CHAPTER 4
Master Responses

4.1 Introduction

This section presents "master responses" addressing a number of similar or recurring topics in the comments received on the Draft EIR and Recirculated Portions of Draft EIR. The intent of the master responses is to avoid repetition within this document and improve readability by giving a single, comprehensive response to these comments. Responses to the individual comments that raise these recurring topics refer the reader to the master responses in this chapter.

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4.3 Master Responses

4.3.1 Master Response 1: Non-CEQA Comments

Under CEQA, the lead agency "shall evaluate comments on environmental issues" received from people who have reviewed a draft EIR and prepare written responses that "describe the disposition of each significant environmental issue that is raised by commenters" (Pub. Res. Code Section 21091(d); CEQA Guidelines Section 15088(c)). CEQA does not require that substantive responses be provided for comments that do not address the adequacy or accuracy of the environmental analysis or that do not raise a significant environmental issue (Id.).

A number of comments were received on the Draft EIR and Recirculated Portions of Draft EIR that did not address the adequacy or accuracy of the environmental analysis or did not identify any other significant environmental issue requiring a response. Examples include but are not limited to:

- ***Opinions on the Project, and other Miscellaneous Opinions:*** Comments were received that express support for, or opposition to, the proposed Project, and/or on the perceived merits or demerits of the Project. Other comments express miscellaneous opinions and observations, or editorialize on non-environmental issues that are beyond the purview of CEQA and the EIR. These comments do not address the adequacy or accuracy of the Draft EIR and Recirculated Portions of Draft EIR, or pertain to environmental effects of the proposed Project.

- ***Socioeconomic Comments:*** Comments were received related to socioeconomic issues. As discussed on page 5-3 in Section 5.0, Introduction to Environmental Analysis, in the Draft EIR, under CEQA, economic and social effects by themselves are not considered to be significant impacts, and are relevant only insofar as they may serve as a link in a chain of cause and effect that may connect the proposed project with a physical environmental effect, or they may be part of the factors considered in determining the significance of a physical environmental effect. In addition, economic and social factors may be considered in the determination of feasibility of a mitigation measure or an alternative to the proposed project (see CEQA Guidelines Section 15064(e)). As such, the potential effect of the Project on economic and social issues, in and of themselves, such as tax revenues, crime, the cost of public services, or property values are not part of this EIR. Similarly, impacts of the Project on housing supply, affordable housing, or the amount of Stanford's affordable housing fee are socioeconomic issues not required to be analyzed in the Draft EIR. Nevertheless, the Recirculated Portions of Draft EIR does discuss the indirect impacts of off-campus housing associated with the Project (Impact 5.17-1), and analyzes the impacts of two new alternatives that provide additional housing on campus.

- ***Quality of Life Comments:*** Comments were received that increased growth and effects of the proposed Project would have an adverse effect on the quality of life to the local residents. To the extent that the proposed Project could result in significant physical environmental impacts, such as increased traffic, air emissions, and noise, those effects are addressed and mitigated to the extent feasible in the EIR. However, potential Project effects on quality of life and related

conditions, in and of themselves, are not considered environmental impacts under CEQA. See *San Franciscans for Reasonable Growth v. City and County of San Francisco* (1989) 209 Cal.App.3d 1502. Similarly, changes in community character are not environmental effects under CEQA. See *Preserve Poway v. City of Poway*, 245 Cal. App. 4th 560, 575-82 (2016) (changes in community character are not effects under CEQA).

The County acknowledges the public's concerns about these types of issues. The County generally does not provide individual responses to these comments in this Response to Comments Document. In some cases, the County has elected to provide individual or master responses to certain non-CEQA issues for informational purposes. In all cases, these comments are part of the public record on the Project, and will be considered by the County decision-makers as part of the project consideration process.

4.3.2 Master Response 2: Non-Project Planning Processes

Topic 1: Sustainable Development Study

As described in Master Response 5: Project Description, Topic 2: Scope of Project and Analysis, considerations related to the potential maximum buildout of the Stanford campus are not part of the proposed Project, and accordingly, not within the scope of analysis of this EIR. However, for informational purposes, the following provides detail related to the Sustainable Development Study (SDS), including a SDS Supplement[1] that was prepared on September 1, 2018.

The 2000 General Use Permit Condition E.5 required Stanford to prepare a SDS in accordance with the Stanford Community Plan. The Stanford Community Plan indicated the SDS shall identify the maximum planned buildout potential for all of Stanford's unincorporated Santa Clara County land; demonstrate how development will be sited to prevent sprawl into the hillsides; contain development in clustered areas; provide long-term assurance of compact urban development; and provide for long-term protection of natural and scenic resources, including beyond the 25-year timeframe of the Academic Growth Boundary. Towards that end, Stanford, in consultation with the County of Santa Clara, prepared the SDS, and it was approved by the County Board of Supervisors in 2009. The SDS evaluated long-term growth potential for Stanford lands, including analysis of Minimal, Moderate and Aggressive Growth scenarios. The growth proposed under the proposed 2018 General Use Permit corresponds with the 2035 Moderate Growth Scenario in the SDS (i.e., an average of 200,000 square feet of new combined academic space and student housing per year).

In addition, in response to public outreach related to the proposed 2018 General Use Permit, and in response to comments received during the public review period for the Draft EIR for the proposed 2018 General Use Permit, the County prepared a SDS Supplement. The SDS Supplement provides a land capacity and constraints analysis for Stanford's lands within the unincorporated Santa Clara County beyond what is considered in the SDS. The SDS Supplement is intended to provide the public and decision makers long-term contextual information that may assist in decisions related to the 2018 General Use Permit application. As such, pursuant to the CEQA Guidelines Section 15262, as a "planning study," the SDS Supplement is statutorily exempt from CEQA.

[1] Please see https://www.sccgov.org/sites/dpd/DocsForms/Documents/SU_SDS_Supplement.pdf.

4.3.3 Master Response 3: General Comments on EIR and Environmental Topics

A number of general, unsubstantiated statements were received regarding overall concerns with the Draft EIR and Recirculated Portions of Draft EIR, including, but not limited to, methodologies used, potential impacts on various environmental topics, mitigation measures, and alternatives. Due to the lack of specificity in these comments, the responses to these comments are incorporated in the responses to specific comments raised on the same general topics.

The County acknowledges the receipt of these types of comments. While the County does not provide individual responses to these comments in this Response to Comments Document, they are part of the public record on the Project, and will be considered by the County decision-makers as part of the project consideration process.

4.3.4 Master Response 4: Environmental Review Process

Topic 1: Use of Program EIR and Subsequent Approvals

A number of comments were received on the Draft EIR inquiring about the appropriate level of environmental review of the proposed Project, and how environmental review of future individual projects that would occur under the proposed 2018 General Use Permit would be addressed.

As discussed in Draft EIR Chapter 2, Introduction, page 2-2; and Chapter 3, Project Description, page 3-1, the County has prepared a Program EIR for the proposed 2018 General Use Permit and associated actions pursuant to CEQA Guidelines Section 15168. A Program EIR is appropriate for a series of actions that can be characterized as one large project and are either: (1) related geographically, (2) logical parts in a chain of contemplated actions, (3) connected as part of a continuing program, or (4) carried out under the same authorizing statute or regulatory authority and have similar environmental impacts that can be mitigated in similar ways (CEQA Guidelines Section 15168).

