register, then a site-specific analysis must be prepared and feasible mitigation measures must be considered during environmental review of the project.

Under 2000 General Use Permit Condition O.2, prior to alterations to a structure that is 50 years old or more, Stanford must assess the structure to determine whether it appears to be eligible for the California Register. If the County determines the structure is a historic resource, then the alterations must be conducted following the Secretary of the Interior's Standards for Rehabilitation.

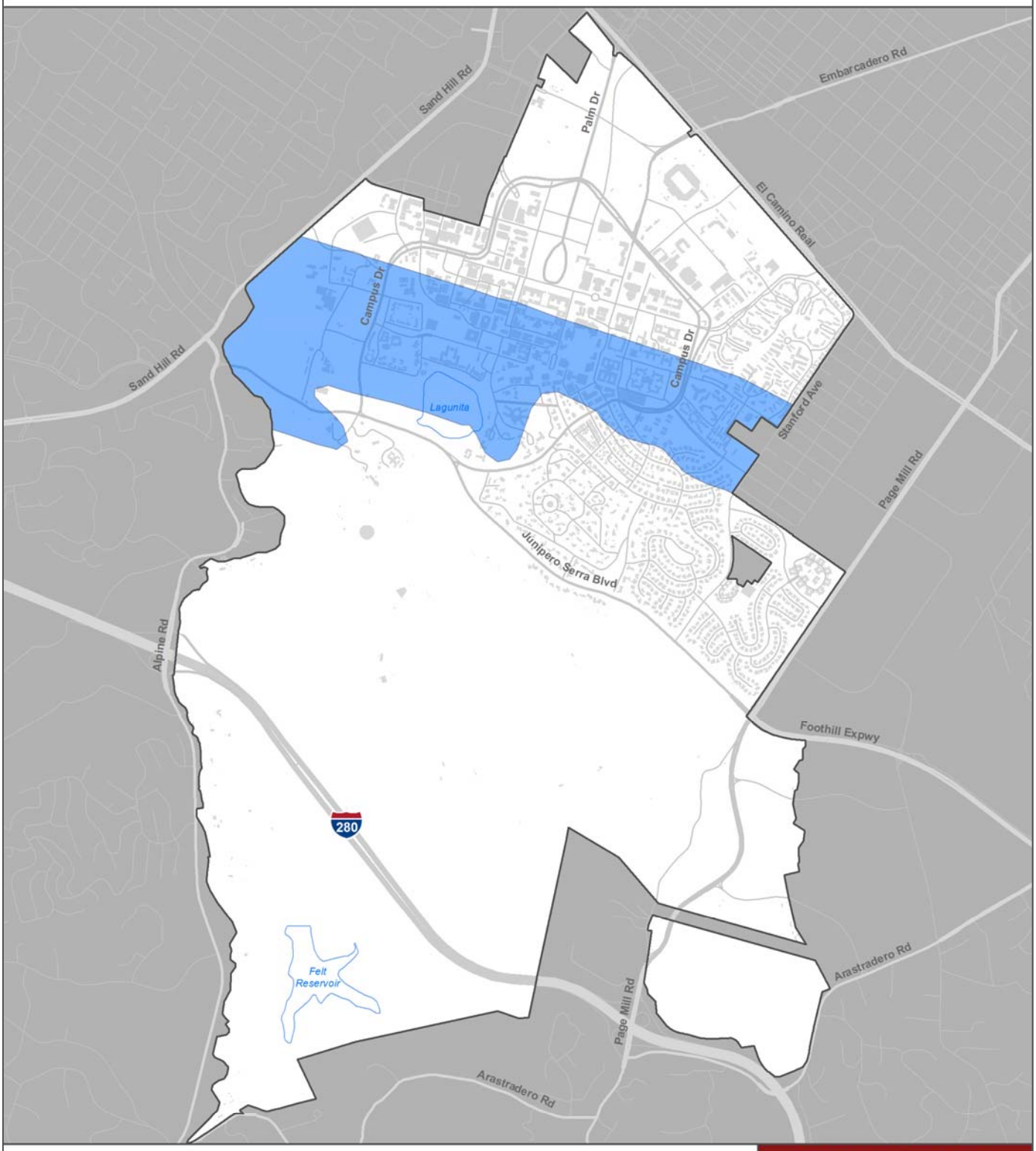
In a memorandum dated April 3, 2014, Stanford documented the following shared Stanford/Santa Clara County Planning Office interpretations of these requirements:

- The 2000 General Use Permit conditions do not apply to demolition and modifications of houses in the faculty/staff subdivision. Instead, the County's Historic Preservation Ordinance and standard building permit regulations apply to those structures.

- The 2000 General Use Permit conditions do not apply to alterations to the interior of structures except for theaters, art galleries and athletic competition venues that regularly host public events.

- There is no need to assess structures to determine whether they are eligible for the California Register if the alterations are limited to maintenance or repair work or if the alterations would comply with the Secretary of Interior Standards assuming the structure was determined to be eligible for listing on the California Register.

Figure BCR.19: Groundwater Recharge Area



Groundwater Recharge Area

Unconfined Zone (Source: Santa Clara Valley Water District, 2001)

Community Plan

Figure 6.3

0 0.5 Miles

Stanford University, LBRE/LUEP
November 5, 2016

N

The 2000 General Use Permit Environmental Impact Report also included a mitigation measure that applies to new development:

> *If a construction project could affect a structure that is on the County Inventory or that has been determined to be eligible for the California Register, then new development plans must be reviewed by the County Historic Heritage Commission for appropriateness of design and siting to ensure the significance of the structure is not adversely affected. If the affected structure is listed on the California Register or National Register, the County also must seek comments from the State Historic Preservation Officer.*

This measure has been interpreted as follows:

- Stanford will assess the compatibility of new buildings located within 75 feet of a building that has been determined to be eligible for listing on the California Register (or that is listed on the Register). The County will present the assessment to the Historic Heritage Commission or (if applicable) the State Historic Preservation Officer.

Eighty-seven properties and one potential historic district on the Stanford campus have been evaluated to determine eligibility for listing on the California Register.

One eligible building was demolished (Encina Gym) under the 2000 General Use Permit after preparation of a Supplemental Environmental Impact Report and adoption of County findings that alternatives to demolition were infeasible.

Figures BCR.20 and BCR.21 update Stanford Community Plan Figures 6.4 (Age of Existing Structures) and 6.5 (Listed Historic Structures). At present, 365 structures on the Stanford campus are over 50 years old and twenty-four properties appear on federal, state or county lists of historic resources, including the Santa Clara County Heritage Resources Inventory.

7.3.2 Archaeological Resources

2000 General Use Permit Condition O.3 requires Stanford to provide a map to the County Planning Office that shows the location of all known prehistoric and historic archaeological resources on Stanford lands in the unincorporated County. The map is to be maintained as a confidential record.

Stanford has provided an updated map to the County Planning Office. During implementation of the 2000 General Use Permit, no building projects were sited on or in the immediate vicinity of a mapped prehistoric or historic archaeological site; no previously unknown sites or human skeletal remains were discovered during building construction.

Figure BCR.20: Age of Existing Structures

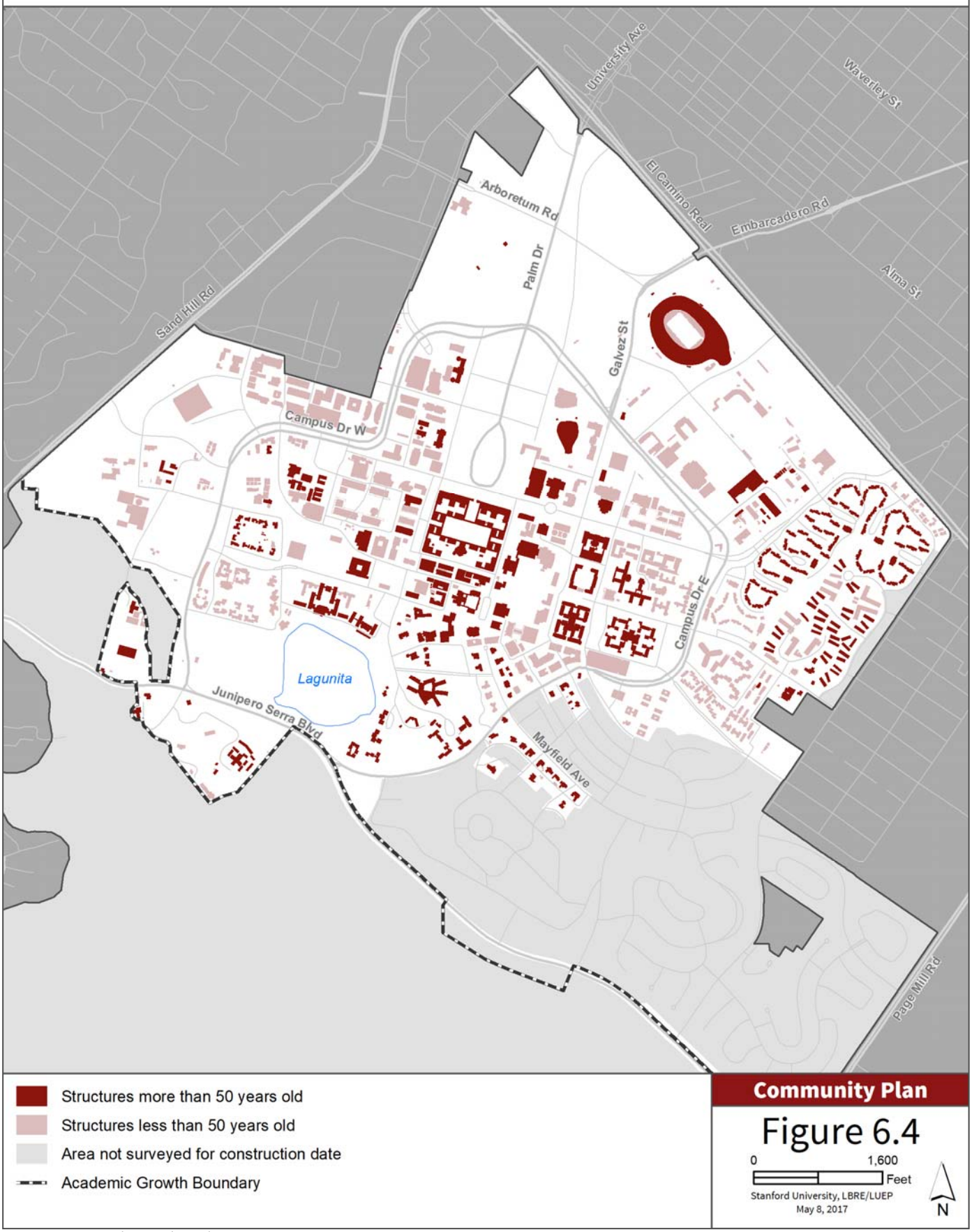
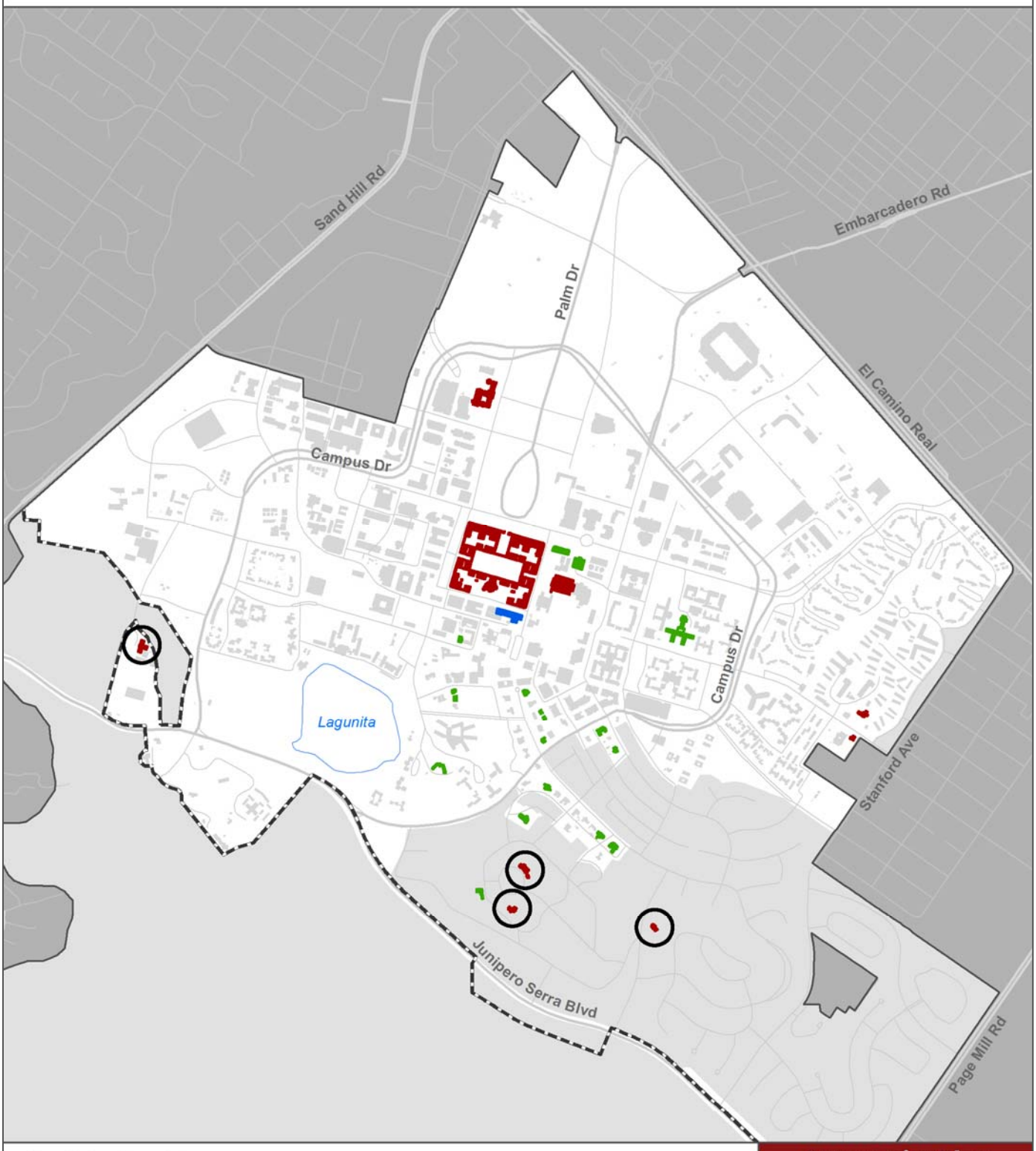


