Annual Report 2018

Genentech Facilities Ten-Year Master Plan

Prepared for the City of South San Francisco

January 2019

Genentech
A Member of the Roche Group

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INTRODUCTION

Genentech, the world's first biotechnology company, was founded in 1976 and is located in South San Francisco. Genentech performs a wide range of functions at its South San Francisco campus, including research and development, clinical manufacturing, distribution, marketing and administration. With approximately 9,800 full-time employees and 5,900 consultants and contractors working in South San Francisco, Genentech remains its largest employer.

GENENTECH MASTER PLAN DISTRICT

In 2007 the City Council adopted the updated Genentech Ten-Year Facilities Master Plan, certified the Master Environmental Impact Report and amended the Zoning Ordinance allowing expansion of the Genentech Research and Development Overlay District (R&D), which in 2010 was renamed the Genentech Master Plan District. The Master Plan was originally established in 1995 to guide the company's growth and development of the Central Campus and to ensure that future growth would be consistent with goals and policies of the East of 101 Area Plan and the South San Francisco General Plan.

The 2007 Master Plan (and its 2013 amendment) outlines a potential expansion that would allow the Central Campus to increase up to approximately 6.8 million square feet during the ten-year planning period and serves several purposes:

- Articulates a vision and policies that serve as a general guide for the placement and design of individual buildings and other campus elements, as well as an overall development program to provide the basis for future approvals;
- Fosters a campus development befitting its setting on the City's eastern bay shore that capitalizes on views and access to the waterfront;
- Promotes reduction of automobile usage by offering alternatives that further the City's transportation objectives via a comprehensive Transportation Demand Management (TDM) program and improved pedestrian access to promote ease of movement between campus buildings;
- Establishes the basis for zoning provisions to the Genentech Master Plan District, as amended; and
- Provides Master Plan development design guidelines for design review and approval.

PURPOSE OF THE ANNUAL REPORT

The Annual Report is required by the Genentech Master Plan District ordinance, SSF Municipal Code Section 20.260.006(E). It must address, as appropriate, the status of facility-wide improvements, progress in completing the required tasks and benchmarks described in the Implementation Plan, anticipated new construction or renovation projects, projected changes in the facility usage and requirements, an update on TDM and parking needs, an update on mobile vendor (employee amenity) activities on the Genentech campus, an update on the security program, advance notice of any proposed changes to the facility-wide development standards or design guidelines and notice of any changes that have been made to the Facility Master Plan since the most recent Annual Report.

Consistent with this requirement, this Annual Report is intended to accomplish several purposes: (1) provide background information and up-to-date data on the Genentech campus, (2) identify near-term projects to the extent possible, (3) provide a brief overview of Genentech's Transportation Demand Management program and parking needs and (4) summarize the status of the Implementation Plan.

2017-2019 MASTER PLAN UPDATE

Genentech is currently undertaking a comprehensive update of the 2007 Master Plan and is planning to be completed in 2019.

In response to the changing global and technology-focused business environment, the goal of the 2019 Master Plan Update is to create a more dynamic and future-looking development plan for the Genentech Campus. The plan is intended continue to promote sustainability and resilience and support tomorrow's workforce needs via Campus-centered growth, while providing needed flexibility to adapt, change and innovate.

GENENTECH 2018 CAMPUS DEVELOPMENT AND BUILD-OUT

Development of a campus with a sense of identity

B73, the new Childcare Facility, replaced the closed facility (B23) at Gateway Boulevard in Q2 2018. – Bird's eye view from Allerton Avenue

CURRENT CAMPUS DEVELOPMENT DENSITY

Genentech's Master Plan District extends over 207 acres of owned and leased land. Genentech also continues to occupy various leased spaces at the Gateway Business Park (B82, B83, B85) as well leased facilities at 285 East Grand Ave (B79) and 383 East Grand Ave (B80); however, these properties are not included in the Master Plan District (see Figure 1, on page 9).

Leases for B84 (office) and B23 (childcare facility) at the Gateway Campus were terminated in 2018.

The Genentech Master Plan District includes specific development standards for build-out in gross floor area, floor area ratio and lot coverage. The following tables summarize the 2017 and 2018 campus conditions. The numbers in red highlight changes from 2017 to 2018. The decrease in square footage in the Lower Campus is due to the demolition of B54 and construction of B59—a smaller building. While B73, the new childcare facility totaling approximately 57,000 square feet, was completed in 2018 in the West Campus, the added building area is shown as zero because of the East of 101 Area Plan policy exempting childcare facilities from counting towards project FAR.

2017 Building Use Distribution in Genentech Master Plan District

Existing Neighborhoods	Land Area (acres)	Building Area (Square Feet) Office	R&D	Mfg	Warehouse	Amenity	Total Bldg Area	FAR
Lower Campus	58.0	303,990	482,410	484,010	239,080	10,230	1,519,720	
Mid Campus	26.2	82,430	469,500	0	0	1,930	553,860	
Upper Campus	51.7	907,190	58,890	12,850	21,360	178,620	1,178,910	
West Campus	37.2	21,830	0	73,120	347,500	0	442,450	
Subtotal	**173.2**	**1,315,440**	**1,010,800**	**569,980**	**607,940**	**190,780**	**3,694,940**	0.49
Master Plan Total	200	2,632,000	2,000,000	1,046,000		322,000	6,000,000	0.69
Potential Expansion		*1,316,560*	*989,200*			*131,220*	*2,305,060*	
2013 Additions with Separate EIRs								
500 Forbes Blvd (B56)	6.7	20,200	139,250	0	0	2,800	162,250	0.56
South Campus	27.0	230,500	568,380	0	0	22,640	821,520	0.70

2018 Building Use Distribution in Genentech Master Plan District

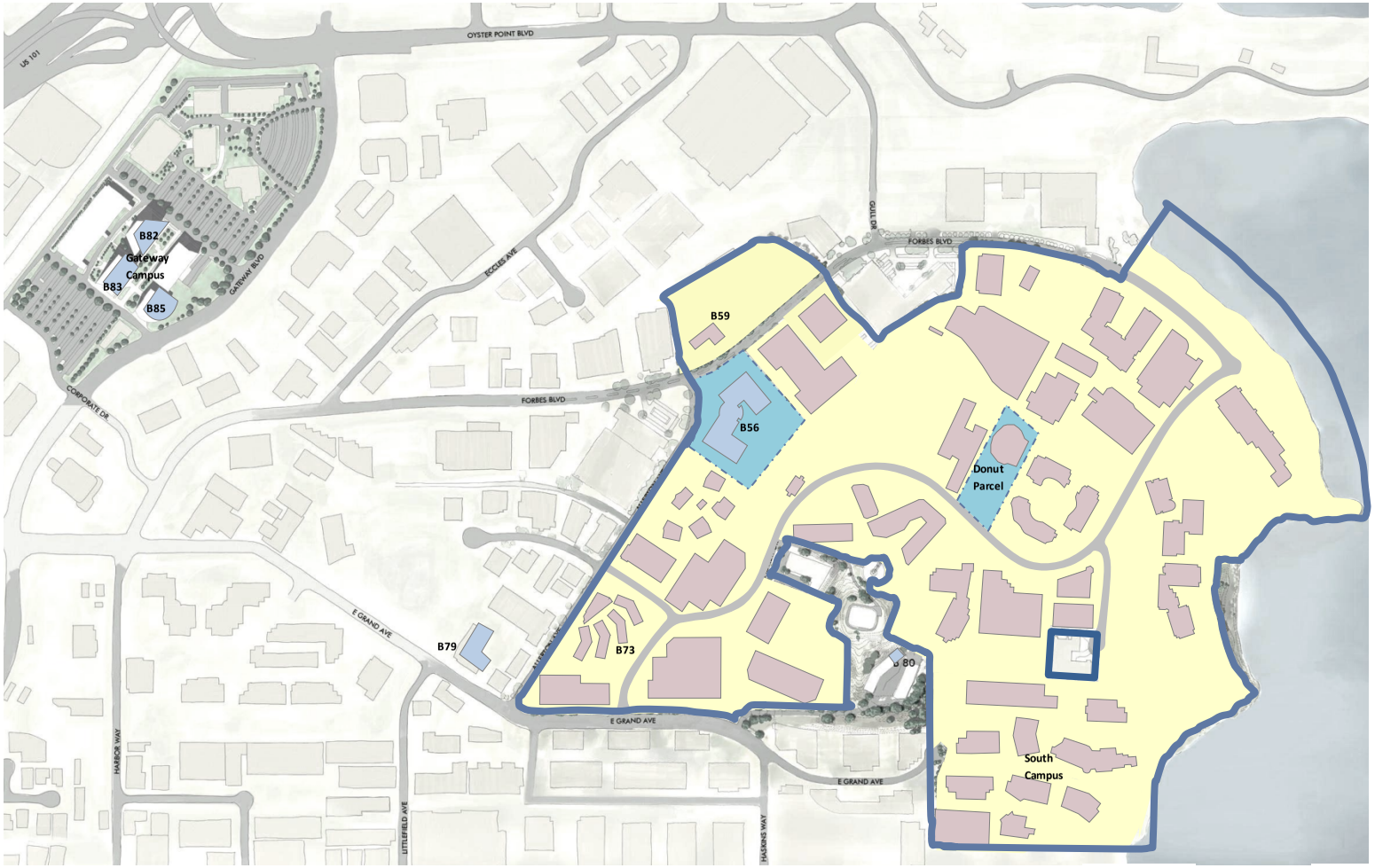
Existing Neighborhoods	Land Area (acres)	Building Area (Square Feet) Office	R&D	Mfg	Warehouse	Amenity	Total Bldg Area	FAR
Lower Campus [3]	58.0	303,310	482,410	484,010	239,080	10,230	1,519,040	
Mid Campus	26.2	82,430	469,500	0	0	1,930	553,860	
Upper Campus	51.7	907,190	58,890	12,850	21,360	178,620	1,178,910	
West Campus [1, 2]	37.2	21,830	0	73,120	347,500	0	442,450	
Subtotal	**173.2**	**1,314,760**	**1,010,800**	**569,980**	**607,940**	**190,780**	**3,694,260**	0.49
Master Plan Total	200	2,632,000	2,000,000	1,046,000		322,000	6,000,000	0.69
Potential Expansion	*26.8*	*1,317,240*	*989,200*			*131,220*	*2,305,740*	
2013 Additions with Separate EIRs								
500 Forbes Blvd (B56)	6.7	20,200	139,250	0	0	2,800	162,250	0.56
South Campus	27.0	230,500	568,380	0	0	22,640	821,520	0.70

1 *WC: B71 is removed per East of 101 Area Policy LU-26 ("...shall not be counted as part of the Floor Area Ratio of the project")*

2 *WC: B73 New Childcare Center has been added in May 2017 but will not be counted per East of 101 Area Policy - see comment No. 1*

3 *WC: B59 (501 Forbes Blvd) was added in Dec 2018*

GENENTECH IN SOUTH SAN FRANCISCO, 2018



Development

- Genentech – owned buildings
- Genentech – leased buildings

Property

- Genentech Master Plan District
- Genentech longterm leased parcels within Master Plan District
- Genentech Master Plan District Overlay Boundary

Figure 1

RECENT AND ANTICIPATED CAMPUS DEVELOPMENT (2017-2019)

New Childcare Facility (B73) on Allerton

- New Childcare Center B73 was completed and opened in Q2 2018 to allow the relocation of the existing childcare facility from Gateway Blvd.

B59 with renovated bus parking lot

- A new Shuttle & Bus Depot Area with an associated Operations Center including a Parking Lot pavement strengthing project for heavier buses was completed in Q4 2018; it also provides flexibility to electrify the entire bus fleet in the coming years
- Rebuilding and repaving the former Keeco parking lot for bus and vehicle overflow parking anticipated in 2019

Simulation - New office building B40 in the South Campus

- New 166 GSF office complex B40 in the South Campus was approved, started construction in Q2 2017 and is targeted for completion in Q2 2019

- Acquisition of 2nd Phase of the southern parcel of Genentech's South Campus was completed in July 2018

Simulation – New B42 Cafeteria Pavilion in the South Campus

- A new Cafeteria Seating Pavilion and Central Green Space redevelopment in the South Campus were approved in 2018 and will be installed by Q3 2019

Simulation – New Lower Campus Food Pavilion (B5a)

- A new Interim Food Pavilion B5A with a full service kitchen for the Lower Campus was approved in 2018 as a replacement for the upcoming B4 Cafeteria decomissioning and will be installed by Q3 2019

New Refrigerated Water & Glycol Piping at B3

Glycol Piping Project

- 1st phase of Campus-wide "Climate Investment Project" *(Installation of Refrigerated Water & Glycol Piping, which will eliminate halogenated hydrocarbon refrigerants)* was completed campus-wide in Oct 2017

- 2nd phase (*replacement of HVAC and Chiller Units, Cold Room & Fire Supression System conversions)* has been initiated in Q2 2017, was ongoing in 2018 and is targeted for overall completion by Q3 2019

New Nitrogen tank for the South Campus next to B42

- The third large scale nitrogen tank housing for South Campus was completed at B42 in Q2 2018

Solar Panel Distrubition Main Campus; Panels on PS2 and T5

- Completed installation of 16,000 solar panels on 13 buildings and parking structures Campus-wide in Q2 2018. This system combined will produce 6.4 megawatts (MW) of energy during peak periods of operation, making Genentech's campus one of the largest corporate solar installations on the San Francisco peninsula.

- Genentech is preparing a proposed revision to its 2007 Master Plan and filed a public Notice of Preparation in April 2018.