CEQA Guidelines Section 15168 notes that the use of a Program EIR ensures consideration of cumulative impacts that might be slighted in a case-by-case analysis; avoids duplicative reconsideration of basic policy considerations; allows the lead agency to consider broad policy alternatives and program-wide mitigation measures at an early time, when the agency has greater flexibility to deal with basic problems or cumulative impacts; and allows for a reduction in paperwork.

See Master Response 5: Project Description, Topic 1: Level of Specificity regarding the level of detail presented in the Draft EIR for proposed Project components. As discussed in Chapter 3, Project Description, page 3-18, the Draft EIR acknowledges that no site-specific projects and locations have been identified for development under the proposed 2018 General Use Permit. As is appropriate for a Program EIR, the Draft EIR considered the maximum square footage of academic and academic support development, maximum numbers of housing units, and maximum projected population under the proposed 2018 General Use Permit to conservatively evaluate all potential environmental impacts associated with buildout of the proposed Project.

This Program EIR is used appropriately for disclosing - at a programmatic level - impacts of the proposed 2018 General Use Permit. This Program EIR also identifies mitigation measures incorporating appropriate performance standards that future individual buildings or other specific projects would need to meet under the proposed 2018 General Use Permit.

The proposed Project includes approval of the proposed 2018 General Use Permit and related amendments to the Stanford Community Plan and County Zoning Map; approval of a Water Supply Assessment; and, potentially, approval of a Development Agreement. The proposed Project also includes the physical development activities and operations that could occur pursuant to these approvals. Pursuant to CEQA Guidelines, Section 15097, a Mitigation Monitoring and Reporting Program (MMRP) will be prepared and presented to the County Board of Supervisors at the time of certification of the Final EIR for the proposed Project and will identify the specific timing and roles and responsibilities for implementation of adopted mitigation measures.

Project-specific CEQA review may be required for individual buildings or other projects that would be developed pursuant to the proposed 2018 General Use Permit. Prior to approval, the County would examine each individual development at the time they are proposed to determine whether the environmental effects of the specific project were adequately disclosed in the 2018 General Use Permit Program EIR.

Procedures for use of this EIR to cover later project activities addressed are established in Public Resources Code Section 21166 and CEQA Guidelines Sections 15168 and 15162(a). Under those sections, if the proposed future activities would not create new or substantially more severe significant impacts than those examined in this EIR, the later activities are considered to be within the scope of the EIR and no further review under CEQA is required. If later activities would have effects that were not examined in the Program EIR, a new Initial Study would be prepared leading to either an EIR or a Negative Declaration.

Subsequent development activities undertaken pursuant to the proposed 2018 General Use Permit must be consistent with the requirements of the Project approvals, as well as the adopted MMRP, and will require project-specific County approvals that may include, but are not limited to, Architecture and Site Approval (ASA), Grading Approval, grading permits, and/or building permits for specific development and infrastructure projects consistent with the 2018 General Use Permit.

Finally, as under the 2000 General Use Permit, over the duration of the proposed 2018 General Use Permit, the County Planning Office would prepare annual reports that would be reviewed and approved by the Planning Commission, that would document Stanford's development activity and compliance with the 2018 General Use Permit.

Topic 2: EIR Recirculation

Certain comments were received asserting the Draft EIR underestimated environmental impacts, omitted substantial information, and identified mitigation that conflicts with existing plans, and on these bases, that recirculation of the Draft EIR was required.

CEQA Guidelines Section 15088.5(a) sets forth the conditions under which recirculation of an EIR is warranted prior to certification:

> A lead agency is required to recirculate an EIR when significant new information is added to the EIR after public notice is given of the availability of the draft EIR for public review under Section 15087 but before certification. As used in this section, the term "information" can include changes in the project or environmental setting as well as additional data or other information. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement. "Significant new information" requiring recirculation include, for example, a disclosure showing that:
>
> (1) A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
>
> (2) A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
>
> (3) A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
>
> (4) The draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

As demonstrated in the individual responses provided to the comments raised, none of the specific issues identified in the comments, or response to these comments, result in any of the conditions of Section 15088.5(a) being met. Thus, the County has determined that recirculation of the Draft EIR on the issues raised by the comments is not warranted.

It should be noted, however, as explained further in Chapter 1 Introduction in this Response to Comments Document, on June 12, 2018, the County elected to publish Recirculated Portions of Draft EIR. This was done for two reasons: 1) two new alternatives to the proposed Project were included (Additional Housing Alternatives A and B) in the EIR for the purpose of comparison and to assist the public and decision-makers in understanding the implications of the construction of higher levels of housing on the Stanford campus, and to allow the County the option to select one of these alternatives at the conclusion of the CEQA process (see also Master Response 8: EIR Alternatives); and 2) a new significant Project impact (Impact 5.17-1) was identified related to off-site environmental impacts associated with the construction and/or operation of off-site housing. The public review period for the Recirculated Portions of Draft EIR was from June 12, 2018 to July 26, 2018. The comments and responses to comments on the Recirculated Portions of the Draft EIR did not present significant new information that would trigger further Draft EIR recirculation.

It should also be noted that, as presented in Chapter 2 in this Response to Comments Document, a number of minor revisions have been made to the text and tables to the Draft EIR and Recirculated Portions of Draft EIR. These include (1) revisions made in response to certain

comments made on the Draft EIR and Recirculated Portions of Draft EIR, and (2) staff-initiated text changes to correct minor inconsistencies, to add minor information or clarification related to the Project, and to provide updated information where applicable. None of the revisions or corrections in that chapter result in any of the conditions of Section 15088.5(a) being met.

4.3.5 Master Response 5: Project Description

Topic 1: Level of Specificity

Several comments were received asserting that the Draft EIR does not adequately define and describe the amount, location or intensity of proposed academic and academic support facilities, and housing, and consequently, fails to fully account for the potential environmental impacts associated with the specific uses that may occur under those land use categories.

The Draft EIR, Chapter 3, Project Description, page 3-18, quantifies the maximum level of campus growth and land use development that would occur under the proposed 2018 General Use Permit, including:

- 2,275,000 net new square feet of academic and academic support facilities (plus any square footage remaining under the 2000 General Use Permit);
- 3,150 net new housing units/beds, of which up to 550 units would be available for faculty, staff, postdoctoral scholars, and medical residents;
- 40,000 net new square feet of childcare center space and other space that reduces vehicle trips (e.g., transit hub);
- utilization of up to 50,000 square feet of construction surge space authorized under the 2000 General Use Permit;
- utilization of the remaining unbuilt parking authorized under the 2000 General Use Permit (estimated at 3,156 spaces as of Fall 2015);
- creation of a parking reserve for up to 2,000 net new parking spaces (with Planning Commission approval); and
- associated infrastructure.

The Draft EIR Project Description, pages 3-19 through 3-24, further describes characteristics of the proposed academic and academic support space, housing, child care and surge space, and infrastructure.