Figure BCR.21: Listed Historic Structures



7.4 Visual Resources

7.4.1 El Camino Real Streetscape Study

In compliance with 2000 General Use Permit Condition L.1, Stanford completed and submitted a Plan for the El Camino Real Frontage (The Frontage Plan) during the 2008 annual reporting period. The Frontage Plan was presented to the Stanford Community Resource Group on December 6, 2007, and approved by the County of Santa Clara Architectural and Site Approval Committee on April 10, 2008. The Frontage Plan was submitted in connection with the Olmsted Staff Rentals housing project along El Camino Real between Serra Street and Stanford Avenue.

The Frontage Plan outlines building setbacks and heights for the Academic Campus portions of the Stanford frontage along El Camino Real. It also describes landscape materials and screening.

7.4.2 Visual Simulations from Public Viewpoints

When proposing development that could potentially be seen from public roads surrounding Stanford (such as El Camino Real), Stanford has voluntarily prepared visual simulations to show how the development may be viewed from public viewpoints.

An example of this is the set of visual simulations prepared for the Escondido Village Graduate Student Residences Project along Serra Street and Campus Drive (see **Figures BCR.22** and **BCR.23**). Stanford prepared visual simulations for the conceptual building profiles and simulated building facades to show how the new buildings may be viewed from public roads.

7.4.3 Lighting

Stanford has complied with 2000 General Use Permit Condition L.3 by submitting external lighting plans with all Architectural and Site Approval applications.

7.4.4 Stanford Avenue Setback

Stanford complied with 2000 General Use Permit Condition L.2 by maintaining a 25-foot building setback from Stanford Avenue and building height at less than 30 feet for the Olmsted Terrace housing project. A landscape plan was also submitted with this project.

7.4.5 Lathrop Development District

No development of occupiable buildings has occurred in the Lathrop Development District since the approval of the 2000 General Use Permit.

Figure BCR.22: Visual Simulation for Escondido Village Graduate Student Residences Project - Conceptual Building Profiles

Figure BCR.23: Visual simulation for Escondido Village Graduate Student Residences Project - Simulated Building Facades

8.0 HEALTH AND SAFETY

The Stanford Community Plan identifies nine strategies for health and safety:

Air Quality

- Manage campus growth and land use for cleaner air
- Emphasize transportation alternatives and transportation demand management to reduce vehicle emissions
- Control sources of particulate emissions

Geologic Hazards

- Design, locate and regulate development to avoid or withstand hazards

Flood Hazards

- Design, locate and regulate development to avoid or withstand hazard

Hazardous Materials

- Manage hazardous materials safely and efficiently

Emergency Preparedness and Response

- Adequately plan for risk reduction, immediate disaster response and post-disaster recovery

Noise

- Prevent or minimize excessive noise

Law Enforcement

- Provide law enforcement oversight

The 2000 General Use Permit conditions to implement these strategies include:

- Condition Q.1 requiring Stanford to comply with control measures required by or recommended by the Bay Area Air Quality Management District for construction activities
- Condition Q.2 requiring construction contractors to properly maintain equipment and, where feasible, use clean fuel equipment and emissions control technology for diesel-powered engines
- Condition Q.3 requiring risk screening analyses for project that contain more than 25,000 square feet of laboratory space or 50 fume hoods
- Condition N.1 requiring compliance with the Uniform Building Code
- Condition M.1 requiring compliance with California Accidental Release Prevention law requirements and preparation of a Risk Management Plan if triggered by those requirements
- Condition M.2 requiring maintenance of programs for storage, handling and disposal of hazardous materials
- Condition R.1 requiring construction to comply with the Santa Clara County Noise Ordinance
- Condition R.2 limiting construction hours within 150 feet of Palo Alto City limits
- Condition R.3 specifying measures to reduce operational noise
- Condition R.4 limiting fireworks events without an entertainment event license
- Condition R.5 establishing a noise hotline

- Condition P.1 requiring maintenance of the Stanford Police Department with County oversight through a Law Enforcement Agreement

- Condition P.2 requiring contracts for fire protection services and funding as required by those contracts

- Condition P.3 addressing lengthened fire protection services provider response times due to increased traffic congestion as a result of development pursuant to the 2000 General Use Permit

8.1 Air Quality

The 2000 General Use Permit Conditions Q.1 and Q.2 require compliance with the standard measures that are recommended by the Bay Area Air Quality Management District for construction activities. Stanford incorporates these measures into its construction contracts and reports on compliance through the Annual Reports. Projects constructed under the 2000 General Use Permit have implemented dust control measures and have minimized diesel and other pollutant emissions from construction equipment.

2000 General Use Permit Condition Q.3 requires a risk screening analysis for any proposed building project that contains more than 25,000 square feet of laboratory space or 50 fume hoods. This condition mirrors Bay Area Air Quality Management District Regulation 2-12. Under the 2000 General Use Permit, a risk screening analysis was prepared for the Bio-Engineer/Chemical Engineering Building. The analysis showed that BAAQMD permitting thresholds would not be exceeded.

The Cardinal Cogeneration Facility was replaced by a new cold/hot water thermal exchange Central Energy Facility system on April 1, 2015. The former Cardinal Cogeneration Power Plant has been fully decommissioned and removed. The remaining combustion sources on campus are emergency generators, used only during loss of electrical power to campus, and water boilers used only periodically at the new Central Energy Facility and locally in some campus buildings not connected to the Central Energy Facility. Emissions from these minor sources are regulated and permitted by the Bay Area Air Quality Management District.

8.2 Geologic Hazards

Stanford's seismic strengthening and rehabilitation program has resulted in the investment of funds exceeding $600 million in over 100 seismic rehabilitation projects since 1989. The work includes the retrofit

and/or mitigation of approximately 45 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. Stanford's seismic strengthening program meets the requirements of the California Building Code and all current amendments.

8.3 Hazardous Materials

Stanford's Department of Environmental Health and Safety (EH&S) provides key resources in the planning, development and implementation of effective environmental and health and safety training programs. Where appropriate and possible, EH&S provides in-house training programs that enable Stanford managers and supervisors to deliver health and safety training directly to their staffs. Schools, departments and principal investigators provide other levels of training throughout the University. Stanford also extends its training efforts by providing training and information resources on the internet at http://ehs.stanford.edu.

Surveys of campus and medical center labs, shops and studios are conducted on a routine basis to provide compliance assistance regarding hazardous materials, hazardous waste, fire safety, biological safety and chemical safety requirements. Personnel conducting the surveys often work one-on-one with personnel in labs, shops and studios to help them understand pertinent compliance requirements.

Hazardous Materials Management Plans for existing buildings storing hazardous materials are submitted annually to the Santa Clara County Environmental Health Hazardous Materials Compliance Division as online updates via the Cal/EPA California Environmental Reporting System Portal. 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.

The University Committee on Health and Safety meets regularly. The committee membership includes a member from the public as well as faculty, staff and students. Issues considered by the committee include environmental health and safety activities.

The EH&S Department reviews each set of plans for new structures and those for renovation and/or remodeling of existing structures to help ensure that the risks associated with activities conducted in Stanford's buildings are addressed and that all projects are undertaken in compliance with applicable environmental and health and safety laws, codes and regulations. EH&S also conducts Environmental and/or Human Health Risk Assessments for new projects as required by the Bay Area Air Quality Management District and as appropriate as part of the building planning process.

EH&S personnel specifically responsible for handling hazardous wastes and for emergency response are trained by certified independent professionals and by professional EH&S staff in accordance with all applicable regulations. The operational waste personnel are augmented and assisted by professional environmental engineers, chemists and environmental managers. As a part of waste minimization activities, EH&S operates a surplus chemical redistribution program.

2000 General Use Permit Condition M.1 addresses the potential risk from hazardous materials. It requires Stanford to disclose projected quantities and types of hazardous materials associated with each proposed building project and to identify measures for storing materials and protecting users from potential risks as part of applications to the County Planning Office. In 2001, the County Planning Office published an interpretation of the condition that recognized the County Department of Environmental Health as the agency with the expertise necessary to apply and monitor any conditions of approval related to hazardous materials and stated that the County Department of Environmental Health already was involved in project approval processes.

Condition M.1 also requires Stanford to prepare and implement a Risk Management Plan if quantities of hazardous materials trigger the California Accidental Release Prevention Law requirements. No projects developed under the 2000 General Use Permit triggered these requirements.

8.4 Noise

2000 General Use Permit Conditions R.1 and R.2 require compliance with the County Noise Ordinance for construction activities. Stanford has incorporated the requirements and measures into construction documents and contracts for individual construction projects.

Stanford maintains a noise hotline accessible to the general public and campus residents. Under 2000 General Use Permit Condition R.5, the noise hotline was intended to be staffed during outdoor special events with attendance greater than 10,000 persons or where amplified sound is used. However, the hotline, which is in operation 24/7, has also been used to capture day-to-day noise issues that would typically go to Public Safety or 911.

The Noise Hotline operator captures noise complaint information and callers are offered forwarding to the non-emergency dispatch for a timely response in regards to the noise disruption. Callers also have the

choice to not be connected to the non-emergency dispatch number at which point the complaint is logged and recorded for tracking purposes.

If calls are forwarded to the non-emergency dispatch, the City of Palo Alto dispatch center forwards calls to Stanford Public Safety, per Stanford's contract for these dispatch services. Stanford's Department of Public Safety provides services to ensure the comfort and safety of campus residents, which includes responding to noise complaints.

Stanford's resource website for Special Events: Noise and Traffic Management includes information on the hotline and high impact events on campus. Stanford has also initiated an email notification procedure to inform on- and off-campus neighbors of upcoming special events on-campus that include evening fireworks shows.

2000 General Use Permit Condition R.3 requires mechanical equipment for academic building projects within 50 feet of a residence to be acoustically engineered. Building projects also must locate noise sources away from noise-sensitive receptors to the extent possible. Stanford reviews and minimizes noise from mechanical equipment during project design.

8.5 Emergency Preparedness and Response

The Palo Alto Fire Department's (PAFD) service area covers all of the land within the jurisdictional boundaries of Palo Alto in addition to some of the unincorporated land surrounding the city limits, much of which is occupied by the Stanford campus.

In 1976, the City of Palo Alto and Stanford signed an agreement that resulted in the PAFD providing emergency medical, fire protection and rescue services for the campus. This agreement will terminate in 2026. The agreement sets out the amount that is determined to be Stanford's fair share to be reimbursed to the City of Palo Alto for fire protection services. Furthermore, this agreement specifies that the PAFD occupy and operate portions of the Stanford Fire Station (Station 6). Until 2013, the agreement also provided coverage through a second station at the SLAC Linear Accelerator Laboratory. That station was closed and the fire service for that land in San Mateo County is now provided under a contract with the Menlo Park Fire Protection District. Since the closure of the SLAC station, Stanford and the City of Palo Alto have been negotiating the revised amount of Stanford's fair share payments.