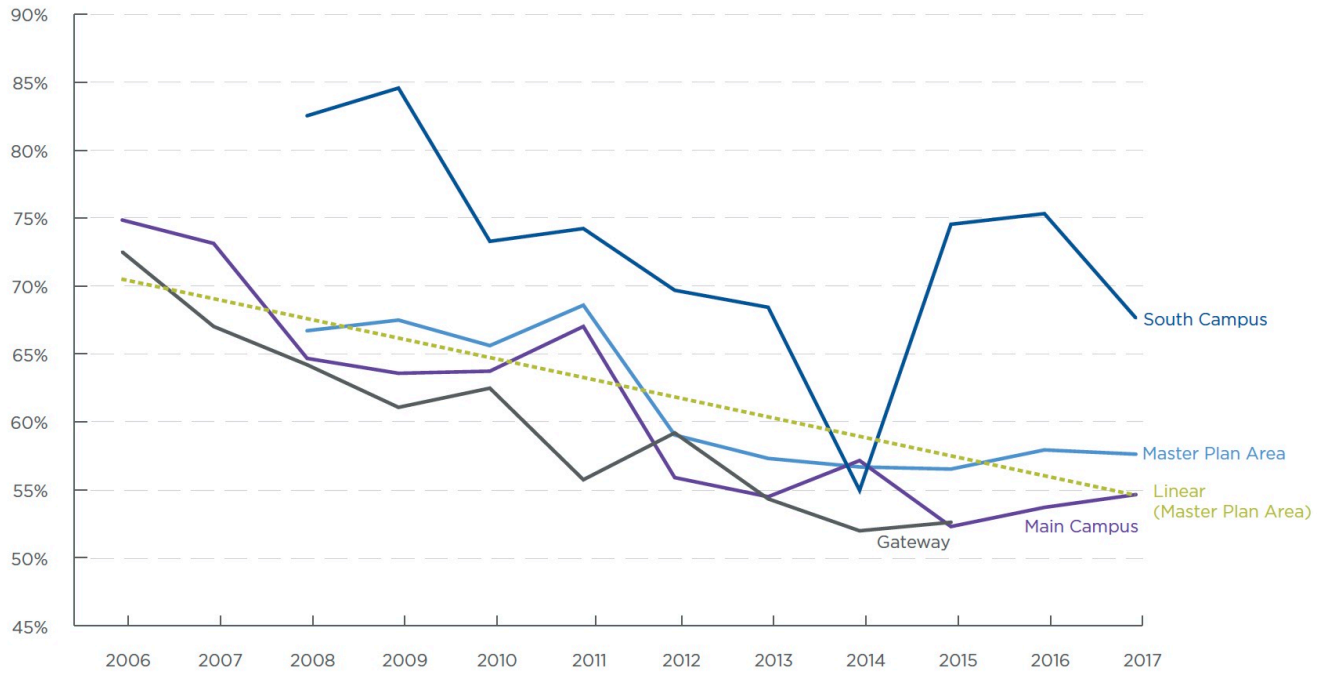
TRANSPORTATION DEMAND MANAGEMENT AND PARKING

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Now in its thirteenth year, the Genentech's TDM program, named gRide, continues to provide employees with a suite of commuting alternatives to driving alone. The program includes coach service ("GenenBus") with 27 routes and 37 stops across the Bay Area; "last mile" bus service between the Campus and the Millbrae BART/Caltrain and Glen Park BART stations; incentives for walking, biking, carpooling/vanpooling, taking public transit, and motorcycling to work; and—piloted in 2017—a private ferry service serving four marinas in the North and East Bay.

Changes and innovations in the gRide program in 2018 included formalization of the ferry service, mentioned above; and delivery of several double-decker electric buses, as gRide works to transition its fleet over time to utilize clean air vehicles. In addition, Genentech was recently named a Gold standard Bicycle Friendly Business by the League of American Bicyclists for fostering and promoting a bicycle-friendly business environment.

As required by the Master Plan and the South San Francisco Municipal Code, Genentech conducts annual monitoring and reporting of TDM program participation. The most recent data available at the time of this report is from the Cordon Count survey completed in October 2017. At that time, Genentech achieved an average alternative mode use of 42.4% within the Master Plan boundaries. The following chart shows drive-alone mode share data from 2006 to 2017 for each subcampus and the Master Plan Area as a whole.



Drive Alone Mode Share, 2006 - 2017

As required by Section 18.2 of the TDM Program (Appendix D of the Genentech Ten-Year Master Plan) and the South San Francisco Municipal Code Section 20.400.008, a TDM Annual Summary Report (prepared by an independent consultant) is submitted with this Annual Report (see Attachment 1). The survey data is from the fourth quarter of 2017 and captures details on all alternate mode usage and trip reduction rates.

PARKING

The Master Plan estimates parking demand and calculates parking ratios based on building functions and TDM program participation rates. For instance, for Campus-wide usable square footage of approximately 4.6 million and an alternative mode share of 35%, parking demand is estimated at 6,742 spaces.

Actual parking demand is determined by changes in growth and alternative mode share, and is measured and reported annually. The latest parking survey for which data is available was taken in October 2017 and showed that the campus-wide supply of 7,714 spaces (8,073 spaces when those that are currently closed due to construction are included) far exceeded the measured demand of 6,527 spaces.

CHANGES TO USE, SECURITY, DEVELOPMENT STANDARDS, OR DESIGN GUIDELINES

No changes are projected at this time to facility usage and security detailed in the Genentech Facilities Ten-Year Master Plan. Similarly, no changes are proposed to facility-wide development standards or design guidelines under the Genentech Facilities Ten-Year Master Plan.

MOBILE VENDOR SERVICES

Consistent with the South San Francisco General Plan and Zoning Ordinance, Genentech provides amenities for employees to support overall campus function. These include cafeteria and food services, fitness, childcare and other miscellaneous employee support services. In addition, Genentech continues to provide on-site mobile vendor services including carwash, hair salon, health, dental and bike/maintenance/repair services. These services are for employee convenience and help lessen traffic on local streets. Specific mobile vendor locations are noted on Figure 3.

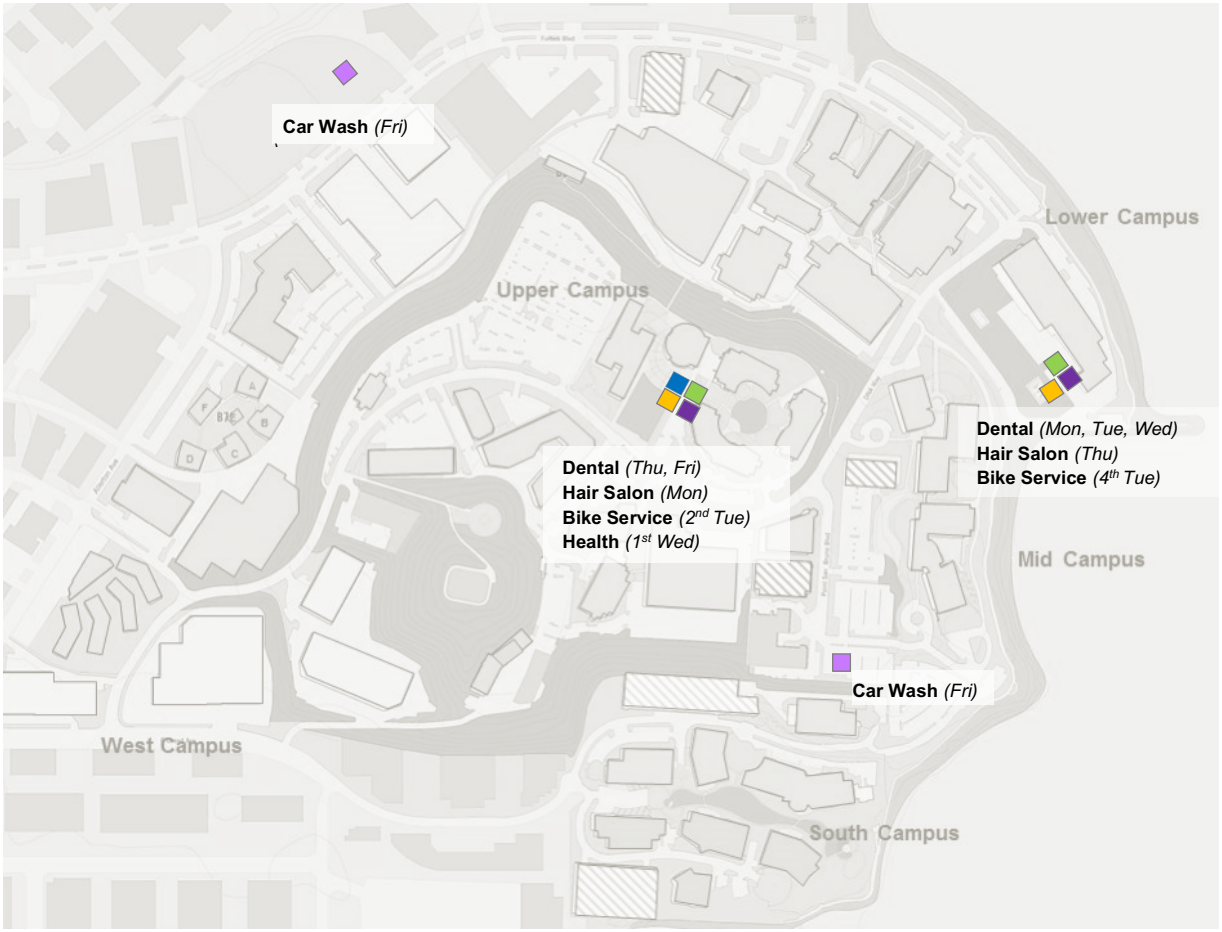


Figure 3 – 2017/2018 mobile vendor service location map

MASTER PLAN IMPLEMENTATION PROGRAM

The Implementation Plan sets forth the specific improvements and public amenities to be provided on the Genentech campus in conjunction with buildout of the Genentech Facilities Ten-Year Master Plan and the triggers for implementation of those improvements and amenities. Appendix A contains an update on the status of the specific improvements within the Implementation Plan.

APPENDICES

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MASTER PLAN IMPLEMENTATION PROGRAM

LOWER CAMPUS

2018 UPDATE

IMPROVEMENT		IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
Land Use And Structure			
Public Amenities & Bay Trail	Complete designation of existing employee shoreline parking lots for public use on evening and weekends as described in Attachment A (of the Master Plan).	Complete within 4 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update.	Completed in July 2007.
	Install Bay Trail directional signage from intersection of Forbes & Allerton, Oyster Point & Gull Drive and East Grand & DNA Way (formerly Grandview) to the Bay Trail access points as described in attachment B (of the Master Plan).	Complete within 4 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update.	Completed in July 2007.

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
	Provide Improvements consisting of constructing a recreational field and associated public parking on approximately .8 acres for public use along Forbes Blvd. as described in Attachment A (of the Master Plan).	To be implemented in conjunction with the redevelopment of the B4 site.	
	Construct a History Hall for public use.		▪ The requirement was removed per Master Plan amendment approved by the City Council in 2013
	Enhance landscaping adjacent to the Bay Trail by expanding the green space along the Lower Campus parking lot (adjacent to UPS facilities) through reducing the number of cars and re-striping the parking lot as described in Attachment A (of the Master Plan).	To be implemented in conjunction with the redevelopment of the B4 site.	

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
	Enhance existing cross walk on DNA Way at B3 from type one (stripe only) to type two (controlled) as identified in Section 3.1 of the Master Plan.	December 31, 2007	Completed in 2007.
	Add cross walk type two (controlled) on DNA Way at B5 entry in proximity to the shuttle stops as identified in Section 3.1 of the Master Plan.	December 31, 2007	Completed in 2007.

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
	Public shoreline parking.	Specific design concepts shall be submitted for Planning Commission review within 6 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update. Pursuant to this review, the Planning Commission shall determine the appropriate number and location of dedicated public parking spaces, approve phasing and implementation aspects of the improvement(s). An aggressive implementation schedule will be pursued.	Completed in 2007.
Urban Design			
Pedestrian & Bike paths	Add class II bike lanes along Forbes Blvd., from the intersection of Forbes and Allerton to terminus of Forbes Blvd. by striping a 5 foot bike path on both sides of the street, adjusting the street median to 4 feet and	Complete by the earlier of (i) completion of the City's planned sewer improvements along Forbes Blvd. or (ii) December 30, 2009. Genentech shall coordinate implementation &	▪ Detailed design & permit application was submitted in 2008. ▪ Bike Lanes were striped along Allerton Ave. from East Grand to Forbes (2009)

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
	adjusting the outside traffic lane to 11 feet as described in Attachment D (the traffic lane adjustment requires and is pending City Council approval).	timing of this improvement with the City Engineer.	▪ Implementation of this improvement was extended by the Chief Planner to December 31, 2012. (see Attachment 2) ▪ City Council approved the concept design, funding and maintenance agreements on November 14, 2012. The funding deposit was completed in January 2013, effectively fulfilling the Master Plan obligation. The project will be completed in May 2014.
	Add bike lanes by striping a 4-foot bike lane on both sides of the street as described in Attachment D (of the Master Plan). Additional bike lanes will be along DNA Way as well southern DNA Way (formerly Grandview Drive), from intersection of Forbes and DNA Way to the intersection of the former Grandview Drive and East Grand Blvd.	Complete by the earlier of (i) completion of the City's planned sewer improvements along DNA Way and the southern DNA Way (formerly Grandview Drive), or (ii) December 30, 2009. Genentech shall coordinate implementation & timing of this improvement with the City Engineer.	Bike lane striping along entire DNA Way (including the former Grandview Drive) was completed in 2007.
	Enhance landscape and pedestrian connectivity along the Lower Campus central spine from the parking structure to Building 6.	The location and design of the improvements on the north side of the central spine shall be submitted for Planning Commission review within 3 months following the effective date of	▪ Design for the north side of the Central Spine between Building 7 and PS1 was submitted & approved in 2007 in conjunction with approval of Building 50.

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
		adoption of the Genentech Facilities Ten-Year Master Plan Update. Improvements on the north side of the Central Spine between Building 7 and PS1 shall be completed prior to issuance of a C of O for Building 50. Improvements along the south side of the Central Spine between Building 6 and PS1 shall be completed by the earlier of (i) prior to issuance of a C of O for the redevelopment at Building 9 or (ii) six years following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update. (This six-year timeline may be extended by the Planning Commission, in its sole discretion, as part of the Annual Review in the event that Building 9 still exists four years after the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update.)	▪ Implementation will occur in conjunction with a new development in the B51 surface parking lot.
	Connect the Lower and West Campuses by developing a pedestrian path/service road from the Lower Campus Central Spine to B29 at Allerton as identified in Section 3.4 of the Master Plan.	Complete prior to issuance of a C of O for redevelopment of West Campus parcels at 301 East Grand and 342 Allerton (pending acquisition of remaining easement rights)	▪ Completed in 2010.