The Draft EIR also discusses applicable plans relevant to the proposed 2018 General Use Permit, including the Stanford Community Plan, which provides detail on allowable uses within the campus, by land use designation. The Draft EIR, Land Use and Planning, pages 5.10-6 to 5.10-7, Policy SCP-LU 1 describes the types of current or intended academic land uses under the Academic Campus land use designation: “Academic use includes both facilities used for teaching or research activities and the wide range of uses which support academic activity, such as administrative offices, athletic facilities, student housing, and student and administrative support

services." Policy SCP-LU 2 states that the allowable academic uses include instruction and research (including teaching hospital facilities); administrative facilities; housing intended for students, postgraduate fellows, and other designated personnel; high density housing for faculty and staff; athletics, physical education, and recreation facilities; support services (such as child care facilities, the bookstore, and the post office); infrastructure, storage, and maintenance facilities; cultural facilities associated with the University; and, non-profit research institutions with close academic ties to the University.

The Draft EIR, Chapter 3, Project Description, page 3-2, footnote 3, further defines academic support uses: "Academic support uses include non-academic uses essential to the daily operation of Stanford; examples include, but are not limited to: retail food service, retail book and academic supplies, copy services, child care, convenience retail, gas and service stations, bike shop, and transit service [County of Santa Clara, *Planning Commission Staff Report*, File 7165-07-81-01 PAM 4 (& 7165-07-81-99P-99EIR-99GP), September 6, 2001]."

The proposed distribution of new academic and academic support facilities, and housing within the campus under the 2018 General Use Permit, are described in the Draft EIR Project Description on pages 3-19 to 3-22. Table 3-6 and Figure 3-8 in the Draft EIR show the proposed development anticipated to be distributed among seven of the nine development districts within the academic growth boundary. No development is proposed in two of the nine districts: Arboretum and San Juan districts.

All other Project elements are also described in the Draft EIR Project Description, including the proposed adjustments to the "No Net New Commute Trips" compliance methodology (pages 3-24 to 3-27); proposed sustainability programs and practices (pages 3-27 to 3-20); and amendments to the Stanford Community Plan and zoning map (pages 3-29 to 3-31).

As discussed in Chapter 3, Project Description, page 3-18, the Draft EIR acknowledges that no site-specific projects and locations have been identified for development under the proposed 2018 General Use Permit. As is appropriate for a Program EIR, the Draft EIR considered the maximum square footage of academic and academic support development, maximum number of housing units, and maximum projected population under the proposed 2018 General Use Permit to conservatively evaluate all potential environmental impacts associated with buildout of the proposed Project. Please see Master Response 4: Environmental Review Process, Topic 1: Use of Program EIR and Subsequent Approvals for additional detail on the requirements under CEQA for a Program EIR.

With respect to the additional housing alternatives, the Recirculated Portions of Draft EIR described characteristics of Additional Housing Alternative A and Additional Housing Alternative B at a similar level of detail as the proposed Project.

In summary, the type and location of campus development that would occur under the proposed 2018 General Use Permit is described at a sufficient level of detail in this Program EIR for all significant impacts to be adequately disclosed and mitigated to the extent feasible; and adequate mechanisms are in place to ensure future individual buildings or other projects pursuant to the proposed 2018 General Use Permit would be considered using the Program EIR, and subject to

project-specific environmental review and approval, as needed. CEQA does not require EIR land use project descriptions to provide detail about buildings that, due to the nature of a proposed project, does not exist at the time of EIR preparation. *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036.

Topic 2: Scope of Proposed Project and Analysis

Several comments were received indicating the maximum buildout of the Stanford campus and/or other future considerations not associated with proposed 2018 General Use Permit should be identified, defined, and evaluated in the proposed 2018 General Use Permit and EIR.

Maximum Campus Buildout

The proposed Project is limited to the proposed 2018 General Use Permit and related amendments to the Stanford Community Plan and County Zoning Map, other associated approvals such as a Water Supply Assessment, and, potentially, a Development Agreement, and the physical development and operations that could occur under these approvals. As discussed under Master Response 5: Project Description, Topic 1: Level of Specificity, above, the Draft EIR, Chapter 3, Project Description, defines the maximum level of campus growth and land use development that would occur under the proposed 2018 General Use Permit. The proposed Project does not include any potential subsequent future general use permit(s) and associated requests for additional development beyond that which would be authorized by the proposed 2018 General Use Permit.

As such, consideration of any level of development that may occur at the Project site beyond that proposed under the 2018 General Use Permit, up to and including any potential maximum buildout of the Stanford campus, is not part of the proposed Project, and accordingly, not within the scope of analysis of this EIR.

Please see also Master Response 2: Non-Project Planning Processes, Topic 1: Sustainable Development Study.

Academic Growth Boundary

The Draft EIR Chapter 3 Project Description, describes the location, intent and use the Academic Growth Boundary (AGB) as defined in the Stanford Community Plan. The proposed 2018 General Use Permit does not propose any changes to the existing AGB location or the established duration of existence of the AGB.

As under the 2000 General Use Permit, under the proposed 2018 General Use Permit, the Academic Growth Boundary does not expire; it will remain in place until it is modified by the Board of Supervisors. Prior to 2025, no modification of the Academic Growth Boundary may be proposed or approved until total building area on the central campus reaches 17.3 million square feet and requires a 4/5ths vote of all members of the County Board of Supervisors to modify. After 2025, the Academic Growth Boundary will continue to remain in place unless it is amended by majority vote of the County Board of Supervisors. The County Board of Supervisors may consider extending the 4/5ths vote requirement beyond 2025 during consideration of the Project.

Analytical Horizon

As discussed in Section 5.02, Scope of Analysis of the Draft EIR, this EIR evaluates the foreseeable impacts under the proposed 2018 General Use Permit through Year 2035, consistent with Stanford's planning horizon for buildout of development under the proposed 2018 General Use Permit. In the absence of any specific proposal or application by Stanford at this time for additional development beyond this planning horizon, 2035 is considered the longest feasible timeframe for analyzing potential environmental impacts in this EIR with any level of reliability.

4.3.6 Master Response 6: Approach to 2018 Baseline Environmental Setting and Cumulative Scenarios

Topic 1: Approach for 2018 Baseline Environmental Setting

Certain comments were received asserting that the 2018 baseline environmental setting in the Draft EIR is not clearly identified or quantified; and inquiring whether the 2018 baseline scenario included development under construction in adjacent jurisdictions.

As discussed in the Draft EIR, Introduction to Environmental Analysis, on page 5-6, the baseline environmental setting describes the conditions that exist prior to implementation of the Project. For this EIR, the baseline environmental setting provides the point of reference for assessing the environmental impacts of the proposed Project and Project alternatives.

In the case of this Project, when the County commenced its environmental review the proposed 2018 General Use Permit was not anticipated to be considered by the County for approval until 2018 at the earliest (now anticipated in 2019), after which implementation would commence if the permit is approved. For purposes of this EIR, the County established 2018 as the baseline environmental setting to coincide with the anticipated approval and first year of implementation of the 2018 General Use Permit. Accordingly, 2018 serves as the baseline year against which environmental impacts of the Project are evaluated.

The 2018 environmental baseline generally accounts for all applicable cumulative development anticipated to be under construction, and/or built and occupied by 2018; this includes both on-site and off-site cumulative development, as applicable.