2000 General Use Permit Condition P.2 requires Stanford to provide funding through contracts for fire protection services to maintain at least 0.88 fire suppression personnel for each 1,000 additional daytime population at Stanford. PAFD is to review the need for additional equipment in response to the increased population and Stanford is to fund this new equipment as necessary. Funding for personnel and equipment is to be provided as agreed upon by PAFD and Stanford.

The City of Palo Alto assesses the City's fire protection needs with its annual budget. As part of this process, the City identifies Stanford's share and Stanford pays its annual allotment.

2000 General Use Permit Condition P.3 states that in the event that there are lengthened response times due to increased traffic congestion or modified routes as a result of campus development, new routes shall be developed. The PAFD notified the Santa Clara County Planning Office in May 2015 that it has experienced lengthened response times as a result of campus construction. Stanford is investigating whether alternate routes would address the Fire Department's concerns. To date, the PAFD has not indicated that the increased response times are unacceptable.

Since preparation of the Environmental Impact Report for the Stanford Community Plan and 2000 General Use Permit, the courts have clarified the standard for assessing an impact on emergency response times and fire protection services and the duty to mitigate such impacts under CEQA. A recent decision explains that an adverse effect on staffing ratios and response times is not an environmental impact under CEQA; an environmental impact occurs only if such an effect results in the need for construction of new or expanded physical facilities and construction of such facilities will in turn result in a significant adverse environmental impact. See *City of Hayward v. Board of Trustees of the California State University*, 242 Cal. App. 4th 833 (2015) (rejecting argument that an adverse effect on fire and emergency services response times from university expansion is an impact on the environment triggering a duty to provide mitigation under CEQA).

8.6 Law Enforcement

Police protection for the campus is provided by the Stanford Department of Public Safety, under the authority of the County of Santa Clara Sheriff's Department. Stanford Public Safety is responsible for all police calls on Stanford lands within the unincorporated portion of Santa Clara County. This includes providing coverage for special events. The Palo Alto Police Department Communications Center handles dispatching for the Palo Alto Police, Fire, Utilities and Public Works departments and for the Stanford Department of Public Safety.

A memorandum of understanding regarding police services between Santa Clara County and Stanford was signed in February 2001 and updated in June 2007.

As noted under Emergency Preparedness and Response, above, the courts recently have clarified the rule that an effect on staffing ratios and response times is not, by itself, an environmental effect under CEQA. See *City of Hayward v. Board of Trustees of the California State University*, 242 Cal. App. 4th 833 (2015). Similarly, an increase in demand for police protection services also is not an environmental impact absent physical construction of new or expanded facilities. See *Saltonstall v. City of Sacramento*, 234 Cal. App. 4th 549, 584-85 (2015) (holding increased demand for police protection services resulting from new downtown arena project is not a physical impact on the environment).

8.7 Schools

2000 General Use Permit Condition P.7 requires Stanford to pay school impact fees to the Palo Alto Unified School District for development under the 2000 General Use Permit prior to approval of building permits. This condition reflects state statutes limiting the mitigation that can be imposed to address impacts on schools. The courts have held that classroom overcrowding is not an environmental impact. Rather, there must be physical changes that result from the overcrowding such as construction of new or expanded school facilities. See *Goleta Union School Dist. v. Regents of the Univ. of California,* 37 Cal. App. 4th 1025 (1995). Further, in 1998 the California State Legislature significantly limited the application of CEQA to school facilities impacts. By statute, the school impact fee set forth in California Government Code section 65996 constitutes the exclusive means of both "considering" and "mitigating" school facility impacts of projects.

The 2000 General Use Permit Environmental Impact Report anticipated the construction of up to 350 rental apartment units for hospital residents and post-graduate fellows and up to 668 housing units (a mixture of single-family homes, townhouses, condominiums and apartments, to be determined based on need and demand) for faculty and staff.

Based on a 1999 study prepared by Lapkoff & Gobalet for PAUSD, the 2000 General Use Permit Environmental Impact Report estimated the number of additional Palo Alto Unified School District students generated by housing development under the 2000 General Use Permit to be 239 to 584 additional students (see **Table 13**).

Table 13: Enrollment Forecast by 2000 General Use Permit Housing Type

Housing Unit Type	Students per Household	Anticipated Housing Units	Students under 2000 General Use Permit
Medical Residents/Postdocs	0.09-0.20	350	32-70
Faculty/Staff Housing	0.31-0.77	668	207-514
Total		**1,018**	**239-584**

However, Stanford has constructed far fewer family housing units than were anticipated in the 2000 General Use Permit Environmental Impact Report. Olmsted Terrace includes 39 single-family homes and Olmsted Staff Housing includes 25 housing units. PAUSD reported that there were 49 school-age children from these homes in Fall 2015, less than 10% of the increase in school-age children that was anticipated in the 2000 General Use Permit Environmental Impact Report.

In accordance with 2000 General Use Permit Condition P.7, as of June 2016, Stanford has paid approximately $1.2 million in school impact fees to the Palo Alto Unified School District. Stanford will continue to pay the fee for the remaining development authorized under the 2000 General Use Permit including the 1,450 additional graduate student units authorized in March 2016, accruing an additional $1.3 million for the Palo Alto Unified School District.

8.8 Sustainability

At Stanford, sustainability is a core value that permeates across all aspects of campus life and is deeply integrated into academics, campus operations, communications, and lifestyle. Sustainability teachings and practices enrich Stanford students' academic experience, reduce the University's environmental impact, save resources, and engage the campus community.

8.8.1 Greening of the Energy Supply

In 2015, Stanford completed a ground-breaking overhaul of it campus heating and cooling system. This overhaul is called the Stanford Energy System Innovations (SESI). SESI relies on a heat-recovery process that is 70 percent more efficient than the prior cogeneration process for heating and cooling. The new system will meet more than 90 percent of the campus heating demands by capturing almost two-thirds of the waste heat generated by the campus cooling system. To make that exchange possible, Stanford replaced 22

miles of underground pipes and retrofitted 155 buildings to convert the campus from a steam- to hot water-based system. In addition, Stanford now purchases its electricity through a Direct Access program that enables purchase from Electric Service Providers that include renewable resources within their portfolios.

Previously, Stanford had produced electricity, steam and chilled water at its on-campus Cardinal cogeneration plant and its prior Central Energy Facility. These facilities employed what was previously considered a state-of-the-art process of generating electricity through a gas-fired plant, and using the steam (a by-product of electricity generation) to heat campus buildings.

By early 2017, Stanford will further reduce its carbon footprint by acquiring electricity from a new solar electricity generating station in Kern County and by installing additional solar panels on campus buildings. The Kern County solar electricity generating station will be a 68-megawatt peak solar plant capable of generating 159,000 megawatt-hours per year (MWh/year). In addition, several Stanford building complexes feature solar panels, including the Science and Engineering Quad and the Knight Management Center. Installation began in May 2016 on rooftop panels for an additional 16 campus buildings to provide an additional 5 MW, which will generate up to 7,300 MWh/year. These two solar systems are expected to provide up to 53 percent of Stanford's total electricity use. Further, as the grid portfolio gets greener over time, the percentage of Stanford's electricity from renewable energy sources will increase.

Like electricity, the SESI also has improved Stanford's water efficiency. Since the majority of the waste heat from the chilled water loop is reused, rather than discharged via evaporative cooling towers, the SESI saved 0.28 million gallons per day, over a 60% reduction compared to average operations of the previous plant.

SESI continues to serve as a living laboratory to engage the campus community and the public at large by exemplifying a path toward sustainable energy. Biweekly tours allow visitors to interact directly with the mechanical systems that allow the heat recovery and chilled water plant to operate, and to date more than 2,000 people have toured the facility, including university classes and conferences; government delegations from the United States, France, and Taiwan; and private sector organizations such as Google and Tesla.

8.8.2 Robust Energy Efficiency Programs

The University continuously works to reduce energy use in existing buildings and to incorporate energy efficiency best practices into all new buildings. Programs like the Whole Building Energy Retrofit Program and Energy Retrofit Program provide rebates for updating buildings with the most efficient systems possible, and have each saved more than $4 million annual in energy costs each year. A focus on building control systems has maximized the potential for sustainable performance and system evaluation.

8.8.5 Expanded Alternative Transportation Options

In 2015, the employee drive-alone rate is at 50%, compared to 72% in 2002. This year saw record turnout for the annual Bike to Work Day. Stanford continues to expand access to electric vehicle charging stations while increasing the number of electric vehicles in its Marguerite and campus fleets.

8.8.6 Expanded Water Conservation

Stanford has an extensive history of water conservation, and pro-actively manages available resources to meet its needs, while preserving ecological systems and vital resources for future generations. In the face of ongoing drought, the University has expanded its sustainable water practices and conservation efforts for significant results.

Since 2000, Stanford has decreased its potable water use by 30% (2.73 million gallons a day (mgd) in 2000-01 to 1.89 mgd in 2014-15) through a comprehensive program to identify and implement water conservation measures and through replacement of the campus-wide heating and cooling system.

8.8.7 Waste Reduction, Recycling and Reuse

Over the last 30 years, the Waste Reduction, Reuse, Recycling and Composting program at Stanford expanded and improved in response to demands from the campus community, recycling markets and new legislation. Stanford implemented the following programs related to recyclable materials and collection methods:

- 1970s: Paper (and Plastic Bags) Recycling Program, Plastics Metal, and Glass Recycling Program

- 1980s: Scrap Metal Recycling Program, Yard Trimmings Collection and Composting, Cardboard Recycling, Horse Manure Collection and Aging Program, Wood Scrap Recycling Program, Public Recycling Drop-Off Center, Facilities to aid material recovery, drop-off, and transfer, Curbside Collection of Recyclables

- 1990s: Confidential Material Collection, Public Recycling, Composting and Landfill Bins (1995), Furniture and Reusables Reuse Program, Zero Waste Internships, Yard Trimmings Source Reduction Program, Concrete and Asphalt Recycling Program, Construction and Demolition Recycling Program, Electronic Scrap Collection Program

- 2000s: Special Event Recycling and Composting Program, Stadium Recycling Program, Food and Compostable Material Collection and Composting Program, Primary and Nursery Schools Waste Reduction Program, RecycleMania, Waste Audits

- After 2010: Deskside Paper and Mini Trash Can Program, Universal Waste, Athletics Venues and Events, Desk side Paper & Mini Trash Can Program, Customer Funded Compost Program, Café Bins

Outreach and Education on waste reduction, reuse, recycling, composting, buying recycled and pre-cycling is on-going, and includes presentations, training, website information, newsletters, and tours.

Consistent with Stanford's sustainability goals, the Procurement Department and the associated Sustainability Working Team developed Sustainable Purchasing Guidelines, which are summarized on Stanford's purchasing website. The guidelines support and facilitate the purchase of products, services and materials that minimize the harmful effects to the environment from their production, transportation, use and disposition.

Stanford has increased its landfill diversion rate from 30% in 1994 to 66% in 2015, reducing its landfilled tonnage to an all-time low. Implementation of composting across campus will help to further increase this number.