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
	Create Campus entry at Forbes Boulevard and DNA Way, (approximately 8000 SF) as identified in Section 3.2 of the Master Plan and described in Attachment A (of the Master Plan).	Design concepts shall be submitted for Planning Commission review within 6 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update. Pursuant to this review, the Planning Commission shall determine and approve design, phasing and implementation aspects of the improvement(s).	▪ Design concepts were submitted & reviewed by the Planning Commission in November 2007. Concepts included enhanced landscaping, signage & introduction of a roundabout at Forbes Blvd/DNA Way intersection. ▪ New campus monument sign and B5 plaza with landscape improvements on the corner of Forbes Blvd and DNA Way was completed in 2010. ▪ Campus entry concept will be implemented with redevelopment of B4.
	Provide public art throughout the Overlay District area at locations that are visible from the public parks and streets at $1.00/SF of gross new development as identified in Section 3.2 of the Master Plan.	Schedule of phased installation to be submitted to Economic and Community Development (ECD) for approval within 3 months following the effective date of adoption of the Genentech	▪ Genentech's proposed schedule & location of phased installation was submitted to ECD in July 2007 & reviewed by the Planning Commission in November 2007.

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
		Facilities Ten-Year Master Plan and shall be reviewed in the first Annual Report.	▪ Two public art pieces were installed in 2010. One along Forbes Blvd at B7 courtyard and the second along the Bay Trail at FRC courtyard.
Transportation And Parking			
	Remove on-street parking along DNA Way, Grand View Drive and Point San Bruno.	Complete within 6 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update.	Completed in September 2007.

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
	Enhance street lighting along DNA Way, the southern DNA Way (formerly Grandview Drive) and Point San Bruno (on both sides of the street as described in Attachment C of the Master Plan).	Schedule of phased implementation shall be coordinated with and submitted to the City Engineering Division for approval within 3 months following the effective date of adoption of the Master Plan. Update shall be reviewed in the first Annual Report. Improvement shall be completed no later than December 31, 2009.	Completed in January 2012.
	Install new shuttle shelters (up to 2) with associated landscaping enhancement and replace existing shuttle shelter along DNA Way as identified in Section 3.1 of the Master Plan and figure 4.2-4 of the Master Plan.	December 31, 2007	Completed in 2007.

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
Land Use And Structure			
Bay Trail	Complete Bay Trail Phase II Improvements.	Complete by March 2007.	Completed in 2007.
Urban Design			
Pedestrian Walkways	Create secondary pedestrian connection from Upper Campus to the Mid and South Campuses as identified in section 3.4 of the Master Plan.	Prior to issuance of C of O for the first new building on Mid Campus.	▪ Pedestrian Connection from South Campus to Upper Campus was completed in 2007. ▪ Design of Pedestrian Connection from Mid to Upper Campus was submitted and approved by Planning Commission with the Founders Research Center (FRC) III project in 2007. ▪ Implementation will be in conjunction with FRC III construction.

Public Art	Provide public art throughout the Overlay District area at locations that are visible from the public parks and streets at $1.00/SF of gross new development as identified in Section 3.2 of the Master Plan.	Schedule of phased installation to be submitted to Economic and Community Development (ECD) for approval, within 3 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan, and shall be reviewed in the first Annual Report.	(Refer to Lower Campus section)
Transportation And Parking			
Street Improvement	Install shuttle shelters along Point San Bruno (up to 2) as identified in Section 3.1 of the Master Plan and figure 4.2-4 of the Master Plan.	Prior to issuance of C of O for the first new building on Mid Campus. Final design and location of improvements shall be subject to review and approval by City Engineer.	▪ Shuttle bus stop was installed at B36 in 2015 to support campus transportation needs ▪ Further improvements will be in conjunction with FRC III Construction.
	Street lighting enhancement.	(Refer to Lower Campus section)	Completed in 2012.

MASTER PLAN IMPLEMENTATION PROGRAM

UPPER CAMPUS

2018 UPDATE

IMPROVEMENT		IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
Land Use And Structure			
Crosswalks & Sidewalks	Add type-one (striping only) cross walk on Grandview Dr. at B31 (one location), as identified in section 3.1 of the Master Plan.	Complete by the earlier of (i) completion of the City's planned sewer improvements along DNA Way and the southern DNA Way (formerly Grandview Drive) or (ii) December 30, 2009. Genentech shall coordinate implementation & timing of this improvement with the City Engineer.	Completed in 2009.
	Add type-two (controlled) crosswalk at B21/Hilltop Parking lot (one location), as identified in section 3.1 of the Master Plan.	Complete by the earlier of (i) completion of the City's planned sewer improvements along DNA Way and the southern DNA Way (formerly Grandview Drive) or (ii) December 30, 2009. Genentech shall coordinate implementation & timing of this improvement with the City Engineer.	Completed in 2007.

Urban Design			
	Add sidewalk on north side of the southern DNA Way (formerly Grandview Drive) from B2 to B39 to enhance Upper Campus pedestrian connectivity, as identified in Section 3.4 of the Master Plan and described in Attachment C, sidewalk A.	Complete by the earlier of (i) completion of the City's planned sewer improvements along DNA Way and the southern DNA Way (formerly Grandview Drive) or (ii) December 30, 2009. Genentech shall coordinate implementation & timing of this improvement with the City Engineer.	Completed in 2007.
Public Art	Provide public art throughout the Overlay District area at locations that are visible from the public parks and streets at $1.00/SF of gross new development, as identified in Section 3.2 of the Master Plan.	Schedule of phased installation to be submitted to Economic and Community Development (ECD) for approval within 3 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan and shall be reviewed in the first Annual Report.	(Refer to Lower Campus section)
Transportation And Parking			
	Street lighting enhancement.	(Refer to Lower Campus section)	Completed in 2012.
	Removal of on street parking.	(Refer to Lower Campus section)	Completed in 2007.
	Install shuttle shelters on Grandview Dr. at B24 & B21 (two locations) and enhance the associated landscaping, as identified in Section 3.1 and figure 4.2-4 of the Master Plan.	Prior to issuance of C of O for the first new building on Upper Campus. Final design and location of improvements shall be subject to review and approval by City Engineer.	Completed.

MASTER PLAN IMPLEMENTATION PROGRAM

WEST CAMPUS

2018 UPDATE

	IMPROVEMENT	IMPLEMENTATION TRIGGER	2018 PROGRESS REPORT
Urban Design			
	Construct a Campus entry at East Grand Avenue and the southern DNA Way (formerly Grandview Drive), as identified in Section 3.2 of the Master Plan.	Design concepts shall be submitted for Planning Commission review within 6 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan Update. Pursuant to this review, the Planning Commission shall determine and approve design, phasing, and implementation aspects of the improvement(s).	▪ Design concept was reviewed by the Planning Commission in November 2007. Design concept included enhanced landscape & signage. ▪ New Street Sidewalks along DNA Way were installed from B73 to B39 in 2018
			▪ Campus Entrance will be in conjunction with future East Grand Ave Building Projects.
Public Art	Provide public art throughout the Overlay District area at locations that are visible from the public parks and streets at $1.00/SF of gross new development, as identified in Section 3.2 of the Master Plan.	Schedule of phased installation to be submitted to Economic and Community Development (ECD) for approval within 3 months following the effective date of adoption of the Genentech Facilities Ten-Year Master Plan and shall be reviewed in the first Annual Report.	▪ One public art piece was installed in 2018 at B73 facing DNA Way.
			(Refer to Lower Campus section)

Transportation And Parking			
	Install shuttle shelters (up to 2) on Cabot Road, as identified in Section 3.1 and figure 4.2-4 of the Master Plan.	Install prior to issuance of C of O for the first new building on West Campus. Final design and location of improvements shall be subject to review and approval by City Engineer.	▪ One new shuttle shelter was installed on the north side of Cabot Road in 2007. ▪ Shuttle stop on south side of Cabot Road was installed in conjunction with development of B73 Childcare facility Completed in 2018
	Street lighting enhancement.	(Refer to Lower Campus section)	Completed in 2012.
Bike paths	Add class II bike lane along Allerton Avenue by striping a bike path on both sides of the street as identified in Section 3.1 and figure 4.6-1 of the Master Plan & described in Attachment D (of the Master Plan).	Complete by the earlier of (i) completion of the City's planned sewer improvements along Allerton or (ii) December 30, 2009. Genentech shall coordinate implementation & timing of this improvement with the City Engineer.	Completed in 2009.

APPENDIX B

Genentech Occupied Buildings in the Genentech Master Plan District. Red text indicates 2018 changes.

Genentech Building Number	Parcel Address	Building Area (sf)
LOWER CAMPUS		
3	44 DNA Way	206,777
4	1 DNA Way	150,516
5	22 DNA Way	182,164
6	660 Forbes Boulevard	120,576
7	700 Forbes Boulevard	263,267
8	650 Forbes Boulevard	87,783
9	640 Forbes Boulevard	192,275
51	642 Forbes Boulevard	33,207
59	501 Forbes Boulevard	4,320
56	500 Forbes Boulevard	163,257
T1	560 Forbes Avenue	43,450
T9	530 Forbes Avenue	239,702
	Sub-total	1,687,294
MID CAMPUS		
FRC I (10,11,12)	99 / 101 / 103 DNA Way	250,791
FRC II (13,14,15)	340 Point San Bruno	277,814
36	301 DNA Way (formerly 1776 Grandview Drive)	25,253
	Sub-total	553,858
UPPER CAMPUS		
20	389 DNA Way (formerly 1200 Grandview Drive)	97,609
21	401 DNA Way (formerly 1000 Grandview Drive)	17,296
24	305 DNA Way (formerly 1600 Grandview Drive)	101,415
25	325 DNA Way (formerly 1500 Grandview Drive)	67,154
26	335 DNA Way (formerly 1526 Grandview Drive)	113,642
28	501 DNA Way (formerly 550 Grandview Drive)	36,671
31	310 DNA Way (formerly 1631 Grandview Drive)	150,000
32	320 DNA Way (formerly 1541 Grandview Drive)	126,019
33	330 DNA Way (formerly 1633 Grandview Drive)	127,573
34	340 DNA Way (formerly 1151 Grandview Drive)	71,000
35	350 DNA Way (formerly 1475 Grandview Drive)	255,119
39	500 DNA Way (formerly 501 Grandview Drive)	15,411
	Sub-total	1,178,909
WEST CAMPUS		
27	600 DNA Way (formerly 425 Grandview Drive)	103,109
29	410 Allerton Avenue	46,378
Childcare (71)	444 Allerton Avenue	52,740
Childcare (73)	342 Allerton Avenue	57,080
T3 + T4	601 +701 DNA Way	107,810
	Sub-total	367,117
SOUTH CAMPUS		
41	470 East Grand Avenue	109,284
42	475 East Grand Avenue	152,804
43	465 East Grand Avenue	78,873
44	455 East Grand Avenue	120,374
45	620 East Grand Avenue	110,084
46	640 East Grand Avenue	95,896
47	660 East Grand Avenue	83,159
48	645 East Grand Avenue	62,318
PS A Clubhouse	450 East Grand Avenue	8,686
	Sub-total	821,478
	TOTAL (rounded to nearest thousand)	**4,609,000**

ATTACHMENTS

CONTENTS

Genentech
A Member of the Roche Group

South San Francisco Campus
TDM and Parking Report

April 2018

SOUTH SAN FRANCISCO CAMPUS MODE SHARE AND PARKING REPORT

Fall 2017 Survey

NELSON
NYGAARD

Genentech

GENENTECH SOUTH SAN FRANCISCO

CAMPUS MODE SHARE AND PARKING REPORT

2017

CONTENTS

JAN 2019

FIGURES

1

INTRODUCTION

This report describes the employee transportation mode split and parking conditions at Genentech's headquarters in South San Francisco. Parking and cordon count surveys were conducted on October 17th, 18th, and 19th of 2017 as part of an ongoing review and analysis of how parking lots are utilized at Genentech's campuses and how people access the site. This report compares the fall 2017 results with previous parking and cordon count surveys, with attention focused on long-term trends.

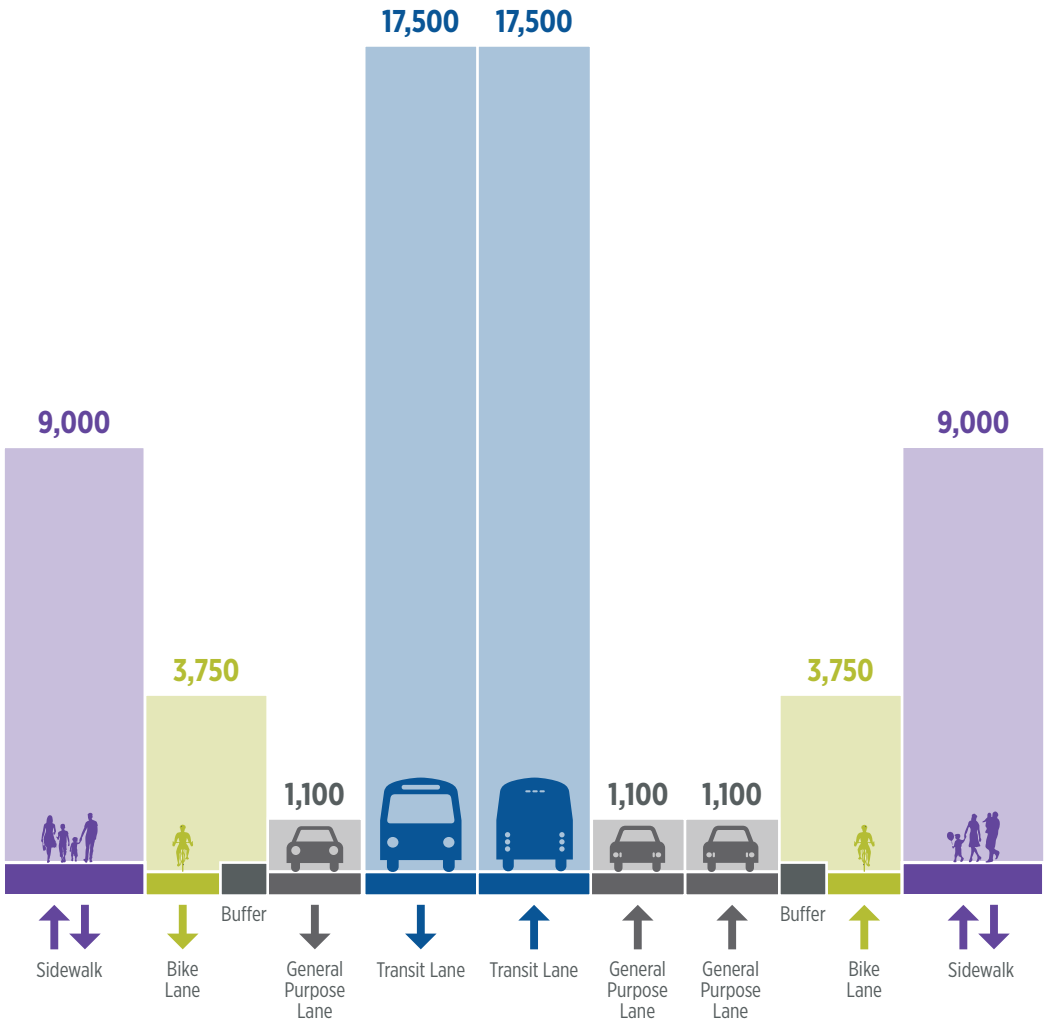
PURPOSE

Determining how employees and contractors travel to campus allows Genentech to better manage its land resources as the company continues to grow, particularly as new offices and labs are built on sites that were previously parking lots. In addition to the land space needed for parking, people driving alone proportionally take up the largest amount of road space per trip, contributing to congestion in the East of 101 area. As a way of reducing congestion and demand for parking on site, transportation demand management (TDM) programs encourage the utilization of alternative modes of transportation to reduce the number of single-occupant vehicle (SOV) trips, especially during peak commute hours. Genentech's gRide program has been evolving since 2006, providing over a decade of data to inform long-term transportation and parking trends at the South San Francisco company's headquarters.