The Draft EIR relies in part on certain technical studies that used existing conditions data (e.g., traffic counts) that predated the publication of the NOP. In each of these technical studies, and depending on the issue being addressed and geographic study area considered, appropriate growth factors and extrapolations were used; and/or adjustments made to consider specific reasonably foreseeable near-term projects, to establish the 2018 environmental baseline. The subsection for each environmental topic in Chapter 5.0 in the Draft EIR, and associated supporting technical studies included in the Draft EIR appendices, provide additional detail on other applicable 2018 environmental baseline characteristics relevant to the topic being analyzed.

It should be noted that the Draft EIR considers Stanford's Escondido Village (EV) Graduate Residences project in different contexts, depending on when impacts associated with it would

occur. Since construction-related site disturbance for the EV Graduate Residences project is currently underway, any footprint- and construction-related environmental operational-related environmental impacts associated with this housing project were included in the 2018 environmental baseline. However, as discussed in the Draft EIR, since the EV Graduate Residences will not be occupied and operational until 2020, operational-related environmental impacts (e.g., operational traffic) associated with this housing project were not included in the 2018 environmental baseline. However, the on-campus population that will be associated with the EV Graduate Residences once occupied, and the correlating operational-related environmental effects, were appropriately accounted for in the context of the 2035 cumulative scenario (see Topic 2, below for additional detail on the cumulative scenario).

Finally, for informational purposes, Draft EIR Appendix CON, Table 1, presents a list describing notable individual Stanford building construction projects within the Project site that were either completed since release of the NOP in January 2017, or for which construction is either currently underway or starting soon and expected to be largely completed by Fall 2018. Furthermore, Appendix CON, Table 2 provides an overview of notable near-term cumulative building projects within the Project site vicinity that were either completed since release of the NOP, or for which construction is either currently underway or anticipated to begin prior to Fall 2018, based on a review of City of Palo Alto and Menlo Park on-line websites which identify development projects in their cities. This information was presented to provide context for the physical change and near-term cumulative construction effects on the Project site and immediate site vicinity that occurred between existing and 2018 baseline conditions.

Topic 2: Approach for Cumulative Scenario

Certain comments were received indicating the Final EIR should identify cumulative projects, and whether the cumulative scenario is based on specific projects or growth projections, and inquired if cumulative development included growth in neighboring communities.

As indicated in the Draft EIR, Introduction to Environmental Analysis, on page 5-8, an analysis of cumulative impacts is included in the impact section for each environmental topic. The cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed (e.g., Santa Clara County, the Bay Area Air Basin, other activity concurrent with Project construction). The Draft EIR's cumulative impact analysis methodology description consists of both the general overview on p. 5-8 and the detailed methodology description in each technical section. As required under CEQA, the cumulative impact analysis in the Draft EIR considers all reasonably foreseeable projects causing related impacts, including those in neighboring communities, where applicable.

For example, in Section 5.11, Noise and Vibration, the cumulative construction noise impact analysis (Impact 5.11-6) considered construction noise associated with the 2018 General Use Permit in conjunction with concurrent off-site construction noise, including that associated with the non-Project-related Stanford University Medical Center renewal project in Palo Alto (see also Topic 3, below); and the cumulative operational transportation noise impact analysis

(Impact 5.11-7) accounted for the noise from traffic associated with buildout of the proposed Project in conjunction with 2035 cumulative traffic noise on study area roadways in adjacent jurisdictions associated with local and regional traffic growth.

Please also refer to Master Response 13: Transportation and Traffic, Topic 3: Travel Demand Forecasts for information on how the travel demand forecast for growth outside the Project site was developed for the cumulative scenario for Transportation and Traffic section of the Draft EIR.

Topic 3: Consideration of Non-Project Stanford-Related Development Outside General Use Permit Boundary

Certain comments were received inquiring if and how approved or planned off-campus development on Stanford-owned lands, such as Stanford Research Park, Stanford University Medical Center, and Stanford Redwood City campus, were accounted for in the Draft EIR.

As described in the Draft EIR Project Description, pages 3-2 to 3-4, the proposed 2018 General Use Permit would apply only to the 4,017 acres of Stanford lands that are located within unincorporated Santa Clara County (as shown in Draft EIR Figure 3-3).

Growth or occupancy of buildings outside of unincorporated Santa Clara County is subject to the local jurisdiction's entitlement and environmental review process, and is subject to the regulatory requirements of that jurisdiction. The cumulative impacts of the proposed 2018 General Use Permit include all the local and regional growth, including that of Stanford and its affiliates, that would be outside Santa Clara County.

Aside from the Stanford lands located within unincorporated Santa Clara County for which the proposed 2018 General Use Permit would apply (i.e., the Project site), Stanford owns approximately 4,163 contiguous acres in five adjacent governmental jurisdictions, including the cities of Palo Alto and Menlo Park, and the towns of Portola Valley and Woodside, and unincorporated areas of San Mateo County (see Draft EIR Figure 3-2). Additional description of these off-site contiguous Stanford land uses is described in Draft EIR Section 5.10, Land Use and Planning, pages 5.10-2 to 5.10-3. This includes, but is not limited to, the Stanford University Medical Center complex, Stanford Shopping Center, Stanford Research Park, Palo Alto Transit Station, and residential areas in the City of Palo Alto; the SLAC National Accelerator Laboratory and Jasper Ridge Biological Preserve located in unincorporated San Mateo County; and Stanford properties in the and Cities of Menlo Park and Town of Woodside.

Of note, the City of Palo Alto certified the Final EIR[2] and approved the Stanford University Medical Center Renewal Project in June 2011. Stanford is completing final stages of construction of many of these facilities, including the Lucile Packard Children's Hospital, and Stanford Health Care Hospital. Construction of School of Medicine facilities is underway, and construction of some of the Hospital and Clinic square footage has not yet commenced. The Stanford School of

[2] City of Palo Alto, *Stanford University Medical Center Facilities Renewal and Replacement Final EIR*, certified June 2011.

Medicine and the SUMC have an existing partnership which would continue during the timeframe of the proposed 2018 General Use Permit; however, campus growth at Stanford under the proposed 2018 General Use Permit is independent of the SUMC operations.

The Stanford Research Park is a separate land use from the University with multiple employers. The Stanford Research Park land is owned by Stanford, but much of the land is ground leased to private companies for 50 years or more. Buildings within the Stanford Research Park that are occupied by Stanford affiliates in the Research Park were entitled for office uses prior to Stanford's occupancy. At the Stanford Research Park, occupancy by Stanford affiliates fluctuates independent from campus growth.[3] As under existing conditions, under the proposed General Use Permit, there may be Stanford research programs that partner with businesses in the Stanford Research Park. Academic partnerships or student internships would be at the discretion of individual companies and would not be tied to an increase in Stanford's student enrollment or additional academic space on campus. Rather, any growth in companies located at the Research Park would be within the control and jurisdiction of the City of Palo Alto.

The SLAC National Accelerator Laboratory is a Department of Energy (DOE) facility, and Stanford operates the facility on behalf of DOE. Academic partnerships and programs do exist; however, growth in programs at SLAC are tied to federal funding for scientific research that is independent from activity on the campus.

The Stanford Shopping Center is located on land owned by Stanford in Palo Alto, but ground-leased to Simon Properties, which operates the Shopping Center. The Shopping Center serves regional and local residents; it is not tied to growth at the Stanford campus.