8.8.8 Sustainability Enhancements in Food and Living

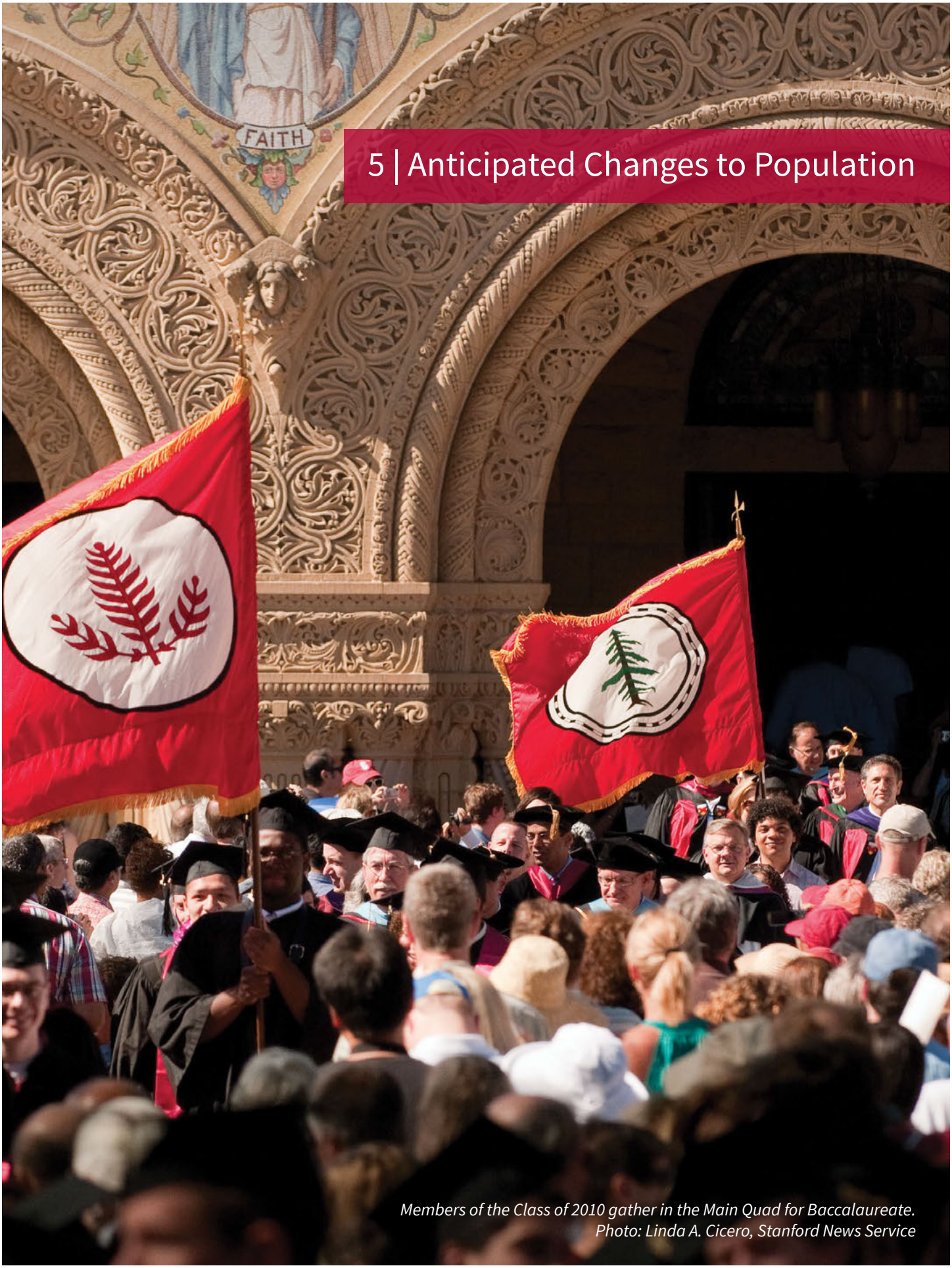
Residential & Dining Enterprises (R&DE) Sustainable Food and Living programs help to influence generations of students to lead sustainable lifestyles, not only on campus but in their future communities. R&DE prioritizes local, organic, humanely raised, fairly traded food and options from family-owned farms and sustainable fisheries. With a focus on plant-based-protein menus, R&DE has reduced the amount of animal proteins purchased by 14% and increased plant-based protein purchases by 29%. Housing projects included the expansion of zero-waste and composting programs in dorms, and working with students to encourage conservation. In 2015, R&DE Student Housing led an irrigation retrofit project to reduce landscape irrigation by 46%, or 33 million gallons of water, and during its first year of performance the program significantly exceeded expectations, reducing landscape water usage by over 66%.

8.8.9 Behavioral Sustainability

The suite of programs aimed at engaging the community in sustainable practices continues to expand, with new targeted programs focused on high-impact areas such as systems integration, laboratories and events, and Cardinal Green campaigns that focus campus attention on specific resource conservation each season. The fifth annual Celebrating Sustainability event showcased the thriving culture of sustainability and for the

first time, aligned with an academic symposium to highlight how the university translates its groundbreaking research into practical application in a global environment. Entitled “Knowledge to Action” the day-long celebration brought together more than 35 campus groups, 60 volunteers, and 650 guests, culminating with a reception at the new Central Energy Facility.

5 | Anticipated Changes to Population



Members of the Class of 2010 gather in the Main Quad for Baccalaureate.
Photo: Linda A. Cicero, Stanford News Service

5 | Anticipated Changes to Population

SUMMARY OF REVISIONS, APRIL 2017

This April 2017 version of Tab 5 – Anticipated Changes to Population contains the following revisions to the version provided to Santa Clara County in November, 2016:

- As directed by Santa Clara County staff, the 2018 campus residential population estimates have been revised to exclude the approved Escondido Village Graduate Residences project. This project would be under construction by 2018, but is not anticipated to be occupied until 2020. The date of occupancy of Escondido Village does not affect the projection of the number of graduate students who would be enrolled at Stanford in a given year; rather the date of occupancy of Escondido Village only affects the number of graduate students (and their spouses) who would live on the campus in a given year.
- Estimates of the 2020 campus residential population have been added to reflect conditions at full development of the existing 2000 General Use Permit. This scenario is identical to the 2018 scenario except it includes occupancy of the approved Escondido Village Graduate Residences project.
- The additional population categories identified in the VMT Report now are also presented in Section 4.1 of this Tab 5.

1.0 PURPOSE OF REPORT

This technical report is prepared to support the environmental analysis for the proposed 2018 General Use Permit. The Stanford Community Plan and 2000 General Use Permit do not present campus population totals. Rather, compliance with the 2000 General Use Permit is monitored through measurement of actual effects on the surrounding community: the number of vehicles crossing a defined cordon, the amount of water used on campus, etc. Population may be relevant, however, to forecasting future environmental impacts in an environmental impact report.

2.0 STUDENTS, FACULTY AND STAFF POPULATION PROJECTIONS

Tables 1 and **2**, below, provide Stanford's student, faculty and staff populations existing as of Fall 2015, expected to exist at commencement of the proposed 2018 General Use Permit in Fall 2018, and forecasted at completion of the development proposed in the 2018 General Use Permit in Fall 2035. The student, faculty and staff populations presented in this technical report include all undergraduate and graduate students, postdoctoral scholars, and regular benefits-eligible faculty and staff. Other population categories relevant to calculation of vehicle miles traveled are presented in the accompanying technical reports prepared by Ramboll Environ (**Tab 9 – Greenhouse Gases and Energy Technical Analyses** and **Tab 10 – Air Quality and Health Risk Assessment**, respectively), and are also presented in Section 4.1, below.

To prepare this report, Stanford reviewed data provided by the Stanford Office of Institutional Research and Decision Support, including 15 years of population data for each population segment. Stanford calculated the 15-year Compound Annual Growth Rates (CAGR) for each population segment and then applied the measured CAGR to each population segment to calculate the populations anticipated in Fall 2018 and Fall 2035, with three exceptions. As further discussed below, Stanford applied a CAGR of half the historic growth rate to predict population growth for postdoctoral students. Stanford also assumed approximately 100 undergraduate students would be added each year after 2018, which is higher than the historic growth rate. Finally, Stanford assumed there would be no growth in the "Other Teaching" segment of Stanford's faculty.

Stanford anticipates that it will grow by 1,100 students, faculty and staff under the 2000 General Use Permit between Fall 2015 and Fall 2018, prior to commencement of the proposed 2018 General Use Permit. During the predicted duration of the 2018 General Use Permit between Fall 2018 and Fall 2035, Stanford anticipates that it will grow by 7,500 students, faculty and staff. These projections reflect an approximately 1.2 percent CAGR.

Table 1: Projected Growth in Academic Year Population Prior to Commencement of 2018 General Use Permit

Affiliation	Population in Fall 2015	Anticipated Population in Fall 2018	Change in Population	Growth Rate (CAGR)
Undergraduates	6,994	7,085	91	0.4%
Graduate Students, including PhDs	9,196	9,528	332	1.2%
Postdoctoral Students	2,264	2,403	139	2.0%
Faculty	2,959	3,073	114	1.3%
Staff*	8,612	8,985	373	1.4%
Nonmatriculated Students	918	977	59	2.1%
Total	**30,943**	**32,051**	**1,108**	**1.2%**

Source: Stanford University Land Use and Environmental Planning Office, in consultation with the Stanford Office of Institutional Research and Decision Support

* Refers only to staff working within the area governed by the 2018 General Use Permit.

Table 2: Projected Growth in Academic Year Population during 2018 General Use Permit

Affiliation	Anticipated Population in Fall 2018	Anticipated Population in Fall 2035	Change in Population	Growth Rate (CAGR)
Undergraduates	7,085	8,785	1,700	1.3%
Graduate Students, including PhDs	9,528	10,728	1,200	0.7%
Postdoctoral Students	2,403	3,364	961	2.0%
Faculty	3,073	3,862	789	1.4%
Staff*	8,985	11,423	2,438	1.4%
Nonmatriculated Students	977	1,397	420	2.1%
Total	**32,051**	**39,560**	**7,509**	**1.2%**

Source: Stanford University Land Use and Environmental Planning Office, in consultation with the Stanford Office of Institutional Research and Decision Support

* Refers only to staff working within the area governed by the 2018 General Use Permit.

2.1 Undergraduates

Prior to Fall 2018, undergraduates are anticipated to grow at the historic 15-year CAGR of 0.4%. After that, Stanford estimates that by Fall 2035, the total population of undergraduate students may increase by up to 1,700. This would occur gradually over time, at a growth rate of approximately 100 undergraduates per year. This is a higher rate of growth than the historic rate. Stanford plans a modest expansion of undergraduate enrollments in recognition of the fact that applications to Stanford have increased while spaces available have not, resulting in one of the lowest rates of admission in the nation. Providing a reasonable increase in the number of talented students for whom a Stanford education is accessible has therefore become an increasing priority.

2.2 Graduate Students

Based on the historic CAGR for this population segment, Stanford anticipates that the total campus population of graduate students will increase by 330 by Fall 2018, and by an additional 1,200 by Fall 2035. Again, these increases would not occur all at once, rather total graduate student enrollment (including both master's candidates and doctorate candidates) would grow gradually between Fall 2018 and Fall 2035, at a rate of approximately 70 graduate students per year. The 1,200 total growth projection includes the 300 new Knight-Hennessy scholars, announced in Spring 2016.

2.3 Postdoctoral Students

Postdoctoral students (postdocs) refers to are trainees with doctoral degrees who are involved in research projects and who have appointments for the purpose of advanced studies and training under mentorship of a Stanford faculty member.

Although postdoc growth at Stanford has been strong in the last 10–15 years, trends show the growth to be leveling off for medicine, biology, and engineering. Other key limitations are the number of faculty, available research work and grant funding. Based on these trends and limitations, as well as their professional judgment, Stanford administration projects the postdoc growth to year 2035 at a 2.0% CAGR, about half the historic CAGR experienced during the last 15 years. This projected growth rate would result in an increase in the total campus population of postdoctoral student population by 140 by Fall 2018, and by an additional 960 by 2035. Like the other populations, the total population of postdoctoral students would grow gradually between Fall 2018 and Fall 2035.

2.4 Faculty

Faculty refers to professoriate faculty members and regular benefits-eligible employees in academic/instructional positions, including Academic Council faculty, Center fellows, Medical Center line faculty, lecturers, acting professors, coaches, some emeriti and teaching fellows.

Professoriate faculty from the School of Medicine is expected to grow by the historic CAGR of 2.4%. Professoriate faculty from all other schools is projected to follow the historic CAGR of 1.2%.

Faculty also includes Other Teaching, which comprises lecturers and senior lecturers; visiting, consulting and acting professors; coaches; emeritus faculty on recall and research assignments; artists-in-residence; course associates; teaching specialists and teaching fellows. The Other Teaching population fluctuated in the last 15 years, with a historic CAGR of -1.1%. It is assumed that this group would remain steady at its existing population of about 810 from Fall 2018 until Fall 2035. No increase is assumed.

Altogether, the combined CAGR for faculty growth from Fall 2018 to Fall 2035 is projected to be 1.4%.

2.5 Staff

Staff refers to regular benefits-eligible employees generally in nonacademic positions such as human resources, information technology, facilities, financial aid, etc.

Staff growth within the area governed by the 2018 General Use Permit is projected to be 1.4% based on historic CAGR.

This rate of staff growth may be conservative given that some staff will from the academic campus in unincorporated Santa Clara County to a new administrative campus in Redwood City. However, it is unknown how many staff who relocate to Redwood City already would be located outside of the academic campus at locations such as the Stanford Research Park, and it is unknown whether positions on the academic campus would be back-filled. Therefore, Stanford has not taken credit for moving staff to Redwood City in estimating its future growth under the proposed 2018 General Use Permit.

2.6 Nonmatriculated Students

Nonmatriculated graduate students are students taking graduate courses or engaged in graduate-level research or training but who are not seeking a degree. This group is assumed to grow at the historic CAGR of 2.1%.