CHANGES TO 2017 REPORT

At Genentech's request, the 2017 report update has eliminated legacy information on survey methodology and land use changes, in order to provide a more focused document to help Genentech staff manage parking and transportation demand management.

People per per hour, per lane (by mode)



People driving alone proportionally take up the largest amount of road space per trip compared to other modes

Over a Decade of gRide

Genentech's gRide program has been evolving since 2006, providing over a decade of data to inform long-term transportation and parking trends at the South San Francisco company's headquarters.

2

COMMUTER MODE SHARE

Genentech security officers were used to conduct a cordon count on October 17th, 18th, and 19th of 2017. Between 6 am and 10 am, all employees were counted as they arrived on campus and their mode of transportation was recorded. Transit data was provided by the gRide team for the same dates.

Note that the companion Carbon Footprint report covers emissions for the whole campus, and therefore incorporates historical Gateway mode share data. Gateway has always had a lower drive alone mode share than the rest of campus, and the reported mode shares in the Carbon Footprint differ from the data below accordingly.

With the new focused report format for 2017, this section presents high level analysis of mode share trends. Detailed historical data is available in Appendix A.

DRIVE ALONE MODE SHARE

The 2017 cordon count results show that drive alone commuting declined slightly between 2016 and 2017. Drive alone commuting accounted for 57.6 percent of trips in 2017, compared to 58.0 percent of trips in 2016 and 56.6 percent of trips in 2015. Thus, drive alone commuting remains well below historic levels and within a percentage point of most years since 2012.

Note that since 2016 the Gateway campus has not been included in either the mode share or parking surveys, because Genentech no longer has exclusive access to parking facilities there. Gateway always had a lower drive-alone mode share than the rest of campus, therefore this change likely contributes to the slight increase in drive alone mode share observed in 2016-2017 versus 2012-2015.

In addition to the omission of Gateway, results may track the broader trend that people tend to drive more when the economy is strong and when and gas prices are relatively low (as compared to the last decade). Figure 4 illustrates Bay Area gas prices trends between 2006 and 2017.

Figure 1. Drive Alone Mode Share, 2006 – Present

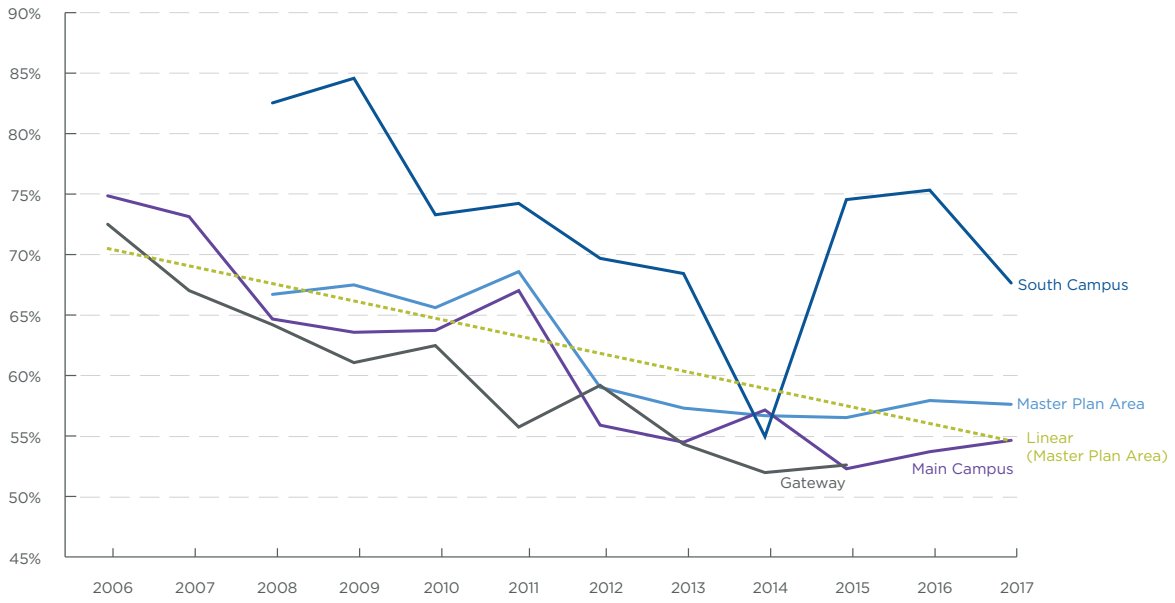


Figure 2. Bay Area Gas Prices, 2006 – 2017

TRANSIT MODE SHARE

Overall, transit mode share was 27.5 percent in 2017 (for the whole Master Plan area). Transit ridership increased slightly from 2015 through 2017. While transit remains below the 30% observed from 2012 to 2015, the omission of Gateway since 2016 from the calculation (with its above average transit mode share) likely contributes to the reduction.

As before, GenenBus accounts for the majority of transit ridership with 73% of riders, followed by BART (17%), Caltrain (5%), and the ferry (4%). Although the ferry mode share remains small, ridership has almost doubled since 2016, when Genentech began operating their own ferries in addition to the WETA service. Transit ridership by route is shown in Figure 4.

Figure 3. Transit Mode Share, 2006 – Present

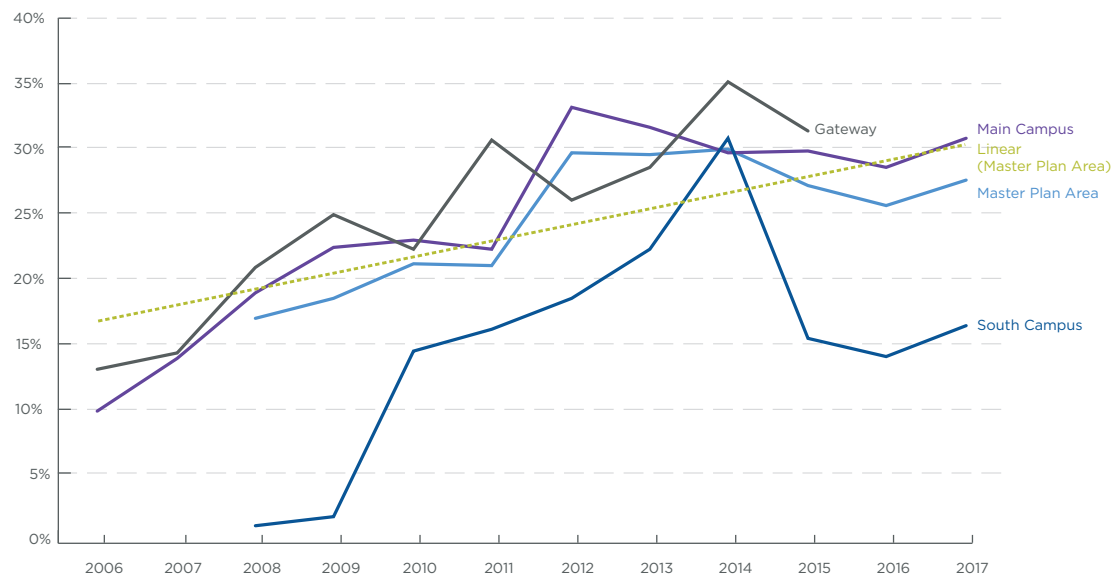


Figure 4. BART, Caltrain, GenenBus and Ferry Ridership*

Route	Ridership (Daily Average)	Share of Transit Riders
BART		
Glen Park BART	510	19%
Caltrain		
Millbrae	158	6%
Oyster Point Ferry		
Ferry Terminal	120	5%
San Francisco and Marin GenenBuses		
Marin/19th Avenue	122	5%
Marina Pacific Heights	161	6%
Divisadero/16th & Sanchez	100	4%
Noe Valley/Castro/ Haight	95	4%
SOMA/SF Ferry/ Union Square	169	6%
Total	646	24%
Alameda County / 24 / 680 Corridor GenenBuses		
Livermore	33	1%
Dublin	172	6%
Hayward	39	1%
Castro Valley	92	3%
Newark	207	8%
Ohlone	28	1%
Rockridge	61	2%
Total	631	24%

Route	Ridership (Daily Average)	Share of Transit Riders
South Bay / Peninsula GenenBuses		
Camden	22	1%
Cupertino	185	7%
Mountain View	0	0%
San Mateo	25	1%
Total	232	9%
Contra Costa / Solano / 80 Corridor GenenBuses		
Danville	60	2%
Vacaville	28	1%
Fairfield	41	2%
Vallejo	50	2%
San Ramon	78	3%
Richmond	44	2%
Pleasant Hill	61	2%
Orinda	33	1%
Total	394	15%

*Transit ridership is derived from GenenBus badge data and driver records. It is possible to supplement this data with gRide reimbursement data, but this data was previously deemed unreliable.

3

PARKING SURVEY

Parking occupancy was counted at 10 a.m. on the same three survey days, immediately following the cordon count. As in 2016, the Gateway campus was not included in the parking survey because Genentech no longer has exclusive access to parking facilities. Parking spaces were counted by type, to give granular information about parking utilization. Similar to prior years, parking is generally more available at the periphery of campus than in central areas; however, the trend was exacerbated in 2017 with several parking lots in the Main Campus reaching 100% occupancy.

For more detailed information, see Appendix B.

PARKING SUPPLY

A full inventory update was completed in October 2017 and April 2018. The Master Plan Area accounts for approximately 7,714 available parking spaces, with an additional 359 spaces closed for construction, for a total of 8,034 parking spaces. Dedicated employee parking is the largest category, accounting for approximately 80% of all spaces. To incentivize carpool and clean-electric vehicles, 6% of campus parking is set aside for carpool and vanpool (gRide) and clean-air/electric vehicles. The remainder of parking spaces, approximately 10%, are company/service, motorcycle, ADA, public access, loading, and time-limited visitor spaces. At the time of the survey just over 4% of parking spaces were closed for construction.

In the last year, Genentech's parking supply has increased at the Main Campus as construction closures in lot U15 were reopened and decreased in South Campus due to construction closing the top floors of parking structures PS-A and PS-B and the ongoing construction between building 44 and 45 permanently removing spaces there.

Appendix B provides a full breakdown of parking inventory.

Figure 6. Parking Inventory by Location

Master Plan District Boundary	All Space Types (includes closed)	Notes
Main Campus	4,401 (4,471)	This is an increase from the prior year due to an end to construction closures in lot U15.
South Campus	2,001 (2,348)	This is a reduction from the prior year due to construction occurring between Building 44 and 45 and on the entire top floors of parking structures A and B.
Remote Campus	1,212 (1,254)	This is an increase from the prior year due to the addition of lots T01 and T09.
Gateway Campus	N/A	Excluded from 2017 survey.
Total Number of Spaces	7,714 (8,073)	