In addition, Stanford owns other lands in other jurisdictions, including Redwood City. Redwood City certified the Final EIR[4] and approved the Final Precise Plan for the Stanford Redwood City campus in 2013. The 35-acre Stanford Redwood City campus will consist of approximately 1.5 million square feet of offices, medical clinics and research and development. Construction of Phase 1 development of the Stanford Redwood City campus began in 2016, with buildout of Phase 1 anticipated in 2019, and when completed will accommodate 2,700 Stanford employees. The Stanford Redwood City campus is designed for departments that support the University, but do not need to be on Stanford campus on a regular basis. The Stanford Redwood City campus will include a number of Stanford departments, including Business Affairs, University Human Resources, and select areas of other departments.[5] No undergraduate or graduate academic classrooms are planned on the Redwood City campus.

3 For example, Stanford's Land Building and Real Estate (LBRE) department currently occupies part of a building at the Research Park. When Stanford's Redwood City campus opens (see below), LBRE will move out of the Research Park to the Redwood City campus.

4 City of Redwood City, *Final EIR for the Stanford in Redwood City Precise Plan*, 2013, certified September 2013.

5 Including Dean of Research's Office of Technology Licensing; Land, Buildings & Real Estate staff located at Stanford Research Park and on campus; Office of Development, including Medical Center Development; Office of Continuing Studies: Online High School, Summer Session, Pre-Collegiate Studies; Residential & Dining Enterprises; School of Medicine staff located at Stanford Research Park and on campus; and University Libraries staff already located in Redwood City.

The Veteran's Administration Palo Alto Healthcare System (VAPAHCS) consists of federal inpatient facilities in Palo Alto and Menlo Park, and consequently are not owned or operated by Stanford. Similar to the Stanford Research Park, under the 2018 General Use Permit, any partnerships that occur between Stanford and the VAPAHCS would occur on individual bases and would not be tied to increased student enrollment or additional academic growth at Stanford.

All existing, approved or planned development on Stanford lands outside of the Project site are accounted for in either the 2018 environmental baseline and/or the cumulative scenario, in the Draft EIR, as applicable. Moreover, any proposed non-Project development on, and growth associated with, any Stanford lands outside of unincorporated Santa Clara County would be required to comply with CEQA prior to consideration of approval of the jurisdictional agency(ies) in which that development would be located.

Please also refer to Master Response 13: Transportation and Traffic, Topic 3: Travel Demand Forecasts for information on how growth outside the Project site was developed for the 2018 environmental baseline and cumulative scenario for the Transportation and Traffic section of the Draft EIR.

4.3.7 Master Response 7: Flooding/Detention

Comments request more information about the (1) approval of Stanford's storm detention basins that are designed to reduce peak flows from new impervious surfaces on campus, (2) monitoring of storm runoff detention capacity, (3) the capacity of Stanford's storm detention facilities to handle future flows under the 2018 General Use Permit, (4) the capacity of Stanford's storm detention facilities in storm events that are less than the 100-year storm, (5) the capacity of downstream storm drains and creeks, and (6) the potential for additional detention facilities in the San Francisquito Creek watershed.

Topic 1: Development and Approval Process for Stanford's Existing Detention Facilities

Stanford's existing storm water detention facilities are described in the Draft EIR, Section 5.9, Hydrology and Water Quality, under Detention Facilities. Pursuant to Condition N.2.b of the 2000 General Use Permit, Stanford prepared hydrology and drainage studies covering the Matadero Creek and San Francisquito Creek watersheds. Based on these studies, Stanford proposed, and the County approved, the development of on-site detention facilities on a watershed basis to create sufficient capacity to offset increased runoff associated with all new impervious surfaces constructed under the 2000 General Use Permit. Stanford has constructed three storm water detention facilities on its campus (as illustrated in Draft EIR, Figure 5.9-1):

- The Serra/El Camino Real Detention Facility, approved in 2001 (Matadero Creek watershed);
- The West Campus Phase 1 Detention Basins (also referred to as the Stock Farm/Sand Hill Road Detention Basin), approved in 2003 (San Francisquito Creek watershed); and
- The West Campus Phase 2 Detention Facility, approved in 2015 (San Francisquito Creek watershed).

Stanford's Land, Buildings and Real Estate Department water engineers and Nolte Engineering (now NV5) engineered a master plan of storm water conveyance overland flow paths and storm water runoff peak flow detention infrastructure that directs runoff to on-campus detention facilities, for attenuating the peak flow rate of storm water runoff leaving campus. The master plan includes the analyses and calculations for determining the capacity of the basins and their design parameters. The methodology and design parameters were carefully vetted with the County Department of Planning and Development-Land Development Engineering (LDE) and Santa Clara Valley Water District (SCVWD) staff. The County's review process included review of engineered peak flow rate attenuation and increased impervious surface area capacities of each detention facility; SCVWD staff reviewed and commented on the engineering reports describing the methodology and design parameters. The final methodology incorporated the County and SCVWD staff's comments.

The methodology of engineering of the detention facilities is based on the County Drainage Manual, SCVWD regional watershed data, and the U.S. Army Corps of Engineers HEC-1 Flood Hydrograph computer model. The intensity, duration and frequency distribution of rainfall over a storm time period based on SCVWD design storms for various recurrence interval storms (i.e., chance of occurrence, e.g., a 100-year storm has a 1 percent chance of occurrence in any one year) are incorporated into the computer model. The characteristics of the tributary area, such as geometric configuration, topography, and extent of impervious surfaces are also incorporated into the computer model. The computer model then uses the distribution of rainfall intensity over the storm period and tributary area characteristics to produce a hydrograph (i.e., a plot of flow rate over time) of the runoff from the tributary area. The computer model is initially run on the before-development base condition, and then run on the expected post-development condition. Detention facilities are then conceptually engineered and incorporated into the computer model that will attenuate (i.e., restrain) the flow rate from the post-development condition to the flow rate level of the base condition.

The detention facilities are engineered with enough volume to detain all of the runoff flow during the storm period that exceeds that of the base condition, and delays its release until after the peak occurs, so that the peak runoff flow rate does not increase. The detention facilities are then designed to provide the volume needed to receive and hold the quantified excess flow from the developed tributary area with its increase in impervious surface area that would result from development. The storm drainage infrastructure is then engineered to convey the runoff flow and divert it to the detention facilities. The development of the tributary area and the usage of the detention capacity of the detention facilities is then tracked, to ensure that increased impervious surface and resulting higher peak runoff flow rates are detained and do not result in higher peak runoff flow rates leaving campus.

The engineering reports covering the detention facilities are as follows: *Storm Drainage Detention Master Plan,* April 10, 2001; *Calculations – Serra Street at El Camino Real Detention Basins,* April 16, 2002; *Calculations – West Campus Flood Control Detention Facilities Phase 1,* September 19, 2003; *Storm Drainage Detention Master Plan Supplement,* September 25, 2003; and *West Campus Stormwater Detention Facility Volume 1 (Hydraulics Report)* and *Volume 2 (Appendices),* March 24, 2015 (see Appendix SDR in this Response to Comments Document).