Nonmatriculated undergraduates are undergraduates who are auditing classes and are not seeking a degree. This group had no specific trend over the last 15 years, but their numbers have been historically very low (about 5 per year) and are not expected to grow beyond the existing total.

3.0 CAMPUS RESIDENT POPULATION PROJECTIONS

For the purposes of this application, the term "on-campus" refers to the area governed by the 2018 General Use Permit. Stanford estimated the on-campus residential population anticipated to exist by Fall 2018 at commencement of the proposed 2018 General Use Permit, and forecasted the on-campus resident population at completion of the development proposed in the 2018 General Use Permit in Fall 2035. These projections consider the increase in housing units and student beds anticipated to be constructed through completion of the 2000 General Use Permit and under the proposed 2018 General Use Permit. Based on current and historic occupancy rates, Stanford estimates that, in addition to Stanford graduate students, 10% of graduate student housing would continue to be occupied by couples (2% Stanford student spouses and 8% non-Stanford student spouses) resulting in 1.1 residents per graduate student bed. Stanford also estimates that 2.57 residents would occupy each faculty and staff housing unit. Faculty and staff resident household size was obtained from the 2016 Commute Survey conducted by Stanford's Office of Parking and Transportation.

Table 3: Projected Growth in Academic Year Residential Population Through 2035

Affiliation	Fall 2015 On-Campus Residential Population	Housing Units/ Student Beds Added by Fall 2018 and Resulting Residential Population in 2018	Housing Units/ Student Beds Added by Fall 2020 and Resulting Residential Population in 2020	Housing Units/ Student Beds Added under 2018 General Use Permit and Resulting Residential Population in 2035
Undergraduates	6,401 existing beds occupied	216 beds added at Lagunita	0 beds added	1,700 beds added
	6,401 undergraduate students living on campus	6,617 undergraduate students living on campus	6,617 undergraduate students living on campus	8,317 undergraduate students living on campus
Graduate Students, including PhDs *(see note below)*	4,892 existing beds occupied	200 beds added at Highland Hall	2,020 beds added at EVGR	900 beds added
	5,001 graduate students living on campus plus 644 non-student spouses and 420 children	5,205 graduate students living on campus plus 660 non-student spouses and 420 children	7,265 graduate students living on campus plus 822 non-student spouses and 420 children	8,183 graduate students living on campus plus 894 non-student spouses and 420 children
Postdoctoral Scholars	28 existing beds occupied	0 units added	0 units added	N/A - included with faculty/ staff
	28 postdocs living on campus	28 postdocs living on campus	28 postdocs living on campus	
Faculty/ Staff	937 existing faculty/staff housing units built	0 units added	0 units added	550 units added
	937 faculty/staff living on campus plus 1,471 other family members	937 faculty/staff living on campus plus 1,471 other family members	937 faculty/staff living on campus plus 1,471 other family members	1,515 faculty/staff/postdocs living on campus plus 2,335 other family members
Total	**14,902**	**15,338**	**17,560**	**21,664**

Source: Stanford University Land Use and Environmental Planning Office, in consultation with Stanford University Residential and Dining Enterprises.

Note: Based on Fall 2015 data, in graduate student housing that is not occupied by children, couples make up approximately 10% of graduate on-campus contract holders, and 20% of these graduate student couples include student spouses, while 80% include non-student spouses.

In Fall 2015, 5,001 graduate students living on campus included 4,892 graduate students each with a bed contract, and 109 student spouses.

Therefore, the 200 new graduate units constructed between Fall 2015 and Fall 2018 are projected to house 4 student spouses and 16 non-student spouses in addition to the 200 graduate student contract holders. The 2,020 new graduate units constructed between Fall 2018 and Fall 2020 are projected to house 40 student spouses and 162 non-student spouses in addition to the 2,020 graduate student contract holders.

In Fall 2035, the additional proposed 900 graduate student beds are projected to add 18 student spouses and 72 non-student spouses in addition to the 900 graduate student contract holders. Since no increase in graduate student families is projected based on the historic decrease in applications for graduate student family housing, the number of children and spouses associated with graduate student family housing units remains the same throughout the projections. Table 3 does not include Resident Fellow units. Very few were added during the 2000 General Use Permit.

4.0 OTHER POPULATIONS

4.1 Other Worker Populations

Other population segments relevant to calculation of vehicle miles traveled are presented in the technical reports prepared by Fehr and Peers and Ramboll Environ (**Tab 8 – Transportation: Vehicle Miles Traveled**, **Tab 9 – Greenhouse Gases and Energy Technical Analyses**, and **Tab 10 – Air Quality and Health Risk Assessment**). These other population segments also are included in the daily cordon counts used to describe existing numbers of campus trips and to calculate future trip generation rates under the proposed 2018 General Use Permit. The other population segments are presented separate from the faculty, staff and student populations because many members of these populations do not work on the campus on a daily or year-round basis, or are not directly employed by Stanford. Definitions for each of these other population segments are as follows:

- Contingent – salaried workers with roles that are comparable to Academic staff and Other Teaching, working less than 50% FTE[1] and/or working less than six months
- Casual – hourly workers less than 50% FTE and working no more than 980 hours a year, including summer camp staff, summer grounds/facilities work, special projects in academic units
- Temporary workers – hourly workers at 50% FTE or more working no longer than six months, including summer camp staff, summer grounds/facilities work, special projects in academic units
- Other nonemployee academic affiliates – affiliated teaching staff, adjunct professors, visiting scholars, typically not full time, approximately half of this category of workers are 20% FTE
- Third-party contract workers – food service workers at on-campus cafeterias and childcare center workers
- Janitorial contract workers –working off-peak hour morning and evening shifts
- Construction contract workers – related to ongoing construction projects on campus

Stanford estimated the average number of these population segments who were present on the campus in Fall 2015, as some of these segments fluctuate throughout the year. Contingent, casual and temporary workers were estimated to total 4,450 workers on average, although these populations tend to peak during summer when the faculty, staff and student population is reduced. Stanford also determined that there were about 300 third-party contract workers, 240 janitorial contract workers, and 1,200 construction workers coming to campus.

The growth rate assumed for the contingent, casual, temporary, and non-employee affiliate population segments is the same as that for regular benefits-eligible non-academic employees (i.e. staff, at 1.4% CAGR). Third-party and janitorial contract workers were estimated to grow at the same rate as occupied academic and academic support square footage (8.1% from Fall 2015 to Fall 2018, and 22.1% from Fall 2018 to Fall 2035). Construction contract workers are expected to stay constant, as this has been the trend during the 2000 General Use Permit and construction is expected to continue at historic rates under the 2000 General Use Permit.

Other Workers totaled 8,826 in Fall 2015, are expected to total 9,166 in Fall 2018, and 11,267 in Fall 2035.

Tab 8 – Transportation: Vehicle Miles Traveled identifies the commute frequency for each of these Other Worker Populations. The commute frequency refers to the number of days per week a worker travels to campus, and accounts for part-time workers, alternative work schedules, and telecommuting. For third party contractors, janitorial and construction workers, the VMT report conservatively assumes that these workers traveled to campus every work day.

Tables 4 and 5, below, present both the total number of workers within each population category, and the estimated daily population for each population category based on their commute frequency. Stanford anticipates that the daily population of Other Workers will grow by 185 under the 2000 General Use Permit between Fall 2015 and Fall 2018,

[1] FTE refers to Full-Time Equivalent, or the number of hours worked by one employee on a full-time basis. On an annual basis, FTE is considered to be 2,080 hours, calculated as 8 hours per day x 5 working days per week.

prior to commencement of the proposed 2018 General Use Permit. During the predicted duration of the 2018 General Use Permit between Fall 2018 and Fall 2035, Stanford anticipates that the daily population of Other Workers population will grow by 1,074.

Table 4: Projected Growth in Other Worker Population Prior to Commencement of 2018 General Use Permit

Affiliation	Commute Frequency	Total Population in Fall 2015	Daily Campus Population in Fall 2015	Anticipated Total Population in Fall 2018	Anticipated Daily Campus Population in Fall 2018	Change in Population	Change in Daily Campus Population
Casual	20%	2,080	416	2,167	434	87	18
Contingent	52%	980	510	1,021	531	41	21
Temporary	78%	1,390	1,085	1,448	1,130	58	45
Non-employee academic affiliates, 20% FTE	17%	1,259	215	1,312	224	53	9
Non-employee academic affiliates, FTE	85%	1,377	1,171	1,435	1,220	58	49
Third-party contract workers	100%	300	300	324	324	24	24
Janitorial contract workers	100%	240	240	259	259	19	19
Construction contract workers	100%	1,200	1,200	1,200	1,200	0	0
Total	**NA**	**8,826**	**5,136**	**9,166**	**5,321**	**340**	**185**

Note: Totals are rounded to the nearest digit.

Table 5: Projected Growth in Other Worker Population during 2018 General Use Permit

Affiliation	Commute Frequency	Anticipated total Population in Fall 2018	Anticipated Daily Campus Population in Fall 2018	Anticipated Total Population in Fall 2035	Anticipated Daily Campus Population in Fall 2035	Change in Population	Change in Daily Campus Population
Casual	20%	2,167	434	2,746	550	579	116
Contingent	52%	1,021	531	1,294	673	273	142
Temporary	78%	1,448	1,130	1,835	1,432	387	302
Non-employee academic affiliates, 20% FTE	17%	1,312	224	1,662	283	350	59
Non-employee academic affiliates, FTE	85%	1,435	1,220	1,818	1,546	383	326
Third-party contract workers	100%	324	324	396	396	72	72
Janitorial contract workers	100%	259	259	316	316	57	57
Construction contract workers	100%	1,200	1,200	1,200	1,200	0	0
Total	**NA**	**9,166**	**5,321**	**11,267**	**6,395**	**2,101**	**1,074**

Note: Totals are rounded to the nearest digit.

4.2 School-aged Children

Finally, Stanford has calculated the additional number of school-aged children anticipated to reside on its campus lands in unincorporated Santa Clara County by 2035. Stanford student families would continue to be housed in existing units in Escondido Village. The number of applications for student family housing has generally declined over the last 15 years, and therefore no new graduate student family housing is anticipated from now through 2035.

Under the proposed 2018 General Use Permit, Stanford proposes 550 new housing units that could be occupied by faculty and staff, including postdoctoral students and medical residents. These housing units are expected to be multi-family units. Based on the Palo Alto Unified School District's November 2015 demographer's report, multi-family housing generates 0.50 school-aged students per residence. Application of these ratios to the 550 units proposed for the 2018 General Use Permit results in 275 additional school-aged children.

5.0 ALTERNATIVE APPROACH USED TO TEST POPULATION PROJECTIONS

Due to the many factors that influence population and that result in periodic fluctuations, population metrics are more challenging to predict and track than square footage or housing units. As explained above, Stanford has estimated its future population increases based on a comprehensive review of historic data. To test whether these population projections appear to be reasonable in light of the amount of additional building space that Stanford proposes, Stanford also compared the historic and projected population densities (population per 1,000 square feet) that occurred in 2000 at commencement of the 2000 General Use Permit, that are expected in 2018 at commencement at the proposed 2018 General Use Permit, and that are predicted in 2035 at completion of the proposed 2018 General Use Permit.

Table 6 shows that the population density that existed on the Stanford campus in 2000 was 3.14 persons per 1,000 square feet of academic and academic support space. Similarly, the population density that is expected to exist on the Stanford campus in 2018 is 3.13 persons per 1,000 square feet of academic and academic support space. The population density predicted to occur in 2035, based on the projections presented in this document and the proposed amount of net new academic and academic support space, would be 3.16 persons per 1,000 square feet. This density is somewhat higher than the existing and historic densities, indicating that the population projections are reasonable.

Table 6: Stanford University Population Density Comparison over Time

	Fall 2000	Fall 2018 (Projected)	Fall 2035 (Projected)
Standard Academic Year Population	25,821	32,051	39,560
Permitted academic square footage	8,220,391	10,255,391	12,530,391
Approximate density	3.14 persons per 1,000 sf	3.13 persons per 1,000 sf	3.16 persons per 1,000 sf

Source: Stanford University Land Use and Environmental Planning Office

6 | Housing

Toyon Hall, Stanford University.
Photo: Rich Wales, Wikimedia Creative Commons

6 | Housing

SUMMARY OF REVISIONS, APRIL 2017

This April 2017 version of Tab 6 – Housing contains the following revisions to the version provided to Santa Clara County in November 2016:

- As directed by Santa Clara County staff, the year 2018 housing unit totals have been revised to exclude the approved Escondido Village Graduate Residences project. This project would be under construction by 2018, but is not anticipated to be occupied until 2020.
- Estimates of housing unit totals in the year 2020 have been added to reflect conditions at full development of the existing 2000 General Use Permit. This scenario is identical to the 2018 scenario except it includes occupancy of the approved Escondido Village Graduate Residences project.