Figure 5. Parking Zone and Lot Locations

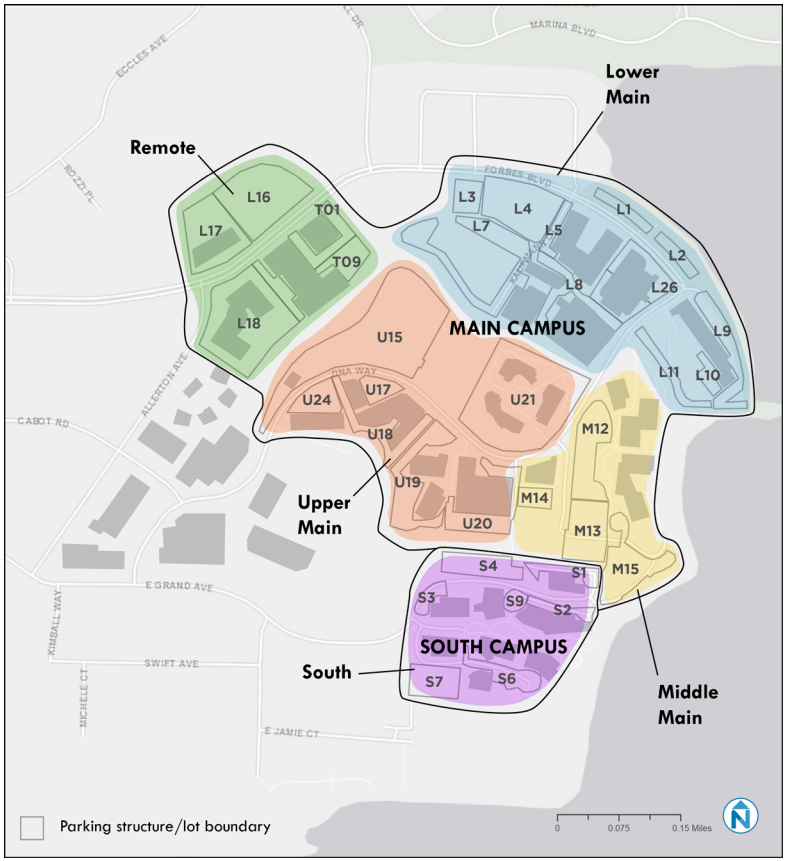


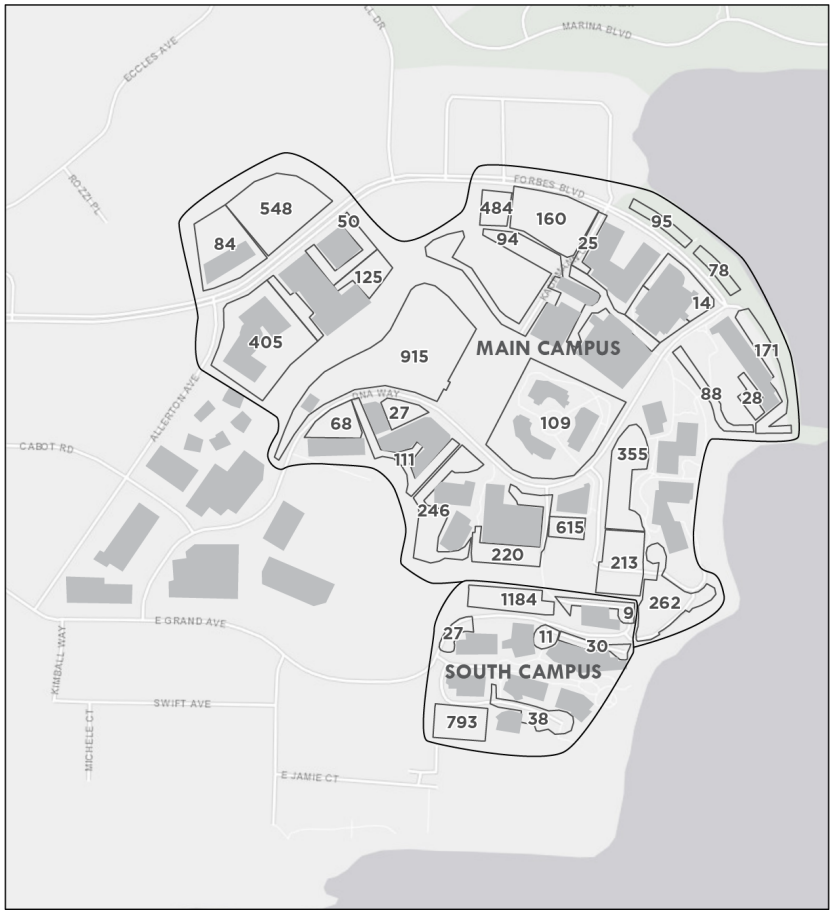
Figure 7. Parking Inventory by Space Type

Space Types	Number of Spaces	Percent of Supply
Employee Parking	6,437	79.7%
gRide Parking (Carpool/ Vanpool)	393	4.9%
Clean Air Vehicle Spaces	106	1.3%
Other Vehicle Spaces	778	9.6%
Subtotal Available Spaces	7,714	95.6%
Closed Spaces	359	4.4%
Total Number of Spaces	8,073	100%

Parking Supply Maps

The maps below, and on the following page, show the number of parking spaces by type. A map showing total inventory for all space types, including temporarily closed spaces, is included in Appendix B.

Figure 8. Total Parking Supply (Excluding Closed)



Total Parking Supply

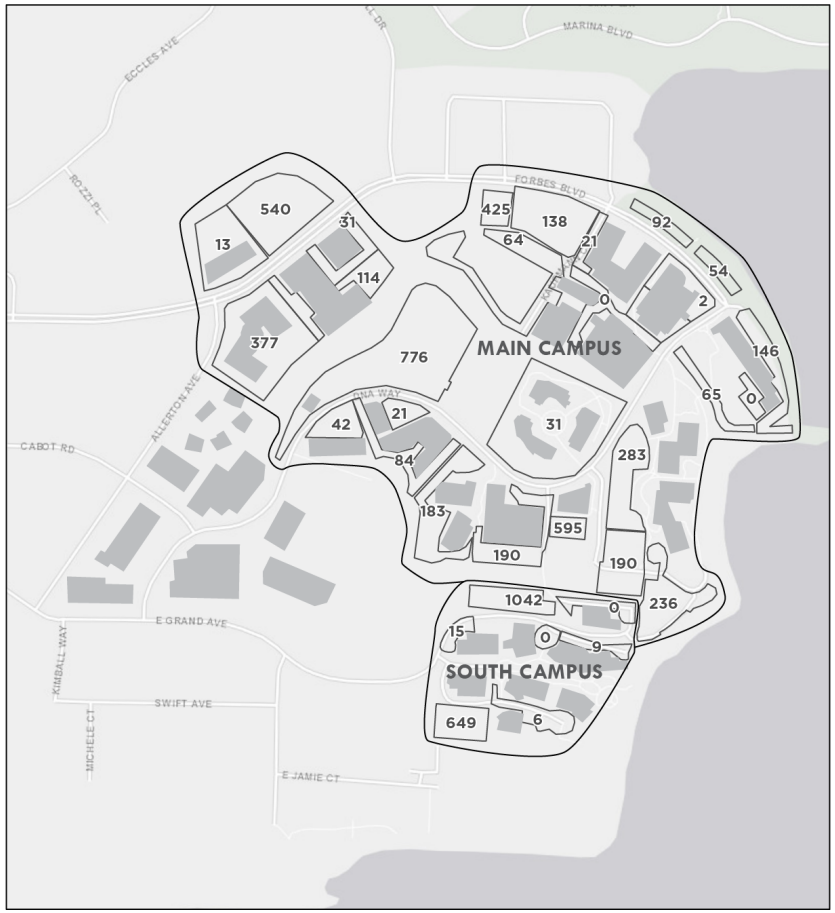
Parking structure/lot boundary

\# Total parking supply

Total Spaces: 7714

0 0.075 0.15 Miles

Figure 9. Employee Parking Supply



Employee Parking Supply

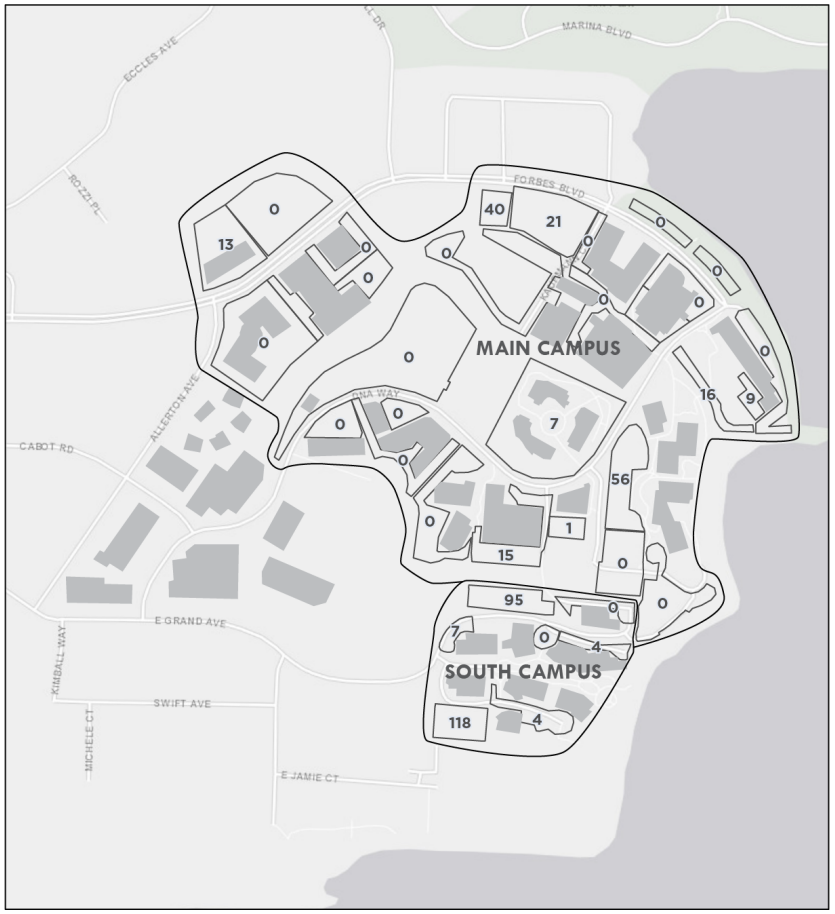
Parking structure/lot boundary

\# Employee parking supply

Total Employee Spaces: 6437

0 0.075 0.15 Miles

Figure 10. gRide Parking Supply*



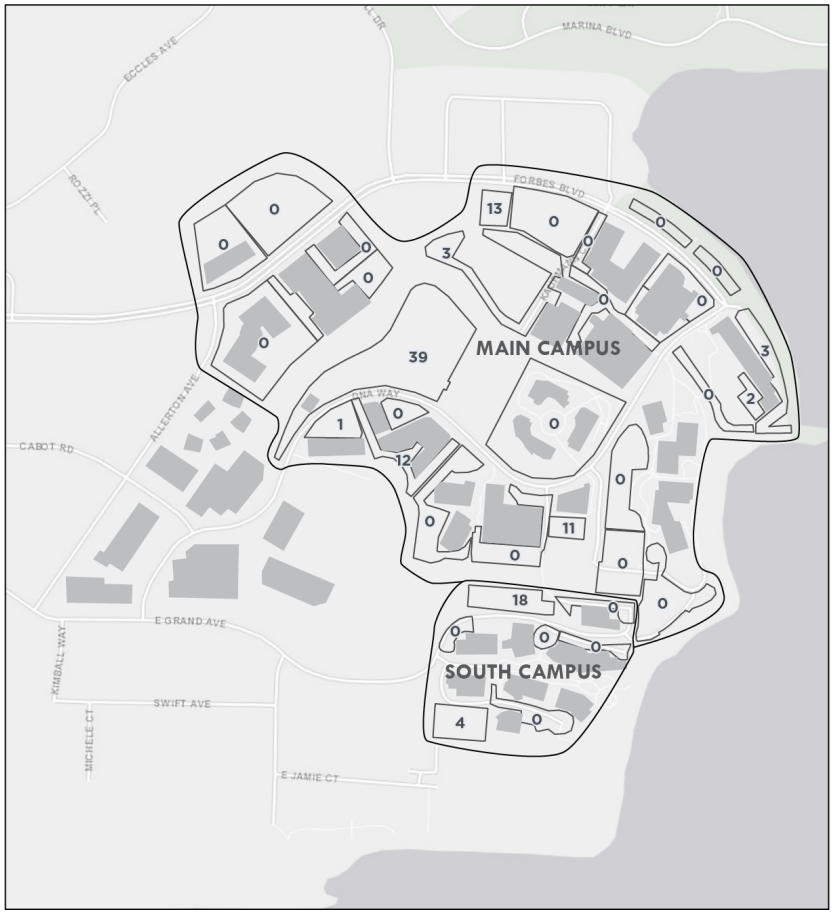
gRide Parking Supply

- Parking structure/lot boundary
- # gRide parking supply

Total gRide Spaces: 406

0 0.075 0.15 Miles

Figure 11. Clean Air Vehicle Parking Supply*



Clean Air Vehicle Parking Supply

- Parking structure/lot boundary
- # Clean Air Vehicle parking supply

Total Clean Air Vehicle Spaces: 106

0 0.075 0.15 Miles

*In parking zones U15 (Upper Main Campus), some spaces are designated for both clean air vehicles and gRide. For the mapping purposes they were included in the Clean Air category.

PARKING OCCUPANCY

Occupancy rates for Genentech's parking lots are based on average occupancy over the three survey days and are used below to identify the areas that experience parking constraints. Throughout the analysis, parking occupancy percentages were calculated based on available spaces (thus, closed spaces were excluded from the analysis). The analysis was conducted in such a way because closed spaces are not available for employee parking. Including closed spaces in the calculations would have lowered overall occupancy rates and given a false sense of parking availability. The report also does not consider whether employee or contractor vehicles were authorized to park where they were observed – e.g. in carpool spaces or at loading docks.

By 10 a.m. on weekdays an average of 6,527 vehicles parked throughout the Master Plan District boundary. This is an 85% occupancy rate and is the highest rate recorded in the last 10 years. The 2017 survey identified 11 lots that experienced daily occupancy rates above 95% (Figure 13).

This average level of parking occupancy signifies the point at which it becomes harder to find available spaces. However, parking demand in unevenly distributed across the campuses and varies for different types of spaces. In general, employee parking in the center of campus is at capacity, while remote lots and other space types have some availability.

- 42% of all lots (15 of 35) reach 90% employee occupancy by 10 a.m.
- 60% of general employee parking spaces (excluding gRide) (21 of 35 lots) were above 90% occupancy and over 50% (18 of 35 lots) were approaching 100% occupancy by 10 a.m.
- L3, M14, U18, and S7 are at or near capacity for clean air/ electric vehicle spaces by 10 a.m.

Figure 12. Parking Occupancy All Space Types (Summary)

Parking Zone	Inventory	% Occupancy
Average Occupancy by Zone		
Lower Main	1,260	90%
Middle Main	1,445	92%
Upper Main	1,696	96%
South	2,001	77%
Total	7,714	85%

Parking Lot	Inventory	% Occupancy
>95% Occupancy by 10 a.m.		
L4	160	99%
L5	25	99%
M14	615	98%
L1	95	98%
U15	921	97%
U20	220	97%
U18	111	97%
L7	102	97%
S3	27	96%

Parking Lot	Inventory	% Occupancy
<75% Occupancy by 10 a.m.		
L6	4	33%
S9	11	6%
S1	9	26%
L10	28	46%
L26	14	62%
L18	407	72%
S7	793	72%
S6	38	75%
M15	262	75%

EMPLOYEE PARKING

Once a parking lot has reached 95% occupancy, employees have a difficult time finding an open parking space and therefore may need to search elsewhere such as a lot farther from their final destination. This year's data collection found that employee-designated parking approached 100% in 11 lots by 10 a.m.

Figure 13. Constrained Employee Parking (by 10 a.m.)

Lot	Zone	% Occupancy
L5	Lower Main	100.0%
L7	Lower Main	100.0%
U18	Upper Main	100.0%
U19	Upper Main	100.0%
U21	Upper Main	100.0%
U24	Upper Main	100.0%
S3	South	100.0%
S6	South	100.0%
S8	South	100.0%
L17	Remote	100.0%
U15	Upper Main	99.7%
M13	Middle Main	99.5%
U20	Upper Main	98.9%
M14	Middle Main	98.1%
L2	Lower Main	96.9%
T09	Remote	96.5%

Areas adjacent to central buildings in Upper and Middle Campuses fill up, as well as several parking lots in South Campus and even two of the remote lots.