The approval process consisted of County planning review and Architecture Site Approval of each of the new storm water detention facilities, and then grading permits from County LDE based on their review of the engineering analyses and quantified increased impervious surface area capacity and the grading construction drawings for each facility. The Serra/El Camino Real detention facility is SCC File No. 8037-09-82-01G, approved July 3, 2001. The West Campus (Stock Farm Road) Phase 1 detention facility is SCC File No. 8614-05-82-03G, approved September 29, 2003. The West Campus Storm Water Detention facility is SCC File No. 10689-14A-146, approved June 19, 2015.

Topic 2: Monitoring of Stanford's Detention Capacity

Stanford constructed each of the three detention facilities described under Topic 1, above, in accordance with the approved engineering analyses, construction drawings and specifications, and grading permits. As part of the engineering and permitting process for each detention facility, Stanford's design team, along with County LDE staff, developed a method for delineating an ongoing accounting of the initial capacity of each facility and the remaining capacity of each based on the new impervious surfaces added to the watershed that drains to each facility from new building projects. Spreadsheets were developed by Stanford and Santa Clara County to track each new campus building project's increase in impervious surface area and its quantified usage of the respective detention facility's capacity. Stanford has provided these tracking spreadsheets to the County every year in support of the 2000 General Use Permit Annual Reports. As part of the annual process, refinements and corrections in past years' data were made if/as needed. The remaining capacity of the detention basins as of September 2016 is presented on page 5.9-7 of the Draft EIR (195.5 acres of additional impervious surface area in the Matadero Creek watershed, and 58.1 acres of additional impervious surface area in the San Francisquito Creek watershed).

The detention capacity spreadsheet used to inform the Draft EIR compiled capacity information on an annual and cumulative basis, starting from the inception of the 2000 General Use Permit; see Appendix CAP in this Response to Comments Document. The spreadsheet identified the initial runoff capacity for each of the three on-campus detention facilities, and detailed how much of this capacity was used for each individual development project that was developed under the 2000 General Use Permit. In some cases, projects led to increased capacity, such as when projects have resulted in a decrease in impervious surface area. As a result, the spreadsheet presents a running cumulative total, for each of the two watersheds, of how much impervious square footage capacity remains in the on-campus detention facilities.

Notably, the detention capacity of the existing detention facilities has not been used as quickly as anticipated when they were designed. Many of the new campus building projects constructed during the 2000 General Use Permit have been developed in a way that results in little increase in impervious surface area, and sometimes a decrease, such as when paved surface parking lots are replaced by buildings with landscaped courtyards and perimeters. Therefore, the need for and usage of detention capacity has been less than expected by Stanford.

Topic 3: Capacity of Stanford Detention Facilities to Detain Runoff from Development Under Proposed 2018 General Use Permit

Information from the detention capacity tracking spreadsheet provides a basis for determining whether sufficient capacity remains for the development of additional impervious surfaces under the proposed 2018 General Use Permit, as shown in **Table MR7-1**, below.

TABLE MR7-1
STANFORD DETENTION CAPACITY SUMMARY

Condition	Stanford Detention Capacity, by Watershed (Acres)	
	San Francisquito Watershed	Matadero Creek Watershed
Remaining Stanford Detention Balance in 2016	58.1	195.5
Average Annual Increase in Impervious Surfaces at Project Site[a]	0.58	0.75
Estimated Remaining Stanford Detention Capacity in 2018	57.0	194.0
Change from Escondido Village Graduate Residences project		(0.81)
Estimated Decrease in Stanford Detention Capacity Associated with Development under Proposed 2018 General Use Permit	10.0	12.8
Estimated Remaining Stanford Detention Capacity with Buildout of Proposed 2018 General Use Permit	47.0	182.0

NOTES:

[a] Based on annual average during the 2000 General Use Permit.

Numbers with parenthesis reflect increase in detention capacity

Table reflects rounded numbers.

SOURCE: Stanford, 2016, 2018

This analysis shows that with buildout of the proposed 2018 General Use Permit, there would be substantial remaining detention capacity on-campus (accommodating an additional 47 acres of impervious surface in the San Francisquito Creek watershed, and 182 acres of impervious surface in the Matadero Creek watershed), and that this remaining capacity is more than sufficient to handle runoff from the increased amount of impervious surfaces projected under the 2018 General Use Permit. As a result, the proposed Project would not result in increases in peak stormwater flows from the site. The annual monitoring of detention capacity allows Stanford to plan for additional detention capacity, if needed.

Topic 4: Capacity of Stanford's Detention Facilities in Storm Events Less than 100-year Event

Several comments suggest that Stanford should be required to detain runoff from storm events that are less than the 100-year event because San Francisquito Creek cannot handle lesser storms. The detention basins on the Stanford campus are in fact designed to detain runoff from storm events that are less than the 100-year event for precisely the reasons delineated by those comments.

Stanford's detention facilities for the San Francisquito and Matadero watersheds are designed to attenuate the peak runoff flow rates from all storms ranging from the 10-year recurrence interval storm through and including the 100-year storm. As runoff from storms increases in magnitude from storms approaching the 10-year recurrence interval, the excess runoff is diverted by the storm drainage infrastructure to the detention basins, using weirs and flow-restricting orifices in the various storm drainage structures; the greater the storm, the greater the amount of diverted runoff that goes to the basins. The detention basins' volume/capacity is sized so that they contain the runoff for all such storms up to and including the 100-year storm, before they fill.

In its comment letter, the SCVWD (Comment A-SCVWD-2) identifies perceived inconsistencies in the engineering reports for the basin serving the San Francisquito Creek watershed. In addition to Paragraph 3.a in the Supplement that is referenced in the comment, the third paragraph under the Summary states that "…the increase in flows from Stanford shall not cause the flow in San Francisquito Creek to increase during periods when the downstream channel capacity is being exceeded. Specifically, this flow rate in San Francisquito Creek has been set by SCVWD at 6100 cfs." This flow rate was considered to be the capacity of the San Francisquito Creek channel at the bridge/culvert constrictions. The resulting engineering design of the detention facilities was attenuation of peak flows ranging from the 10-year storm to the 100-year storm. In addition, the most recent west campus detention facility (near Sand Hill Road between Stock Farm Road and Pasteur Drive) was engineered to also provide hydromodification, which attenuates peak flow for storms down to the 2-year recurrence interval.

Because Stanford would not contribute to additional peak flows to the creek during storms from the 10-year recurrence interval up to the 100-year event, there would be no contribution to flooding in the creek. As such, development under the 2018 General Use Permit would not cause downstream flooding, nor would it contribute to cumulative downstream flooding. Since no Project or cumulative impact is identified, no mitigation is required under CEQA.

Topic 5: Capacity of Downstream Storm Drains with Regard to Stanford's Storm Detention Basins

As explained above, Stanford's detention facilities for both the San Francisquito Creek watershed and the Matadero Creek watershed are designed to attenuate the peak runoff flow rates from all storms ranging from the 10-year recurrence interval storm through and including the 100-year storm. As further described above, there is substantial capacity remaining in Stanford's on-site detention facilities to handle flows associated with development that increases impervious surface under the 2018 General Use Permit. As a result, the proposed Project would not increase peak flows to downstream storm drain systems, as compared to baseline conditions.