1.0 INTRODUCTION

1.1 Stanford as a Residential University

Stanford has been a coeducational and residential campus for faculty and students from its inception. At the time of its founding in 1891, few universities were considering housing both male and female students, plus faculty families. Typical college dormitories of the late 1880s and early 1900s were focused on providing basic accommodations for either men or women who were unable to live at home and were designed to supervise and control student behavior. In the mid-19th century, a new kind of college was emerging in American higher education, a reaffirmation of the principle that students and teachers should live and study together in a close-knit community.[1] Frederick Law Olmsted, a primary promoter of this principle, believed a college should be integrated into a humanly scaled domestic community.[2] In his original campus plan for Stanford, Olmsted envisioned residential areas around three main quadrangles.

Leland and Jane Stanford saw the potential educational benefits of students living on campus in a coeducational community mingled with faculty families to provide oversight and good examples of proper behavior.[3] Jane Stanford emphasized the residential community at Stanford in her 1899 address to the Board of Trustees, saying, "It is desirable that the members of the faculty and the students should generally reside upon the grounds of the University." Hence, the University has, from its inception, thought of itself as a residential university.

The first men's dormitory at Stanford, Encina Hall, suffered from a lack of supervision in the early years. (The women's dorm had a "matron" and a curfew from the beginning.) Hall monitors were instituted in 1905 at Encina Hall by the Committee on Student Affairs, with a charge to improve student academic performance as well as to maintain order. This was the beginning of an organized "residential" education program at Stanford.

During this early period, faculty were encouraged to build homes near the campus. The first houses on campus, on Alvarado Row, were a stone's throw from the Main Quadrangle and were intermingled with fraternity and sorority houses.

For many years, residential education took the form of two Deans (one for men, one for women) who organized programs in the dormitories and other student housing. After World War II, new dormitory complexes (Stern and Wilbur) were constructed with apartments for "faculty resident fellows," charged with stimulating undergraduate academic and intellectual growth. Stanford dormitories still have faculty resident fellows in 2016; senior students also serve as resident assistants to provide peer mentoring and organize appropriate social activities.

In the post-war period the University also expanded faculty housing. The San Juan neighborhood with more than 170 homes had been built from the early 1900s through 1950; after 1950 the University added hundreds of new homes in the Pine Hill neighborhood.

In 1957, the University adopted a policy to oppose discriminatory racial and religious practices and established a long-range goal to house all undergraduate students on campus.

In 1968, Stanford published the Study of Education at Stanford, commissioned by then-President Wallace Sterling. It recommended that "first priority" be given to the creation of on-campus residential communities, each with common amenities and recreational facilities for the purpose of building genuine community, and noted that students suffered from a lack of variety in both residence options and dormitory design. The study put forth ideals of diversity via

[1] Paul Venable Turner, *Campus: An American Planning Tradition* (New York: MIT Press, 1984), 90, 140.
[2] Ibid., 141.
[3] *Stanford Facts 2016*, http://facts.stanford.edu/pdf/StanfordFacts_2016.pdf.

housing variety, moving away from social conformity in an era when the nation was struggling to address the social problems of war, equity and justice.[4]

Today, Stanford offers a variety of residences for undergraduate and graduate students. Housing options include dormitories; theme houses for language and culture, ethnic, academic and special programs; co-operated and self-operated houses where responsibilities of daily living are shared; and fraternity and sorority houses. Living on campus fosters community engagement; promotes diversity, inclusion and respect; and empowers students to thrive.[5]

With an approximate 4-to-1 student-to-faculty ratio,[6] Stanford emphasizes close interactions among students and faculty. Such interactions inside or outside of the classroom, including advising, mentoring, and collaborating, are greatly enhanced when faculty and students live and learn in community with one another.

The ability to attract top scholars is essential to Stanford's future and the University continues to make great efforts in an extremely expensive housing market to provide housing for its students and faculty.[7] There are over 900 single-family or condominium homes on campus that house faculty. They are available via long-term leaseholds or as rentals.

In addition to housing on campus, Stanford also facilitated the development of housing on Stanford's lands outside of the academic campus. This started in the 1950s with 123 single-family units in the Stanford Hills and Stanford Creek subdivisions in Menlo Park, followed by the construction of Oak Creek Apartments in 1969. These housing communities were developed by ground lessees on Stanford's lands and have been available to members of the public as well as Stanford affiliates from their inception.

In 1987, Stanford added 108 apartments at Welch Road in Palo Alto near the Stanford Hospital, primarily for medical residents, and some faculty and staff. In 2001, Stanford added the Stanford West Apartments with 628 units for faculty and staff, including 156 below-market-rate units. In 2005, the Vi at Palo Alto Senior Housing was completed by a ground lessee and is primarily open to members of the public, with limited priority for Stanford affiliates.

At present, Stanford is constructing 180 units on California Avenue in Palo Alto for faculty to be completed in 2018. Finally, Stanford has submitted an application to the City of Menlo Park to build 215 rental units at 500 El Camino Real that will be made available to faculty and staff.

Stanford prioritizes use of its academic campus lands to house students and faculty because housing students and faculty in close proximity fosters collaboration and learning. With limited exceptions, staff and other affiliated housing has been provided outside of the core academic campus lands, in nearby jurisdictions. Recognizing this pattern, the Stanford Community Plan includes a policy to "Support Stanford's efforts to develop housing on land in other jurisdictions, particularly housing specifically targeted to Stanford faculty, staff, students and other affiliated persons." (Policy H.9)

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[4] Stanford Residential Education, "A Residential University: Before 1970," https://resed.stanford.edu/get-know-us/history/residential-university-1970.
[5] Stanford Student Affairs, https://studentaffairs.stanford.edu/.
[6] *Stanford Facts 2016*.
[7] Clifton B. Parker, "Faculty Senate hears report on the impact of housing costs on Stanford," *Stanford Report*, June 10, 2016, http://news.stanford.edu/2016/06/10/faculty-senate-hears-report-impact-housing-costs-stanford/.

2.0 STANFORD HOUSING INVENTORY

2.1 Historic Housing Growth

Stanford land supports a substantial amount of housing. As the academic campus has grown, the amount of Stanford-owned land used for housing has also grown. Stanford has made generous commitments to house its students and faculty on or near the campus and has created denser housing and infill development over time. **Figures HSG.1 – HSG.4** show the addition of student and other housing (i.e., housing for faculty and staff, as well as housing generally available to members of the public) on Stanford lands on or near the academic campus from 1875 through today. The four housing periods represented here are 1875 to 1950, 1951 to 1975, 1976 to 2000, and 2001 to 2020.[8] Today, about a third of Stanford's acreage on the academic campus is used for housing.

From 1875 to 1950, 191 single-family housing units for faculty and staff were constructed in the faculty subdivision. The earliest dormitories and row houses for students were built on the academic campus flanking the main quad and academic buildings, providing over 2,300 student beds. The close proximity of student and faculty housing to the academic core implemented the founding vision of a residential university and remains an integral principle to campus planning to this day.

From the 1950s to the mid-1970s, as the campus added academic buildings, Stanford increased faculty housing by building the new single-family neighborhoods of Pine Hill and Frenchman's Hill, expanding eastward in the faculty subdivision. Stanford also oversaw the addition of single-family housing in the Stanford Hills and Stanford Creek subdivisions in Menlo Park that were made available to the public. Stanford also added multifamily housing in the form of the Pearce Mitchell condominiums on campus for faculty, and the Oak Creek multifamily complex was constructed by a ground lessee in Palo Alto, west of Sand Hill Road for members of the public as well as Stanford affiliates.

During this period, significant additions were also made to house more students on campus, most notably in the Florence Moore housing complex and Escondido Village. These new student housing developments increased the amount of student housing on campus by about 4,410 units. The new on-campus housing product types provided variety for faculty and students and demonstrated the principle of compact urban development on Stanford lands.

From the mid-1970s to 2000, Stanford continued to pursue compact urban development principles by adding housing to the faculty subdivision and by building multi-story, multifamily-style housing.

The Peter Coutts condominiums in the faculty subdivision, together with Ryan Court and the Hill Site in 1996, added new multifamily and single-family options for faculty. The Welch Road Apartments in Palo Alto were added in 1987; they are rented today by medical residents as well as faculty and staff.

Housing growth on campus since 2000 has been directed by the Stanford Community Plan and the 2000 General Use Permit principles and conditions. Stanford has built housing commensurate with academic development by meeting and exceeding the housing linkage requirement established in the 2000 General Use Permit. Stanford has increased housing density on campus through the following:

- **Intensification of Escondido Village** – Several projects within the Escondido Village area intensified the student bed count in this area. The largest project will be the Escondido Village Graduate Student Residences Project, which will soon be under construction and will add 2,020 net new graduate student beds, estimated to be complete by 2020.

- **Infill Student Housing** – Student housing was added to the Campus Center, East Campus and Lagunita Development Districts, achieving better usage of the land. The Munger graduate student housing project is

[8] The cumulative numbers in these Figures have been rounded to the nearest hundred.

served by an underground parking garage with an at-grade recreational field. The new Meier and Norcliffe undergraduate houses at Lagunita Court repurposed parts of a surface parking lot for housing.

- **Compact Faculty and Staff Housing** – Olmsted Terrace and Olmsted Staff Rentals are examples of small, high-quality, single-family and duplex family housing products that meet the needs of Stanford's faculty and staff. The faculty residences built at Olmsted Terrace in 2011 are compact single-family lots averaging 0.1 acre and Olmsted Staff Rentals include single-family attached and detached housing.

Outside of the academic campus, housing has been developed on Stanford lands along Sand Hill Road in the City of Palo Alto. This stretch includes the Vi at Palo Alto Senior Housing development (388 independent living units and an additional 106 beds in the Health Center), open to the public, and Stanford West Apartments (628 faculty and staff units, including 156 below-market-rate units). An additional 180 faculty housing units at the University Terrace project in Palo Alto are currently under construction and are expected to be completed by 2018. This development includes 112 condominium units and 68 single-family units. Another 70 units of below-market-rate housing are currently being constructed at 2500 El Camino Real in Palo Alto, and will be open to the public. An application has been submitted to Menlo Park for 215 future rental units that would be available to faculty and staff.

In sum, since the University's inception, housing offered to students has been substantial. Undergraduate students are guaranteed four years of housing, and six years of housing priority are given to eligible graduate students. Stanford also offers long-term housing opportunities to faculty, not merely transitional housing.

In Fall 2015, there were approximately 11,300 on-campus Stanford-operated student beds. With the addition of undergraduate and graduate student housing projects between 2015 and 2018, the total number of student beds in 2018 is estimated to be approximately 11,700. By 2020, after the completion of the Escondido Village Graduate Residences, there will be about 13,800 on-campus Stanford-operated student beds.[9]

By 2020, Stanford will have also built or facilitated the development of about 3,400 other housing units on its lands, including more than 2,000 housing units for faculty and staff.

[9] In addition, there are approximately 500 beds are occupied by dependents or are reserved for sick students and other temporary needs.