Parking lots that see less demand are located on the fringes of the campus's boundaries. At the remote lots, L16 and L18, 57% and 73% of the lots' available employee spaces are occupied, respectively. South campus experiences the lowest occupancy rates overall, though occupancy of Parking Structure A (S7) continues to increase year over year at 72% in this year's survey. This is potentially due to its location closest to Upper Campus, making it a relatively convenient location for employees with offices on Upper Campus who may be unable to find parking in Upper Campus lots.

OTHER SPACES TYPES

The survey further considered the occupancy rates for gRide, visitor, and clean-air electric spaces. Based on the survey, gRide spaces in 10 lots experienced 100% occupancy rates. This suggests that gRide participants may be unable to park in their desired lot and/or priority spaces.

Visitor and time-limited spaces experienced moderately high occupancy on Upper campus. U15 and U21 have 90% and 98% visitor space occupancy, respectively.

Based on the inventory update, there are 106 clean-air/electric vehicle parking spaces across the Genentech campuses. This includes spaces that also permit gRide, such as in U21. The occupancy counts found that 96% of all clean-air vehicle parking spaces were occupied.

Figure 14. Occupancy of Other Space Types

Space Type	Less than 65% Occupancy	65% -85% Occupancy	86%-94% Occupancy	>95% + Occupancy
gRide	L10		L11, S7, L4	L3, M12, M14, U20, U21, U15, S2, S3, S4, S6
Visitor & Time-Limited	L2, T01	U19	M15, U15, L18, T09	U21, L16
Clean-Air Electric	U24	L10, L7, S4	L9, U15, M14	L3, U18, S7

PARKING STRUCTURES

Parking Structure: PS-1 (L-3)

PS-1 had an average occupancy of 89% during the survey. Clean air vehicle and gRide space occupancy was at 97% and 100%, respectively. Occupancy at the parking structure fluctuated over the last several years, going from 92% to 71% back up to 89% between 2015-2017.

Parking Structure: PS-2 (M-14)

The garage was near capacity at 98%. There are 11 clean air vehicle spaces and a single gRide parking space in this garage, that were 94% and 100% occupied respectively.

Parking Structure: PS-A (S4)

During the counts, PS-A's total occupancy averaged 81% with gRide spaces at 100% occupancy, and electric vehicle spaces averaging 96% occupancy.

Parking Structure: PS-B (S7)

PS-B had a floor closed due to construction at the time of the survey, reducing parking by more than 200 spaces. Based on the occupancy counts, PS-B operates at 72% occupancy, with gRide spaces averaging 93% occupancy and electric vehicle spaces averaging 100% occupancy.

Figure 15. Employee Parking Spaces and Occupancy

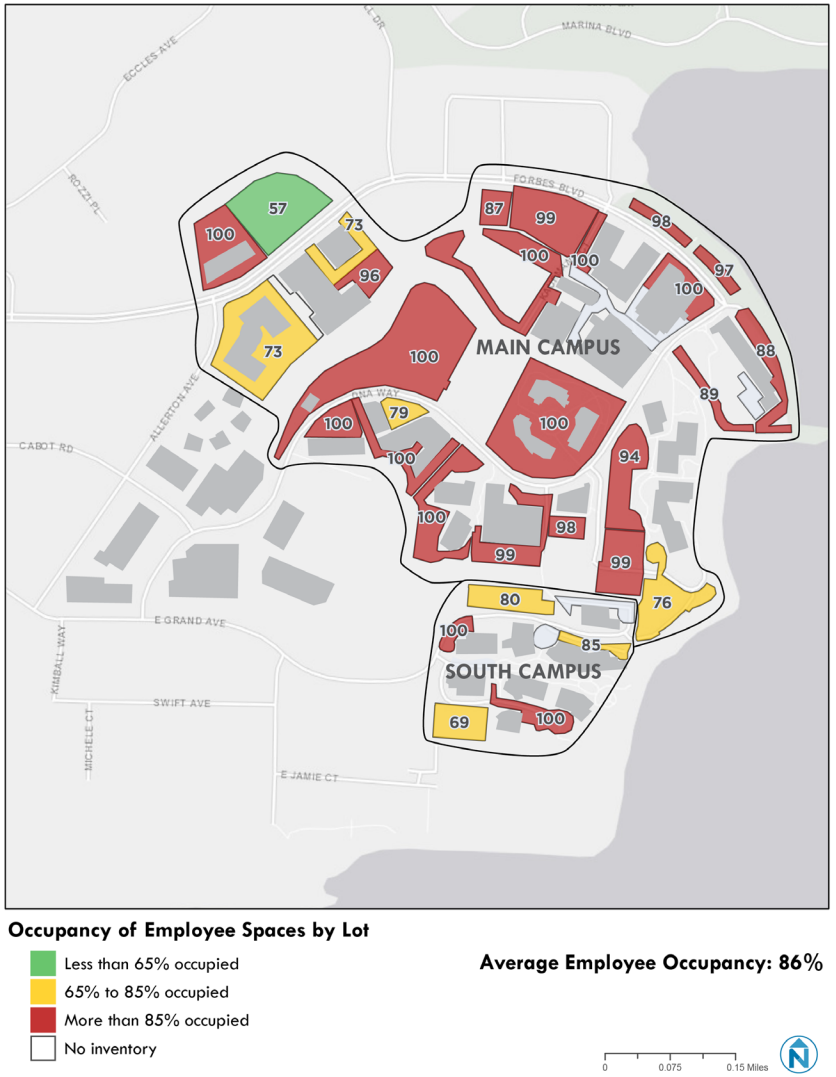
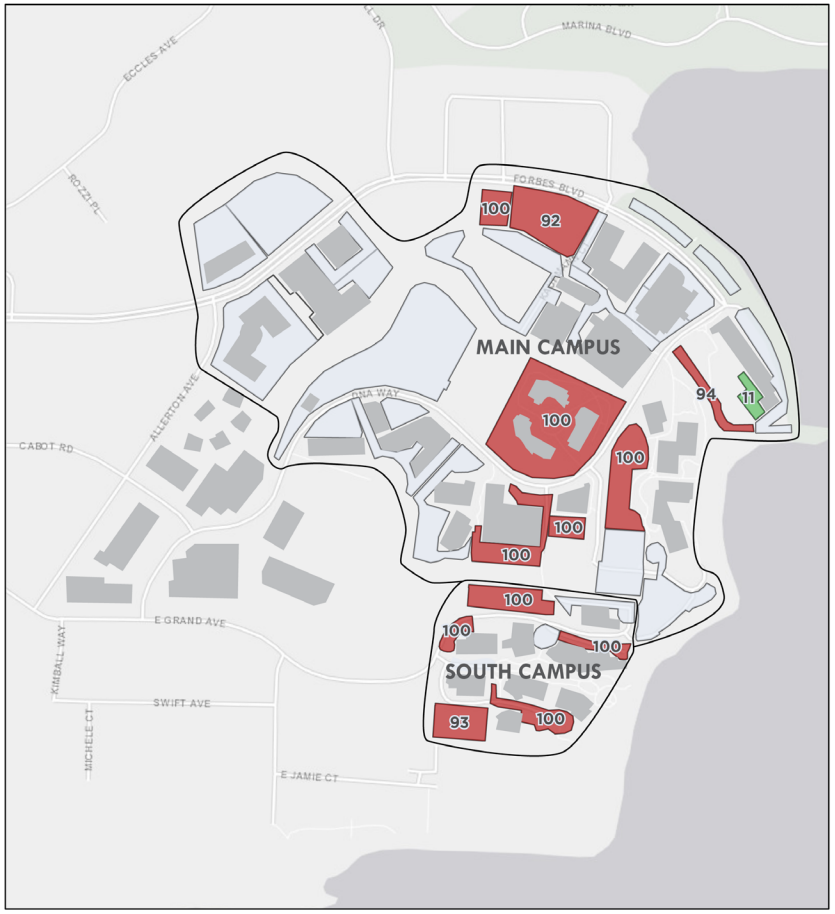


Figure 16. gRide Parking Spaces and Occupancy

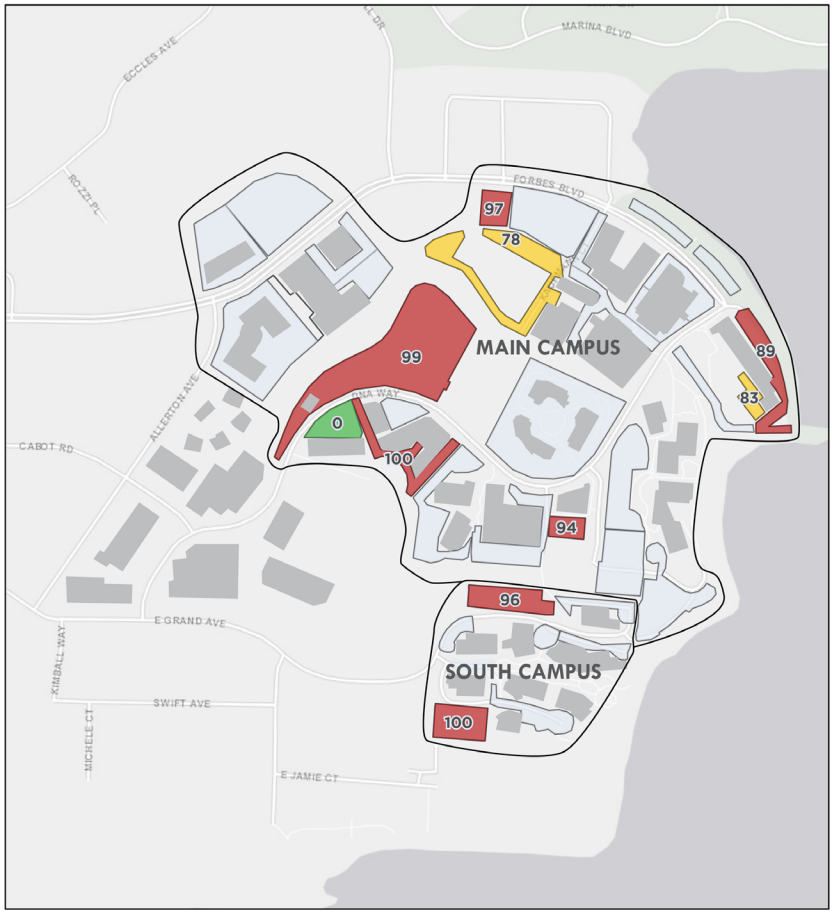


Occupancy of gRide Spaces by Lot

- Less than 65% occupied
- 65% to 85% occupied
- More than 85% occupied
- No inventory

Average gRide Occupancy: 95%

Figure 17. Clean Air Vehicle Parking Spaces and Occupancy

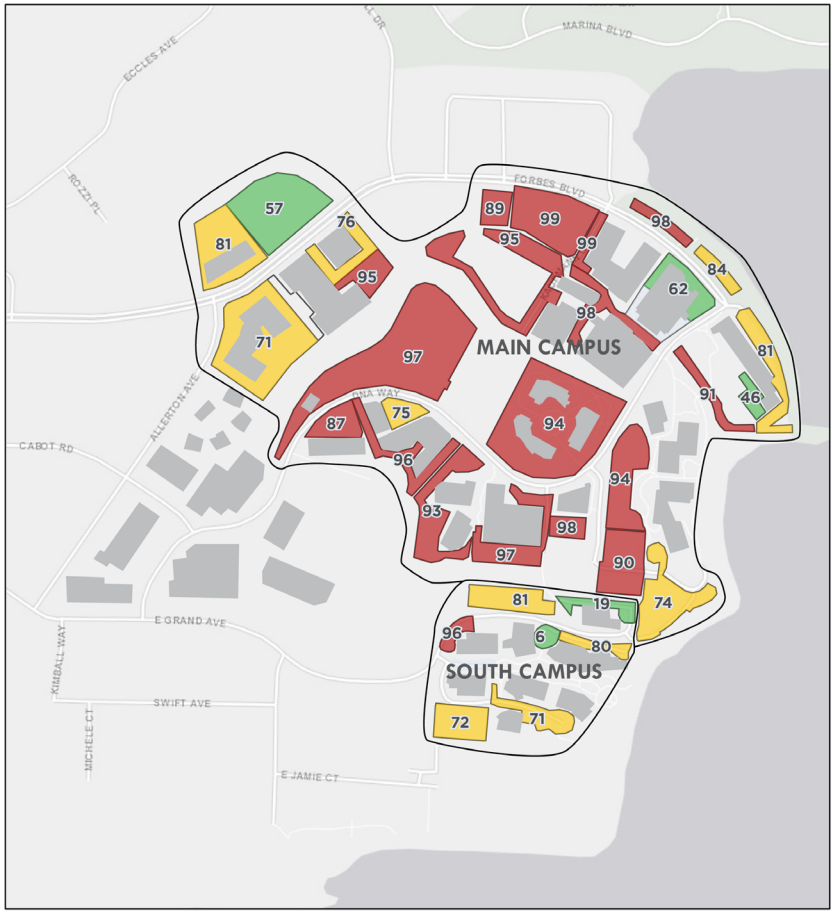


Occupancy of Clean Air Vehicle Spaces by Lot

- Less than 65% occupied
- 65% to 85% occupied
- More than 85% occupied
- No inventory

Average Clean Air Vehicle Occupancy: 96%

Figure 18. Total Parking Spaces and Occupancy



Occupancy of Spaces by Lot

- Less than 65% occupied
- 65% to 85% occupied
- More than 85% occupied
- No inventory

Total Average Occupancy: 84%

0 0.075 0.15 Miles

BICYCLE PARKING

The following types of bicycle parking are available at Genentech:

Bike cages

Bike cages are located in parking structures PS-1, PS-2, PS-3, and in both parking structures on South Campus (PS-A and PS-B). They provide a storage area for multiple bikes in an access-controlled cage and are Genentech's preferred solution for secure long-term parking.

Wave racks

Wave racks (also known as multi-bend racks) are the most common form of rack on campus. They provide a secure locking point, but only support the bicycle frame in one place. Wave racks are generally located adjacent to campus buildings.

U-racks

U-racks are the preferred bike rack solution for short-term parking, featuring both secure locking and support for the bicycle frame at multiple points. U-racks are generally located adjacent to campus buildings.