Some comments request data regarding the amount of runoff that has entered the Palo Alto storm drainage collection system. The County is not aware of meters in the storm drain lines owned by either Stanford or Palo Alto that would provide historic flows (flow rates or volumes) of storm water discharge. Rather, storm water detention is engineered based on calculated flows, following conventional engineering practice. Industry practice is to design and engineer detention basins to ensure that flows from increases in impervious surfaces are detained, and prevented from entering

the downstream storm drainage collection system or running offsite over the land until the storm has subsided and capacity has been restored.

Topic 6: Non-Project Planning Efforts to Provide Additional Detention Facilities in the San Francisquito Creek Watershed

As explained in the Draft EIR and further in this master response, no additional large-scale upstream detention facilities to attenuate and manage flows in San Francisquito Creek are required to reduce impacts of the proposed 2018 General Use Permit. Nevertheless, the Draft EIR discusses the ongoing planning efforts to address flooding within the San Francisquito Creek watershed. The Draft EIR Section 5.3, Biological Resources, Impact 5.3-12 acknowledges that the SFCJPA is currently undertaking environmental review of a range of alternatives to address existing flow capacity deficiencies in San Francisquito Creek to reduce flooding potential. Alternatives include potential channel and/or bypass improvements within the creek downstream of Stanford; and constructing one or more detention basin improvements, including on Stanford lands within the Project site (e.g., Lagunita, Felt Reservoir) and outside the Project site (e.g. Searsville Reservoir).

Independent of the proposed 2018 General Use Permit, Stanford is analyzing possible modifications to the Searsville Dam and Reservoir that could potentially provide substantial peak flow attenuation in Corte Madera Creek, a major tributary to San Francisquito Creek. The Searsville project involves resource/habitat issues, natural sediment process restoration complexities, water supply, and of course, flood management considerations.

The County and Stanford will continue to collaborate with the relevant public agencies, including the SFCJPA, and other interested parties on planning efforts to address flooding issues in the San Francisquito Creek watershed. These planning efforts, which would be in addition to Stanford's own campus detention facilities that restrain increases in peak runoff flow rates from campus development under the 2000 and 2018 General Use Permits, would further serve to benefit the downstream communities.

4.3.8 Master Response 8: EIR Alternatives

Certain comments were received that suggest that the Final EIR evaluate several variations of the alternatives studied in the Draft EIR. Some comments suggest that the EIR evaluate an alternative under which the Project is phased, with discretionary review and/or a new EIR prior to construction of each phase or new building. One comment seeks additional information as to why the All Housing Alternative was not studied in detail. Other comments suggest that the EIR evaluate alternatives that would allow more housing than has been proposed, or that the EIR evaluate Reduced Project alternatives that modify the proportion of housing compared to academic and academic support space. Some comments suggest an alternative that would require Stanford to initiate planning and construction of a tunnel under the foothills or new roadway to connect with Campus Drive. One comment suggests building a new campus elsewhere. The following topics address each of those issues raised.

Topic 1: CEQA Requirements for Alternatives, and Alternatives Evaluated in the EIR

As discussed in Chapter 7, Alternatives, pages 7-1 to 7-2 in the Draft EIR, CEQA requires that an EIR describe and evaluate a range of reasonable alternatives to the proposed project, or to the location of the proposed project, and evaluate the comparative merits of the alternatives (CEQA Guidelines Section 15126.6(a), (d)). The "range of alternatives" is governed by the "rule of reason," which requires the EIR to describe and consider only those alternatives necessary to permit informed public participation, and an informed and reasoned choice by the decision-making body (CEQA Guidelines Section 15126.6(a), (f)).

The range of alternatives must, at a minimum, include alternatives that could feasibly attain most of the basic objectives of the project and could avoid or substantially lessen any of the significant effects of the project (CEQA Guidelines Section 15126.6(a)-(c)). CEQA generally defines "feasible" to mean an alternative that is capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. In addition, the following may be taken into consideration when assessing the feasibility of alternatives: site suitability; economic viability; availability of infrastructure; general plan consistency; other plans or regulatory limitations; jurisdictional boundaries; and the ability of the proponent to attain site control (CEQA Guidelines Section 15126.6(f)(1)). The concept of "feasibility" also encompasses the question of whether a particular alternative or mitigation measure would feasibly attain most of the basic objectives of the project, even if those alternatives would impede to some degree the attainment of the project objectives or would be more costly (CEQA Guidelines Section 15126.6(a), (b)). See also *City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410; *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957.

The description or evaluation of alternatives does not need to be exhaustive, and an EIR need not consider alternatives for which the effects cannot be reasonably determined and for which implementation is remote or speculative (CEQA Guidelines Section 15126.6(f)(3)). An EIR need not consider multiple variations on the alternatives that have been presented. Instead, the relative advantages and disadvantages of other alternatives can be assessed from a review of the alternatives presented in the EIR as long as other alternatives fall within the range that has been evaluated. See *Village Laguna of Laguna Beach, Inc. v. Board of Supervisors* (1982) 134 Cal App. 3d 1022.

Alternatives considered in the Draft EIR but dismissed from further consideration included an Off-site Alternative; an All-Academic Growth/No New Housing Alternative; an All Housing Alternative; and a No Construction Variance Alternative.

The alternatives that were selected for evaluation in the Draft EIR were:

- No Project Alternative, consisting of
    a. No Project/No Development Alternative; and
    b. No Project/Individual Use Permits Alternative;

- Reduced Project Alternative; and
- Historic Preservation Alternative.

In addition, although impacts of the Project on housing supply is a socioeconomic issue that is not a physical environmental impact under CEQA, the County published Recirculated Portions of the Draft EIR that included two new alternatives to the proposed Project for the purpose of comparison and to assist the public and decision-makers in understanding the implications of the construction of higher levels of housing on the Stanford campus and to allow the County the option to select one of these alternatives at the conclusion of the CEQA process:

- Additional Housing Alternative A (2,549 additional units/beds); and
- Additional Housing Alternative B (1,275 additional units/beds).

CEQA also requires that an environmentally superior alternative be selected from among the alternatives. The environmentally superior alternative is the alternative with the fewest or least severe adverse environmental impacts. From the alternatives evaluated, the EIR identified the environmentally superior alternative would be the No Project/No Development Alternative. Of the remaining alternatives that are not the no project alternative, the Reduced Project Alternative is considered the environmentally superior alternative.

Topic 2: Additional Detail on Potential Alternatives

Phased Approach/Multiple EIRs

The Draft EIR disclosed the environmental impacts of full buildout of the proposed 2018 General Use Permit. Phasing would not change the Draft EIR's forecast of the physical environmental effects of the proposed 2018 General Use Permit at full buildout; therefore, a Phased EIR alternative would not avoid or substantially lessen any of the proposed Project's significant impacts. Therefore, the EIR need not evaluate this alternative in detail, since EIR alternatives must be limited to those that avoid or substantially lessen any of the proposed project's significant impacts (CEQA Guidelines Section 15126.6(f)). Nevertheless, the County Board of Supervisors may consider phasing and linkage conditions when it considers the project.