Figure HSG.1: Housing Inventory on Stanford Lands, 1875 to 1950

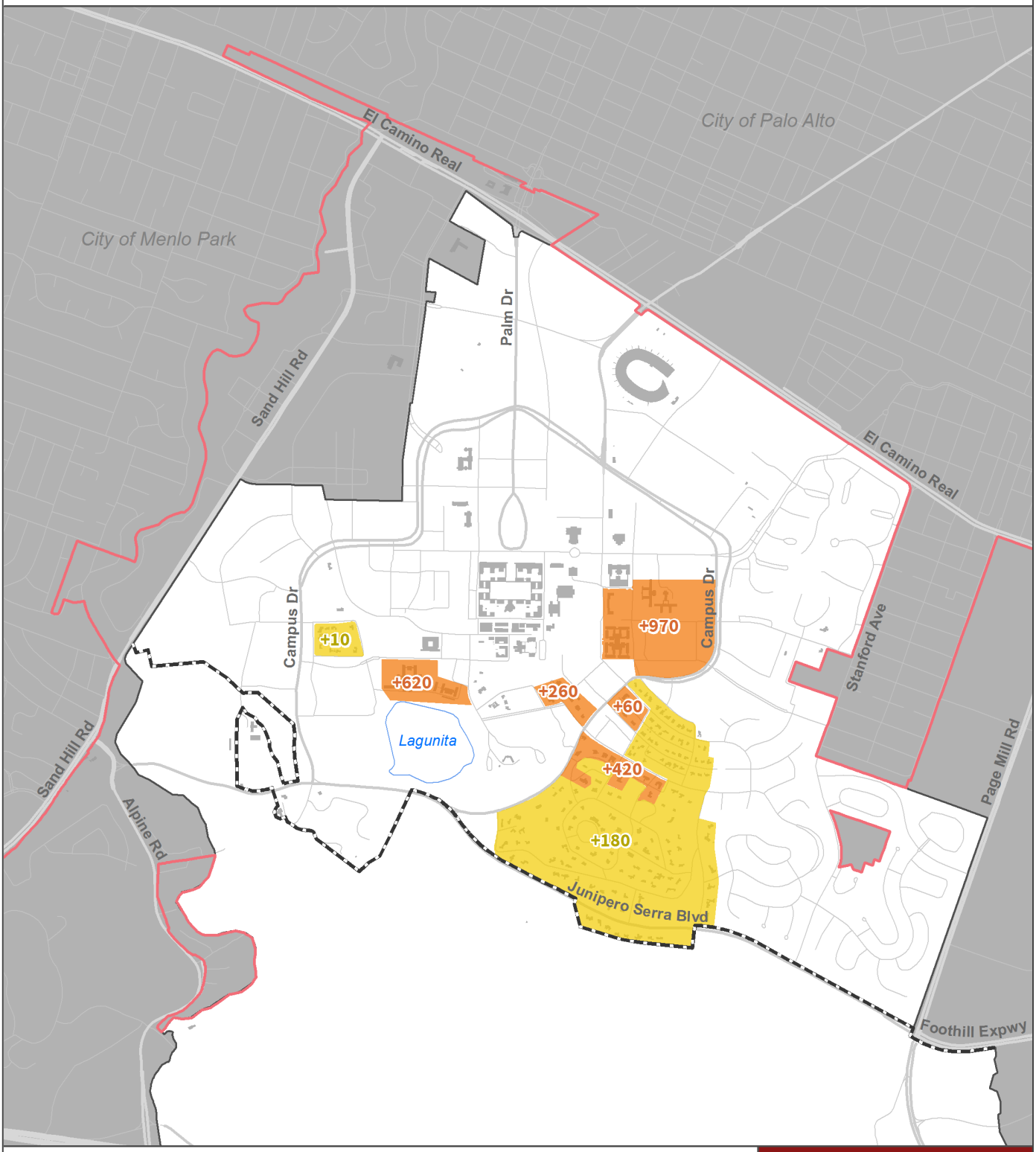


Figure HSG.2: Housing Inventory on Stanford Lands, 1951 to 1975

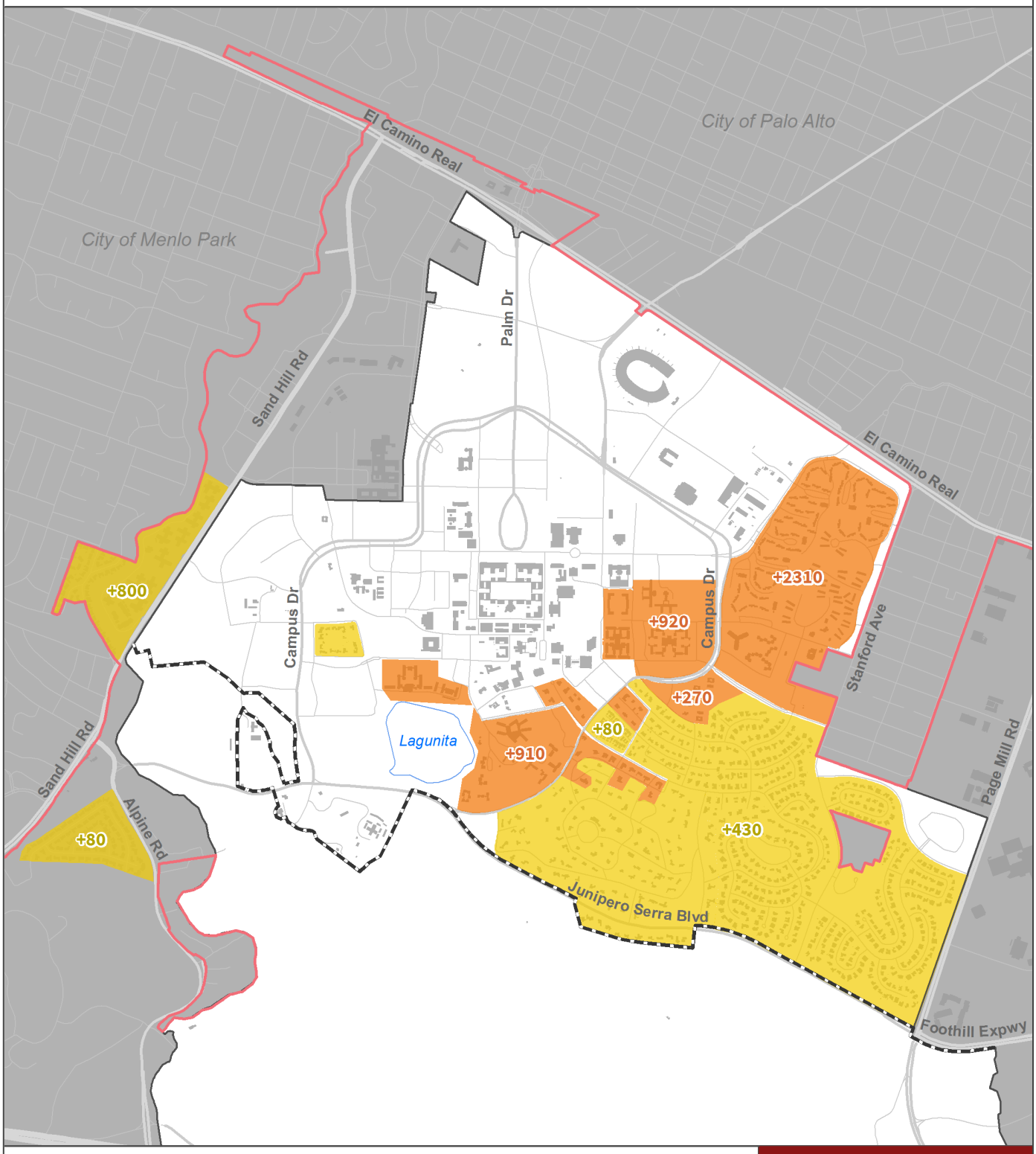


Figure HSG.3: Housing Inventory on Stanford Lands, 1976 to 2000

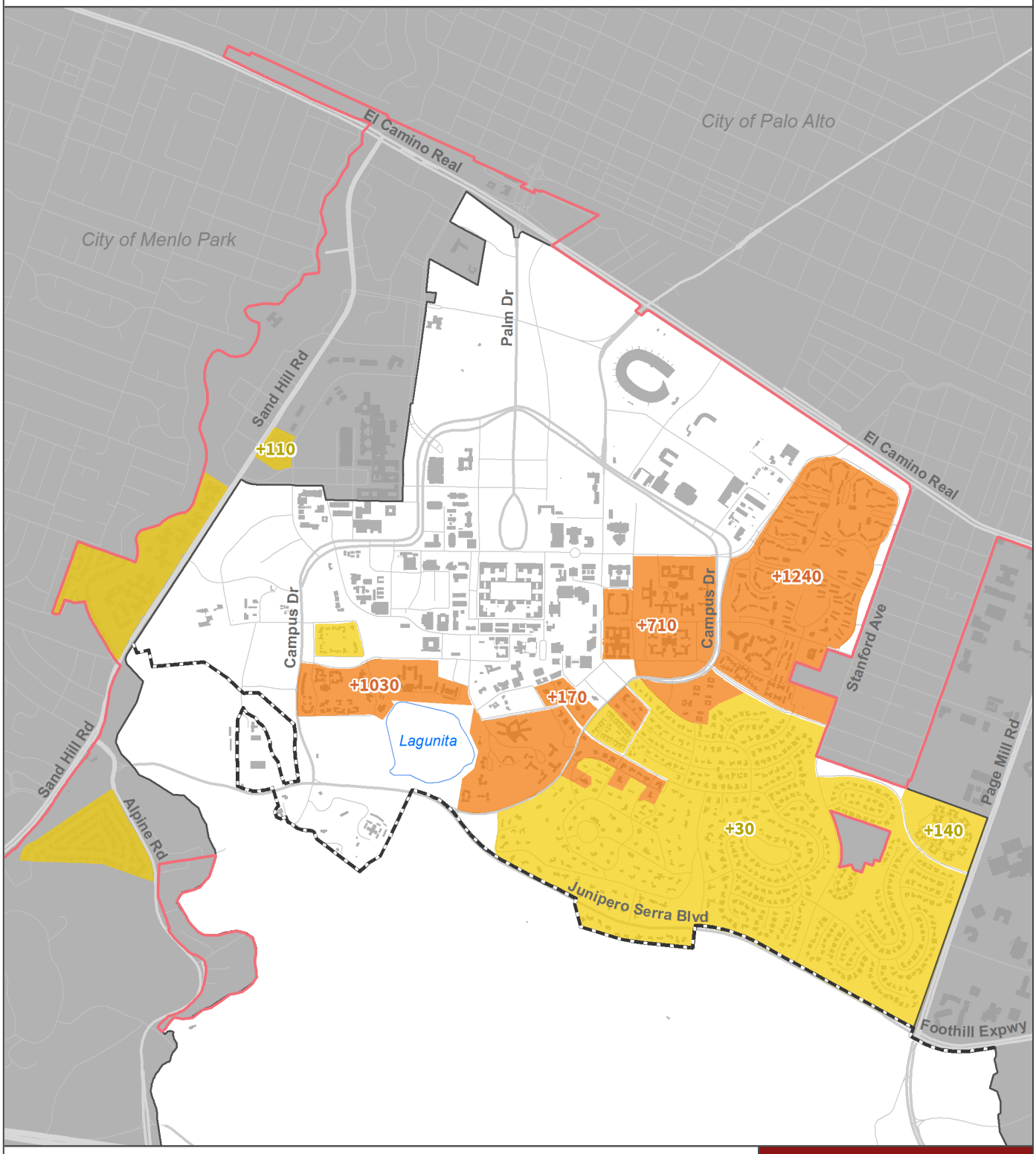
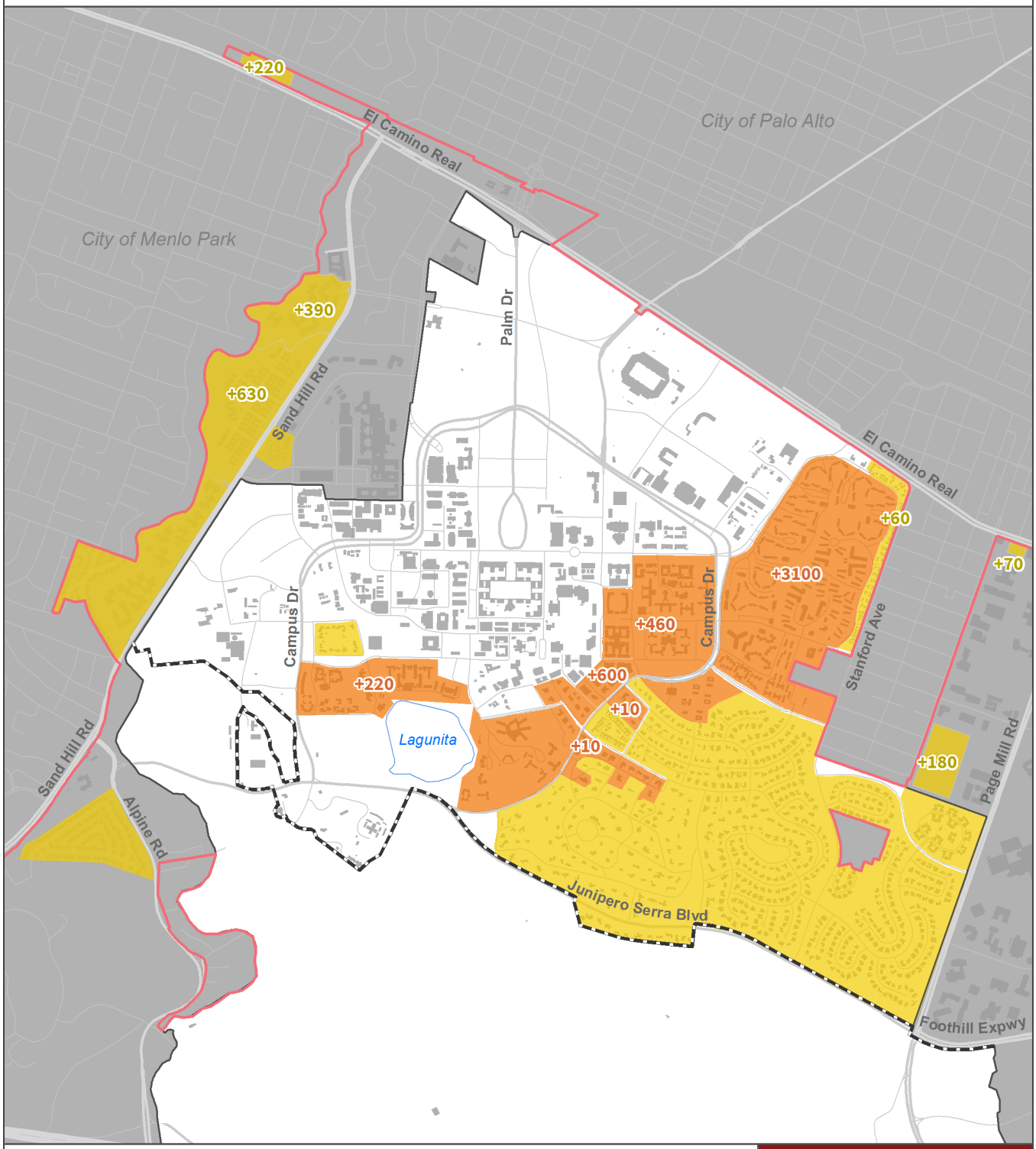