Bicycle storage rooms

Bicycle storage rooms are among the most popular bicycle parking options. They were not included in this analysis because surveyors did not have access to these facilities.

Figure 19. Bicycle Parking Inventory

Rack Type	South Campus	Lower Campus	Upper Campus
U-racks	42	0	0
Wave Racks	0	28	36
Bike Cages	62	32	89
Total	104	60	125

The majority of bicycles were parked in cages. Throughout the survey, there were few bicycles observed parked at racks, indicating that secure parking in the form of cages is preferred for all-day parking. Note that although occupancy appears to be low, the cordon count indicates that bike mode share remains relatively unchanged. It was previously noted that many people cycling to campus brought their bike into the office - however as more offices transition to the New Work Environment layout that may become more challenging. Additionally, it has proven hard to get surveyors to consistently remember to include bicycle parking in surveys, so the counts may be underreporting actual usage.

Figure 20. Bicycle Parking Occupancy

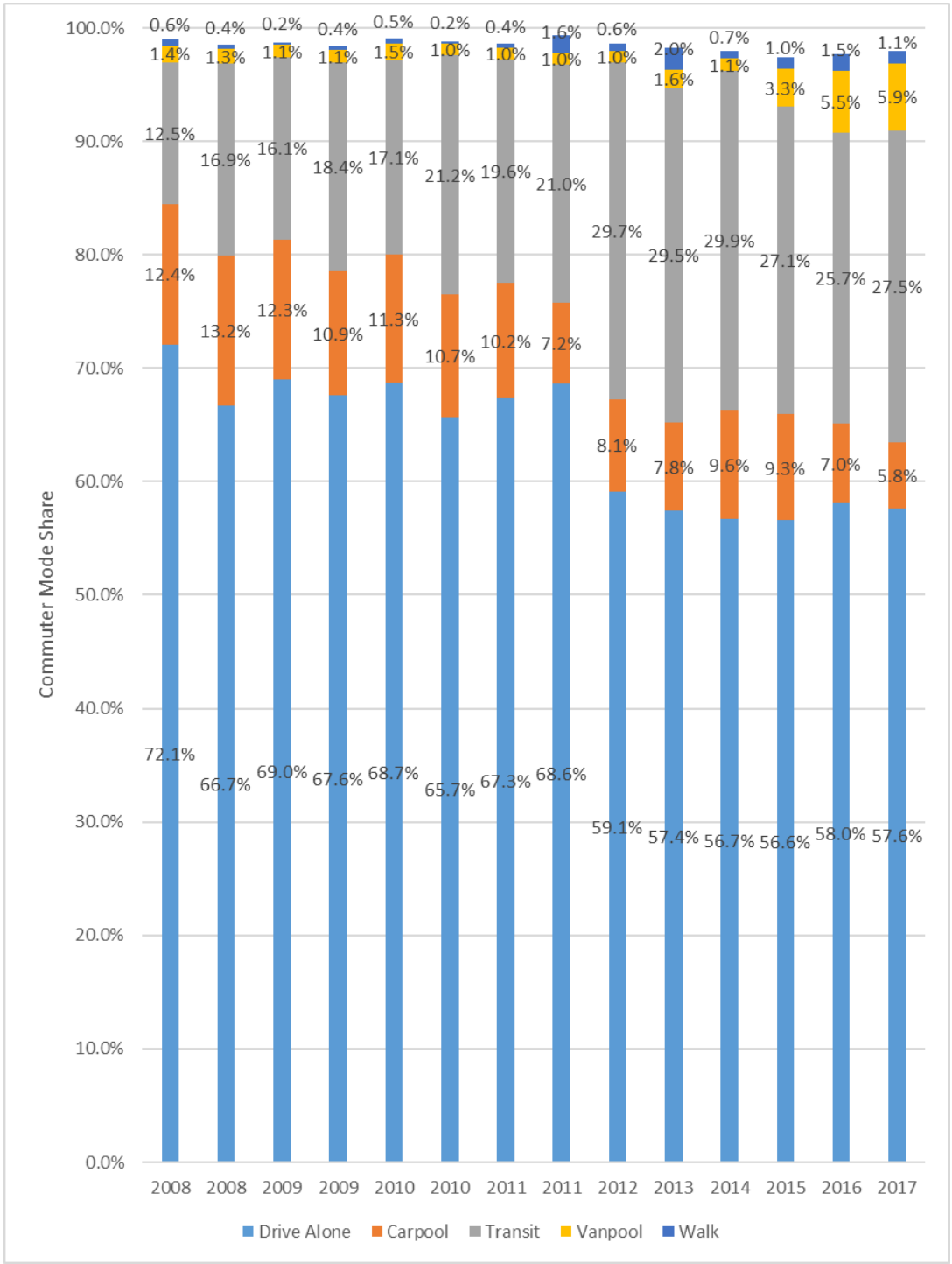
Campus	Inventory	Occupancy Count	Occupancy
Lower	60	12	20%
Upper	125	13	10%
South	104	7	7%
Total	289	32	11%

APPENDICES

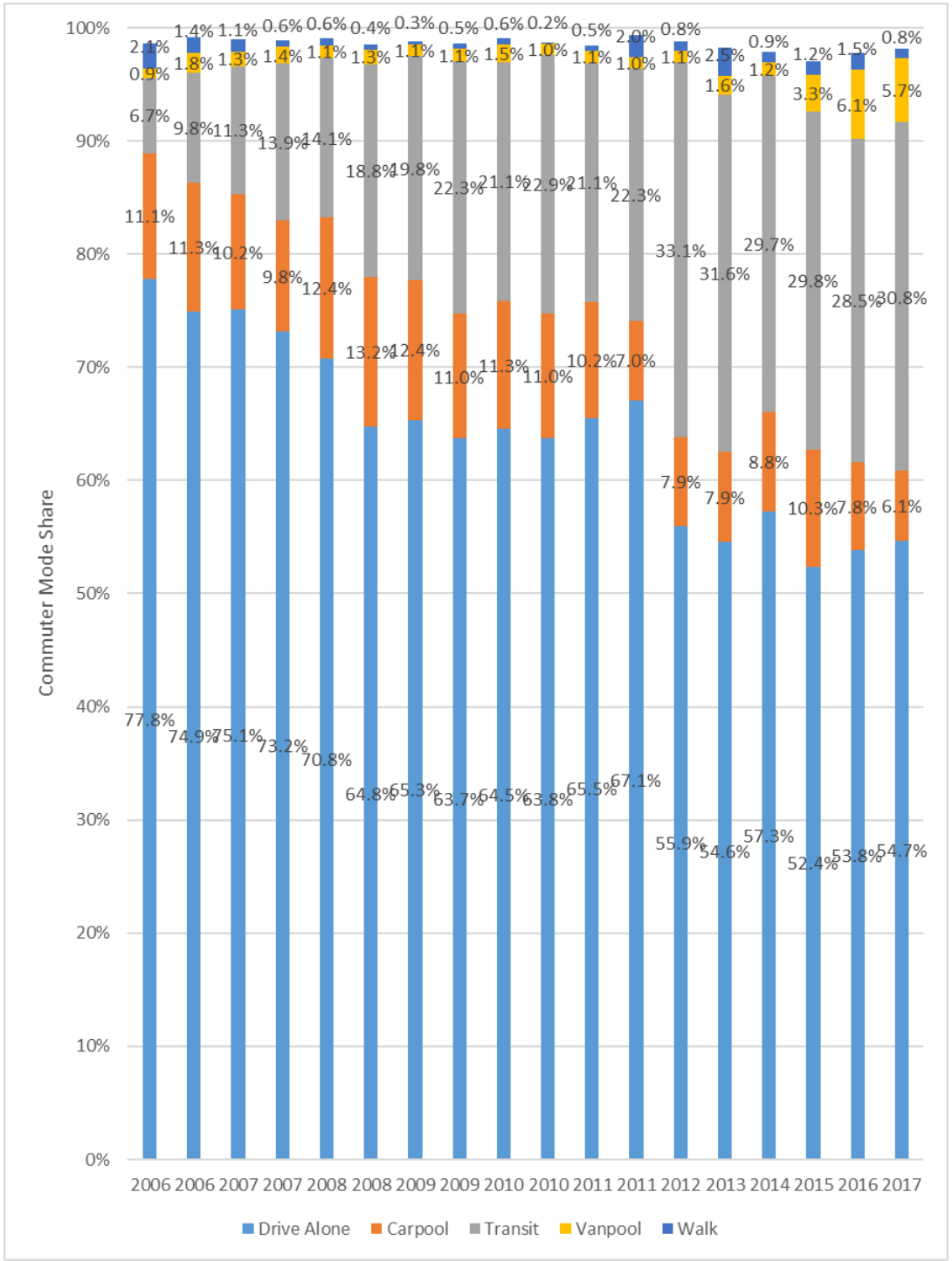
APPENDIX A

Additional Mode Share Data

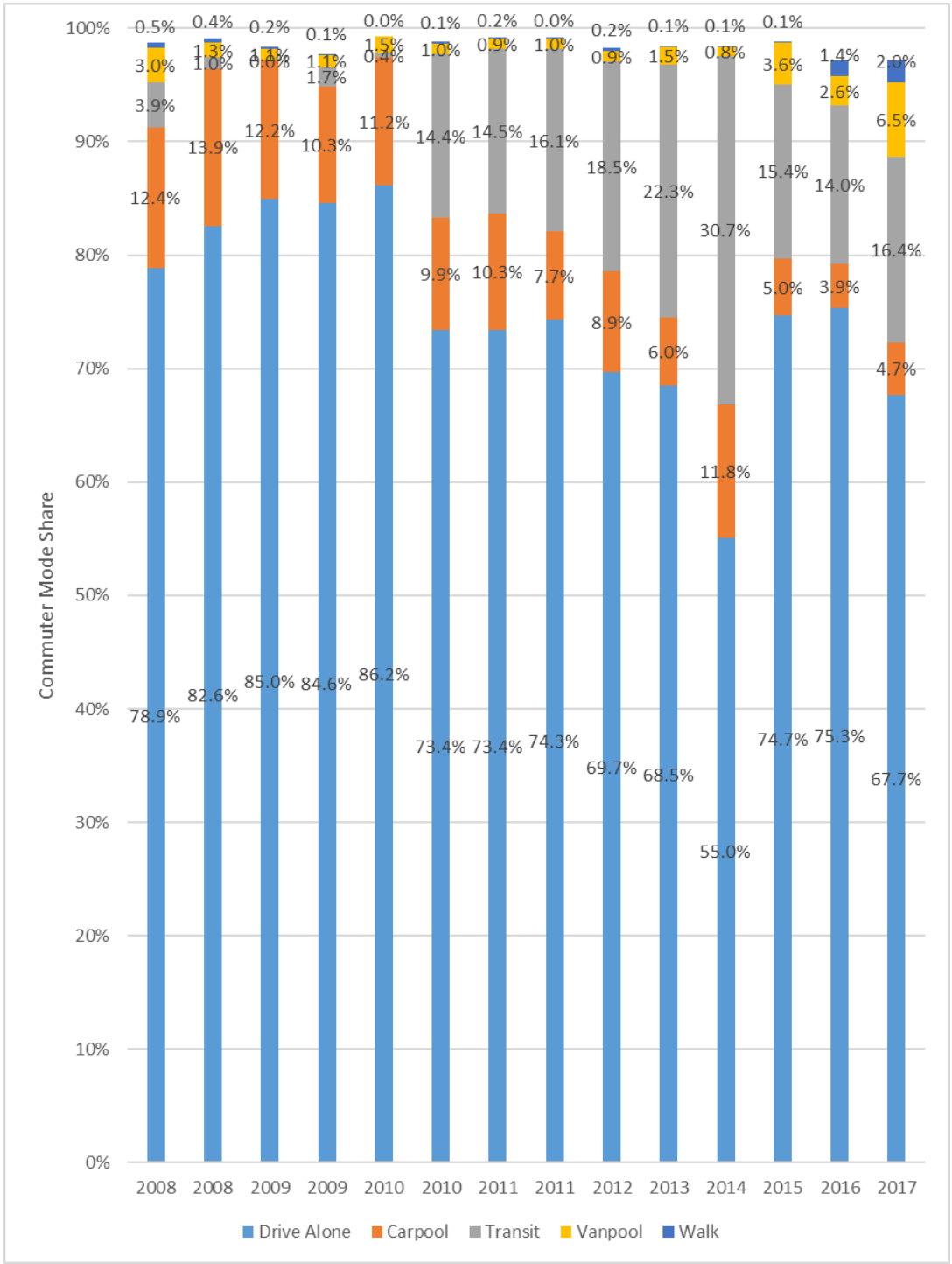
Master Plan Boundary Mode Share, 2008 – Present