Figure HSG.4: Housing Inventory on Stanford Lands, 2001 to 2020



14,300 **Student Housing** Cumulative Number of Beds

3,400 **Other Housing** Cumulative Number of Units

Stanford Boundary

Academic Growth Boundary

- Cumulative totals rounded to nearest hundred
- Period increments rounded to nearest ten

Stanford University

0 1,500 Feet

Stanford University, LBRE/LUEP
March 20, 2017

N

Note: In 2020, the Student Housing inventory includes approximately 13,800 beds occupied by students. Approximately 500 beds are occupied by dependents or are reserved for sick students and other temporary needs.

2.2 Affordability of Housing

In addition to the number of housing units built on Stanford lands, certain types of Stanford housing have been recognized by Santa Clara County as affordable to moderate-, low- and very low-income populations. The Santa Clara County General Plan's Housing Element recognizes that, under the 2000 General Use Permit, Stanford has constructed a total of 816 units that are affordable to low- and very low-income residents, comprising graduate student on-campus housing units mainly in Escondido Village and at the Munger housing project, shown in **Figure HSG.5**. Generally, Stanford's student rents are 40 percent less than what is charged in the surrounding rental market. The County's recognition that graduate student units qualify as affordable housing units under the County's Regional Housing Needs Allocation has not served to financially benefit Stanford or to reduce the number of on-campus units Stanford is required to construct under the housing linkage condition.

Figure HSG.5: Affordable housing constructed under the 2000 General Use Permit

Escondido Village Kennedy Graduate Residences

Munger Graduate Residences

During this same period, Stanford has also built off-campus, deed-restricted affordable housing units, including 156 below-market-rate units at the Stanford West apartments and 70 units on El Camino Real in Palo Alto.

2.3 Affordable Housing Projects Built with Stanford's Contributions

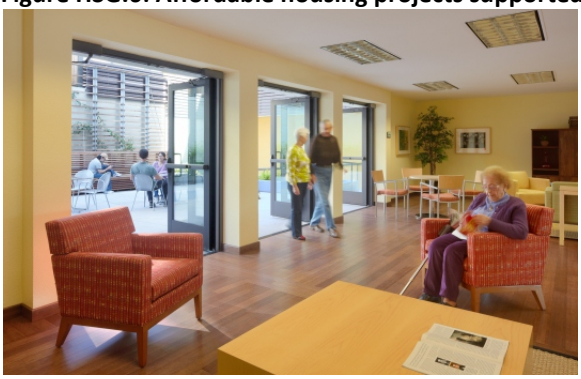
Affordable housing projects utilize a combination of loans, grants, tax incentives and financing tools. Some of these funds may be accessed via loans, grants and federal, state and local programs. Leveraging additional public financing and incentives can help make affordable housing projects financially feasible. The Santa Clara County Office of Affordable Housing administers several funds and programs to support affordable housing projects, including the Stanford Affordable Housing Fund.

As of March 24, 2016, Stanford had paid a total of approximately $25,700,000 to the County-administered Stanford Affordable Housing Fund through affordable housing contributions for each square foot of academic development constructed on campus. **Figure HSG.6** shows the five affordable housing projects that received a total of $13.3 million from this fund. Four out of the five were built in Palo Alto; one was built in Mountain View. This averages approximately $41,800 per affordable housing unit subsidized by the Fund.

About $12.3 million remains in the Fund. Santa Clara County has earmarked this amount for the purchase of the Buena Vista Mobile Home Park (also shown in Figure HSG.6) to maintain the property as affordable housing.

It is anticipated that Stanford will contribute an additional $13 million to the County-administered Stanford Affordable Housing Fund, for a total of $39 million, by the time Stanford completes the academic and academic support square footage authorized by the 2000 General Use Permit.

Figure HSG.6: Affordable housing projects supported by the County-administered Stanford Affordable Housing Fund



1. Alta Torre apartments
3895 Fabian Way, Palo Alto (55 units)

2. 801 Alma Family Apartments
801 Alma St., Palo Alto (83 units)

3. Tree House
488 W. Charleston Rd., Palo Alto (35 units)

4. Stevenson House
455 E. Charleston Rd., Palo Alto (119 units)

5. 1585 Studios
1585 W. El Camino Real, Mountain View (27 units)

6. *Pending* – Buena Vista Mobile Home Park
3980 El Camino Real, Palo Alto (117 units)

3.0 FUTURE HOUSING

3.1 Development Proposed in 2018 General Use Permit

Stanford proposes that the 2018 General Use Permit authorize construction of 3,150 housing units/student beds, including up to 550 housing units that can be occupied by faculty and staff. Stanford wishes to continue to provide on-campus housing to meet the increasing student enrollment in coming years, to foster collaboration and learning, and to attract and retain world class faculty.

Postdoctoral students would be able to live in both student housing and faculty/staff rental housing, and medical residents would be eligible for faculty/staff rental housing. Staff is also eligible for faculty rental housing.

In addition, similar to the 2000 General Use Permit, Stanford seeks a condition allowing it to build more than 3,150 housing units/beds upon approval by the Planning Commission and subject to additional environmental assessment.

3.2 Housing Linkage

The 2000 General Use Permit required Stanford to build housing commensurate with academic development, using a housing linkage ratio. This linkage requirement was a way to recognize that the provision of on-campus housing reduces vehicle commute trips and helps to meet the No Net New Commute Trips goal. Under the requirement, each increment of housing must be completed through the framing stage before Stanford can obtain building permits for the next increment of academic and academic support space. This ensures that housing is built on the same pace as academic and academic support space.

As part of the 2018 General Use Permit application, Stanford proposes to maintain the same housing linkage ratio as was specified in the 2000 General Use Permit. As shown in **Table 6.1** below, Stanford would be required to build housing units at the rate of one unit/bed per 826 net new square feet of academic development, or a total of 2,753 housing units/beds by the time of buildout of the requested academic square footage. Interim milestones must be met at each 500,000 square feet of academic development to ensure that housing keeps pace with academic facility growth.

Table 6.1: Proposed Housing Linkage

Academic and Academic Support Space (net new gsf)	Housing Units/Beds at 1 per 826 net new gsf	Cumulative No. of Housing Units/Beds
0 – 0.5M	605	605
0.5 – 1.0M	605	1,210
1.0 – 1.5M	605	1,815
1.5 – 2.0M	605	2,420
2.0-2.275M	333	2,753

3.3 Affordable Housing on Stanford Lands

Stanford anticipates continuing to build affordable graduate student housing units on its campus lands. Of the 3,150 housing units/beds that Stanford has applied for, Stanford estimates that 900 new beds would be used to house graduate students. For Regional Housing Needs Assessment purposes, an affordable housing unit must have a kitchen. Based on past graduate student housing projects at Stanford, 900 beds conservatively would equate to approximately 450 new housing units affordable to low- and very low-income residents.

The value of providing affordable housing can be quantified by calculating the subsidy required to construct such a unit, which is the cost of the unit minus the return one would expect from the below market rental income to be charged. The estimated value of the affordable housing subsidy required to construct 450 units affordable to moderate-income residents is $103 million.[10] This amount is conservatively low because, as mentioned previously, graduate student units at Stanford have been considered by the County to be affordable to low- and very low-income residents, which requires an even greater subsidy than providing moderate-income units.

By dividing the $103 million subsidy amount by the 2,275,000 square feet of academic and academic support space proposed for the 2018 General Use Permit, the construction of 450 affordable graduate student units equates to approximately $45 in affordable housing subsidies provided per square foot of net new academic and academic support space.

3.4 Affordable Housing Contribution to County-Administered Fund

In addition to building affordable graduate student housing, Stanford is also offering to continue its contribution to the Stanford Affordable Housing Fund, maintained and distributed by the County to subsidize affordable housing in the community. It is important to note that nonprofit institutions, including colleges and universities, rarely are asked to pay affordable housing fees. For example, Palo Alto expressly exempts colleges, universities and hospitals from the City's affordable housing fees. Almost no cities in California charge fees to educational or institutional facilities. Like most jurisdictions, Santa Clara County has not adopted an affordable housing fee that would apply to Stanford.

However, under the 2000 General Use Permit, Stanford has been providing funding that is similar to the current affordable housing fee that some jurisdictions require for-profit commercial developers to pay. The affordable housing fees that cities charge to commercial developers vary, with some cities such as San Diego and Sacramento charging a nominal fee of approximately $2 per square foot for office development. The fee is higher in Oakland and West Hollywood, ranging from $5 to $8 per square foot. The highest fees for office development were observed in San Francisco and Palo Alto, with San Francisco's at $24.03, and Palo Alto's currently at $20.37. Palo Alto is considering raising its fee for office and R&D space, but not for other types of commercial development. Santa Monica does charge an affordable housing fee for new educational and cultural facilities; that fee is $10.23 per square foot.

Recognizing the value that the County-administered Stanford Affordable Housing Fund is bringing to nearby communities, Stanford proposes to continue its contributions at a rate of $20 per square foot of new academic and

[10] The subsidy for each affordable housing unit is estimated to be approximately $229,325. This estimate is based on comparable affordable housing and supportable debt at the moderate-income level. The average development cost for a two-bedroom unit is estimated to be $534,525, based on development budgets for six comparable affordable housing projects in California. The amount of supportable debt per unit, or the amount of private financing a rental unit can undertake based on rent charged, is estimated to be $305,201 per unit based on maximum affordable rent at the moderate-income level, less vacancy and operating expenses, and assuming a debt coverage ratio of 1.25, an interest rate of 4.86 percent, and a 30-year mortgage term. The difference between the $534,525 development cost and the $305,200 supportable debt amount is the $229,325 per unit subsidy required to provide these units to moderate income residents. 450 units multiplied by $229,325 yields approximately $103 million in affordable housing subsidies.

academic support space, a rate that is similar to the current rate that Stanford is contributing. Stanford further proposes that this rate would increase with inflation over time. See **Tab 3 – Project Description.** Multiplying $20 by the proposed 2,275,000 net new square feet of academic and academic support space, and accounting for inflation over time, generates an estimated $56 million that Stanford would contribute to the County-administered Stanford Affordable Housing Fund during the life of the 2018 General Use Permit.

Stanford further proposes that this contribution toward affordable housing should support development of affordable housing within one-half mile of a major transit stop or a high-quality transit corridor as defined by Senate Bill 375. SB 375 defines a high-quality transit corridor as a corridor with fixed-route bus service with service intervals no longer than 15 minutes during peak commute hours. By encouraging affordable housing near major transit corridors, the contribution not only would promote affordable housing, it would be consistent with statewide programs for reduction of vehicle miles traveled and greenhouse gas emissions.

3.5 500 El Camino Real in Menlo Park

Stanford is currently pursuing a mixed-use office and multifamily housing project at 500 El Camino Real in Menlo Park near major transit stops and along a major transit corridor. The proposed project includes more than 200 rental housing units and will be available for Stanford faculty and staff, and the general public if there is capacity available.

The Menlo Park Caltrain station is approximately half a mile from the project site. Stanford's Marguerite Shuttle (Bohannon line) serves the project site every half hour on weekdays between 8 AM and 6:30 PM. SamTrans buses also connect the project site to the Palo Alto Transit Center and destinations north of Menlo Park, with buses running approximately every 14 minutes. Residents and employees will also be able to take advantage of transportation coordinators, bike share programs, carpooling and ridesharing programs, car-share vehicles, and transit subsidies.