Main Campus Mode Share, 2009 - Present

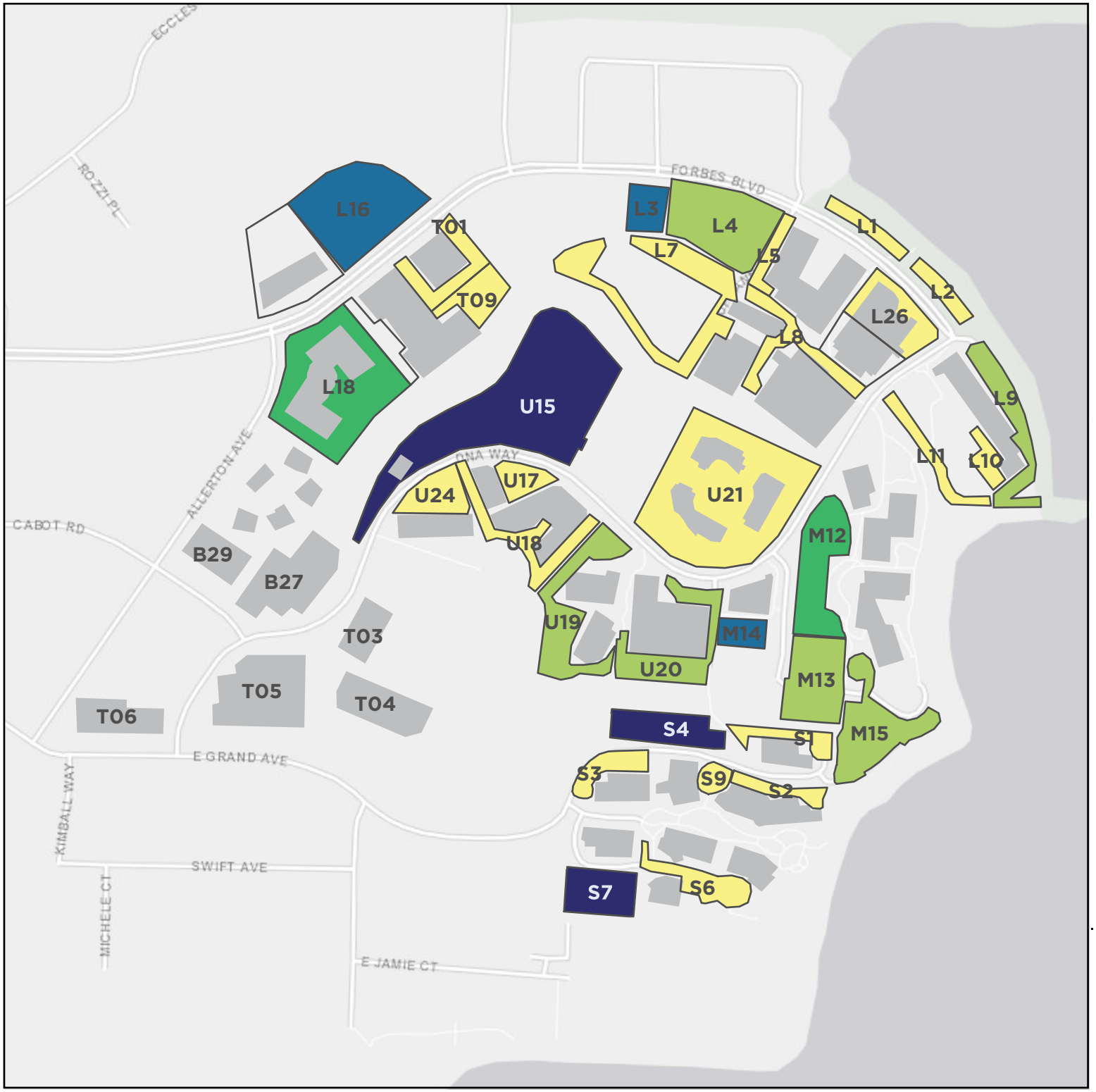


South Campus Mode Share, 2008 - Present



APPENDIX B

Additional Parking Data



Total Parking Supply

Number of Employee Spaces by Lot

1-150 | 151 - 300 | 301 - 450 | 451 - 650 | 651 +

Lots Not Included

Genentech Buildings

Lot Boundaries

Parking Zone	# Spaces (Including Closed)
L11	88 (88)
L10	28 (28)
L9	171 (171)
L26	14 (14)
L2	78 (78)
L1	95 (95)
M12	355 (385)
M13	213 (213)
M14	615 (615)
M15	262 (276)
U18	111 (111)
U17	27 (27)
U20	22 (229)
U19	246 (246)
U24	68 (68)
U21	19 (109)
U15	915 (917)

Parking Zone	# Spaces (Including Closed)
L8	19 (25)
L4	16 (160)
L5	25 (25)
L6	4 (8)
L7	94 (99)
L3	484 (484)
S1	9 (9)
S2	3 (30)
S3	27 (57)
S4	1184 (1191)
S6	38 (41)
S7	793 (1000)
S8	9 (9)
S9	11 (11)
L18	45 (406)
L16	548 (548)
T01	5 (57)
T09	125 (144)

Total Spaces = 7,714 (8,087)

0 0.075 0.15 Miles

Parking Occupancy Rates, 2007 to 2017[1]

Zone	Oct-07	Apr-08	Oct-08	Apr-09	Oct-09	Apr-10	Oct-10	Oct-11	May-12	July-12	Oct-12	Jan-13	Oct-13	Nov-14	Oct-15	Nov-16	Nov-17
Gateway	59% (2,580)	64% (2,613)	53% (2,613)	62% (2,613)	65% (2,613)	74% (2,613)	66% (2,642)	58% (2,642)	52% (2,642)	55% (2,642)	60% (2,642)	57% (2,642)	56% (2,642)	59% (2,642)	55% (2,642)	N/A	N/A
Master Plan Boundary	N/A	63% (7,038)	57% (7,040)	57% (8,246)	55% (8,224)	57% (8,085)	59% (8,156)	60% (8,462)	61% (8,290)	60% (8,290)	60% (8,290)	65% (8,340)	64% (8,082)	64% (8,082)	75% (7,961)	75% (7,376**)	84% (7,714**)
Main Campus	*66% (5,651)*	*73% (5,021)*	*65% (5,021)*	*64% (5,113)*	*64% (5,164)*	*67% (4,880)*	*71% (4,677)*	*70% (4,983)*	*69% (4,830)*	*69% (4,830)*	*69% (4,830)*	*77% (4,851)*	*73% (4,618)*	*82% (4,618)*	*86% (4,505)*	84% (4,205)	92% (4,401)
South	*N/A*	*53% (1,294)*	*40% (1,296)*	*49% (2,410)*	*41% (2,410)*	*38% (2,555)*	*42% (2,414)*	*45% (2,414)*	*49% (2,395)*	*47% (2,395)*	*44% (2,395)*	*46% (2,395)*	*45% (2,395)*	*41% (2,399)*	*58% (2,399)*	*63%* (2,180)	*77%* (2,041)
Other	*17% (743)*	*15% (743)*	*27% (743)*	*39% (743)*	*37% (650)*	*52% (650)*	*42% (1,065)*	*47% (1,065)*	*50% (1,065)*	*45% (1,065)*	*53% (1,065)*	*56% (1,094)*	*50% (1,065)*	*38% (1,065)*	*64% (1,057)*	*68%* (991)	*68%* (1,212)
Total	61% (9,321)	64% (9,651)	56% (9,653)	59% (10,859)	59% (10,837)	61% (10,698)	61% (10,798)	60% (11,104)	59% (10,936)	58% (10,936)	60% (10,936)	63% (10,986)	60% (10,720)	63% (10,677)	70% (10,603)	75% (7,376**)	85% (7,714**)

Notes:

- **Survey excludes Gateway Campus as of 2016
- South Campus was not counted prior to April 2008
- E.g. 60% (10,720) means 60% parking occupancy, total inventory is 10,720.

[1] This chart shows overall occupancy based on occupancy of all spaces types in relation to the inventory of available spaces, excluding closed spaces. Closed spaces were excluded from the occupancy calculation because including them would suggest an artificially high amount of parking availability.

Employee Parking Occupancy Rates, 2015 to 2017

Zone	Oct-15	Nov-16	Nov-17
Gateway	56% (2,527)	N/A	N/A
Master Plan Boundary	74% (6,682)	76% (6,113**)	86% (6,437**)
Main Campus	*87%* (3,726)	83% (2,908**)	95% (3,638**)
South	*67%* (1,994)	*60%* (1,791)	*76%* (1,724)
Other	*61%* (962)	*70%* (900)	*68%* (1,075)
Total	82% (6,042)	76% (6,113**)	86% (6,437**)

Notes:

- **Survey excludes Gateway Campus as of 2016
- E.g. 82% (6,042) means 82% parking occupancy, total inventory is 6,042.

2017 Parking Space Inventory

Lot	Company & Service Vehicles	Motor Cycle	ADA	Employee (excluding gRide vehicles)	Visitor & Time Limited	Public Access (eg. Bay Trail)	Loading	Red Curb/ No Parking	Misc/ Other (w/ descr.)	Clean Air Vehicles	gRide	Closed (construct)	Total (excl. bike and closed)	Total Incl. Closed	Notes
L11	7			65							16		88	88	
L10	6		1						10	2	9		28	28	Miscellaneous = Mobile services (9), EHS radiation (1)
L9		8	3	146		11				3			171	171	
L26	3		5	2					4				14	14	Miscellaneous = Electric service vehicles (4)
L2				54	13	4			7				78	78	Miscellaneous = Visitor/ADA (1), Visitor/motocycle (6)
L1				92		3							95	95	
L8	7		2				6		4			6	19	25	Misc = truck loading (4)
L4				138					1		21		160	160	Miscellaneous = GNE service vehicles (1)
L5			2	21			2						25	25	
L6									4			4	4	8	Miscellaneous = Delivery (4)
L7	2	9	10	64			4		2	3		5	94	99	South and West sides were closed for construction.
L3		4	2	425						13	40		484	484	
M12	5	5	6	283							56	30	355	385	Construction = employee parking (30)
M13	23			190									213	213	
M14		6	2	595						11	1		615	615	
M15	7		2	236	13	3			1			14	262	276	Miscellaneous = Public access/ADA; Closed for construction = service vehicles (10), loading (4)
U18	2	2	2	84					9	12			111	111	Miscellaneous = Mail delivery (9)
U17			6	21									27	27	
U20	2	4	9	190							15	9	220	229	
U19			2	183	54		7						246	246	
U24			3	42			14		8	1			68	68	Miscellaneous = Material operations (9), mail delivery (2)
U21	12	2	14	31	28				15		7		109	109	Health Clinic (4), Catering (3), Mobile services vehicles (appr. 8)
U15	37	9	8	776	39		2		5	39		2	915	917	Miscellaneous = first alert (3), taxi (2)
S1			4				1		4				9	9	Miscellaneous = Catering (4)
S2	5			9			1		11		4		30	30	Miscellaneous = Catering (9), GNE services (2)
S3			5	15							7	30	27	57	Closed spaces: 1 gRide, 1 visitor, remainder employee
S4		3	22	1042					4	18	95	7	1184	1191	Misc = security (4)
S5													0	0	Parking permanently closed due to construction
S6	3		8	6		6	6		5		4	3	38	41	
S7			22	649						4	118	207	793	1000	construction staging area; Construction = employee (195), gRide (12)
S8		6		3									9	9	
S9			11										11	11	
L18			14	377	8		6					1	405	406	
L17	22		7	13					42			15	84	99	Miscellaneous = Bus parking spots (42)
L16				540	4				4				548	548	Miscellaneous = Electric service vehicles (4)
T01			2	31	3	3			11			7	50	57	Miscellaneous = Reserved (9), MVP (1), safety champ (1)
T09			2	114	9							19	125	144	
Totals	143	58	176	6437	171	30	49	0	151	106	393	359	7714	8073	

APPENDIX C

Evaluation of License Plate Reader Data

Genentech security obtained license plate readers in 2017 that were fitted to one of their security vehicles. The license plate readers will primarily be used for parking enforcement, allowing security staff to quickly identify vehicles without the correct parking permits. An evaluation of GPS data from the license plate readers was included in this study to determine if they can be used to provide Genentech with parking occupancy information. If so, it would allow more frequent parking utilization updates and potentially help Genentech manage parking resources better.

GPS DATA

Nelson\Nygaard obtained GPS data from Genentech Security, recorded over two hour-long periods on 10/17/18 and 10/18/2018. A campus map was created in ArcGIS with separate zones for each parking lot, as shown in Figure 1. The colored dots represent data from different days. Additional larger or smaller geographic zones could be defined as needed, though note that there are implementation issues that limit the smaller size of such areas as detailed below.

Raw GIS Data Overlaid on Genentech Parking Lots

POTENTIAL ISSUES WITH LICENSE PLATE READER DATA

GPS DATA ACCURACY

In theory, modern GPS systems provide a high degree of accuracy, down to 3.5 meters (11.5 feet). In practice, actual accuracy varies depending on the number of satellites in range and can also be affected by trees and tall buildings. As can be seen in Figure 2, this issue manifests as vehicles appearing to be in medians and aisles. In addition, GPS receivers are not intended for use inside buildings, and thus the license plate readers would only provide reliable count data for parking structures but not any useful location data.

This means that the data is not accurate enough to determine occupancy of specific parking spaces. For example, the system would not be able to distinguish between adjacent gRide and employee spaces. The geographic boundary of the lot as a whole can be coded to include data points within a margin of error, so that data points appearing just outside the lot can be included. This means that occupancy for the lot as a whole can be determined. Note that vehicles not parked within the lot, for example circling for an available space, would also be included and represent a source of uncertainty.

License Plate Reader GPS Data Accuracy

Table

LPR_101717_930to1030_FC

OBJECTID *	Shape *	PlateRead	Address	Patroller	LPR_Unit	User	Timestamp	Rule	ManualCapture	Latitude	Longitude
474	Point	6FDD008	0	PC0-2	PC0-2 Left-Right	<Null>	<Null>	<Null>	FALSE	37.656219	-122.385083
473	Point	6LQV183	0	PC0-2	PC0-2 Left-Right	<Null>	<Null>	<Null>	FALSE	37.656182	-122.385017
471	Point	6NZJ319	0	PC0-2	PC0-2 Left-Right	<Null>	<Null>	<Null>	FALSE	37.656216	-122.385007
472	Point	7FAM866	0	PC0-2	PC0-2 Left-Right	<Null>	<Null>	<Null>	FALSE	37.656219	-122.385083
476	Point	7JAM822	0	PC0-2	PC0-2 Left-Right	<Null>	<Null>	<Null>	FALSE	37.656182	-122.385017
477	Point	7ZPG789	0	PC0-2	PC0-2 Left-Right	<Null>	<Null>	<Null>	FALSE	37.656219	-122.385083

Double Readings for Each Coordinate

The security vehicle is configured with a license plate reader on each side of the vehicle, so that the vehicle records both sides of a parking aisle simultaneously. This setup is more efficient for parking enforcement, but it means that there are two license plates listed for each coordinate. As can be seen in Figure 22, only three data points are selected (in blue), but they equate to six lines of data. Also note that pairs of license plates share coordinates (latitude and longitude).

Always on License Plate Readers

Security leaves their license plate reader system on at all times, meaning that data contains license plates from vehicles on streets outside of parking lots. These data points can be excluded, as they will not be captured in areas defined as parking lots.

LICENSE PLATE READER RECOMMENDATIONS

As presently configured, the license plate reader system would allow Genentech to conduct parking occupancy for larger geographic areas such as entire parking lots with a reasonable degree of accuracy. However, the system does not appear able to provide more granular occupancy data down to individual spaces, due to the way each data point includes two license plates and limitations in GPS accuracy.

Nelson\Nygaard will provide Genentech with the ArcGIS files created for this analysis if Genentech has in-house ArcGIS capability. If Genentech does not have in-house ArcGIS capacity, Nelson\Nygaard can use the files with any future license plate reader data sets to create occupancy maps and data at the lot level.

Genentech