With respect to housing, similar to Condition F.8 in the 2000 General Use Permit and consistent with the Community Plan linkage policies, under the proposed 2018 General Use Permit, the development of academic and academic support space would be linked to the development of housing units. Under the 2000 General Use Permit, interim housing unit milestones were required to be met for each increment of 500,000 square feet of academic and academic support space to ensure housing construction keeps pace with academic and academic support facility development and Stanford is proposing this same linkage for the 2018 General Use Permit: 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 (605 housing units/beds) to ensure housing keeps pace with academic growth (Stanford University 2018 General Use Permit Application, page 3.39). A different linkage could be established by the County Board of Supervisors as a condition of approval.

With respect to transit/TDM, as under the 2000 General Use Permit Conditions G.3 through G.9, under the proposed 2018 General Use Permit, the extent of implementation of transit/TDM programs at Stanford would be tied to the No Net New Commute Trips program, which is based on annual traffic monitoring and comparisons of vehicle trips entering and exiting the campus to the baseline vehicle trips, to determine if the No Net New Commute Trips standard is being achieved. The No Net New Commute Trips program ensures that traffic mitigation is implemented as growth occurs.

With respect to Multiple EIRs, as under 2000 General Use Permit Condition D.1, the proposed 2018 General Use Permit would require review and approval of individual new buildings as they are proposed for construction. Whenever a public agency undertakes discretionary review of a project that previously was studied in an EIR, it must consider whether supplemental environmental review under CEQA would be required. See Master Response 4: Environmental Review Process, Topic 1: Use of Program EIR and Subsequent Approvals for additional detail on the environmental review process for the proposed 2018 General Permit.

All Housing Alternative

As indicated above, the Draft EIR, Chapter 7, Alternatives, discussed a potential All Housing Alternative (page 7-5). Under such an alternative, Stanford would build the housing proposed but would reduce the academic and academic support facilities proposed. The Draft EIR explains that the alternative was not evaluated in greater detail because it would not accomplish the primary Project purpose. Alternatives must be able to implement most project objectives. Here, the Draft EIR identifies the Project's underlying purpose to "authorize continued growth and development on the campus in a manner that implements the Stanford Community Plan's policies and that is consistent with the growth assumptions in the approved Sustainable Development Study." The Stanford Community Plan and the Sustainable Development Study contemplate growth in academic and academic support facilities and housing. Similarly, Stanford's more specific project objectives address all of these growth components.

An alternative that only allows housing, with no increase in academic and academic support square footage would not provide a means to accomplish the project objectives. Since this alternative would not accomplish the primary Project purpose and most Project objectives, it was dismissed from further evaluation.

Added Housing

As indicated under Topic 1: CEQA Requirements for Alternatives and Alternatives Evaluated in the EIR, above, the Recirculated Portions of Draft EIR included two new alternatives for consideration (Additional Housing Alternatives A and B) which would include the same growth in academic square footage and all of the housing proposed under the proposed 2018 General Use Permit, plus additional campus housing. Additional Housing Alternative A would provide 2,549 additional units/beds, including 2,342 faculty/staff units and 207 graduate student beds (for a total of 5,699 net new housing units/beds when combined with the 3,150 units/ beds proposed under the Project). Additional Housing Alternative B would provide 1,275 additional units/beds, including 1,171 faculty/staff units and 104 graduate student beds (for a total of 4,425 net new housing units/beds when combined with the 3,150 units/ beds proposed under the Project).

Some comments suggest that the EIR study an alternative that would add still more housing compared to the Additional Housing Alternatives A and B. For example, one comment requests evaluation of an alternative that would add one housing unit for each new employee or student added to the campus (at a ratio of one unit/bed per 316 square feet). Such an alternative would add more households to the campus than the number of households attributable to growth in the campus population. This is because each new employee creates demand for a fraction of a household. Demand for the remaining fraction of the employee's household is attributable to other working adults living in the same household.[6] The Draft EIR Population and Housing section contains an explanation of how growth in employees and students has been converted to demand for new households. While other metrics might have been used to convert employment and student growth to demand for housing, the methodology used in the Draft EIR is reasonable based on the evidence in the record, including Stanford-specific data regarding the existing household demographics of its students and postdoctoral scholars and Countywide data regarding the household demographics of employees.

In addition, an alternative that adds more faculty/staff housing to the Stanford campus, beyond the amounts included in Additional Housing Alternatives A and B, would not reduce the significant environmental effects of the proposed 2018 General Use Permit as shown in the analysis of Additional Housing Alternatives A and B. As with Additional Housing Alternatives A and B, this potential alternative would fail to achieve the primary project objective to develop the campus in a manner that reflects Stanford's historical growth rates and the growth assumptions in Stanford's approved Sustainable Development Study. The additional housing contemplated by this alternative would exceed Stanford's historic growth rates and the assumptions in the Sustainable Development Study, and would result in more intense development and construction activity than has occurred over the past several decades.

Variations on the Reduced Project Alternative

The Draft EIR evaluates a Reduced Project Alternative at pages 7-23 to 7-33. The Reduced Project Alternative assumes a proportional reduction in housing and academic and academic support facilities compared to the proposed Project. The total amount of student housing and academic and academic support facility space under the Reduced Project Alternative equates to the Minimal Growth Scenario in the 2009 Sustainable Development Study. It is unknown whether the Reduced Project Alternative would result in campus growth at the same rate as historically has occurred during the initial years of the 2018 General Use Permit, or at a slower rate over the entire 2018 General Use Permit period. For purposes of analysis, the historic growth rate during the initial years of the 2018 General Use Permit is assumed because (a) historic growth rates provide a reasonable basis to forecast future growth rates; and (b) no other data regarding future growth rates are available.

Many variations on a Reduced Project Alternative could be evaluated in an EIR. The relative proportions of housing and academic square footage could be changed at every increment between all of one type of development to all of the other. Because the project objectives for the proposed

6 For example, if a new Stanford employee and a new public sector employee live together in one household, half the new household would be attributable to growth at Stanford and half the new household would be attributable to growth at the public sector employer.

2018 General Use Permit emphasize continued growth in a manner that is consistent with historic growth rates, an alternative designed with similar proportions of housing and academic and academic support facilities could more closely accomplish those objectives, compared to an alternative focused on one type of development or the other. It was therefore reasonable to study a Reduced Project Alternative that proportionately reduced all of these Project components.

An EIR need not consider multiple variations of alternatives as long as it presents a reasonable range. The combination of alternatives that has been evaluated in the EIR for the proposed 2018 General Use Permit presents a reasonable range of potential alternatives from which the public and decision makers can understand the effects of modifying the proportions of academic and academic square footage and housing. Generally, the analysis reveals that adding faculty/staff housing would not reduce the significant effects of the proposed 2018 General Use Permit. Decreasing academic square footage may reduce onsite student and employee population compared to the proposed 2018 General Use Permit, which in turn may decrease population-related environmental effects. The Draft EIR also recognizes that approval of reduced academic and academic support square footage may result in buildout of those reduced allocations earlier than otherwise would occur, triggering another application for additional development. In addition, the Draft EIR discussed that reduced academic square footage would not fully achieve the project objectives, as it would limit Stanford furthering its academic mission and meeting its needs to accommodate increased enrollment. In sum, the trade-offs between the ability of a Reduced Project Alternative to accomplish the project objectives and the potential environmental benefits of such an alternative have been disclosed by the EIR, and will be considered by the County Board of Supervisors when the Board considers the project.

Tunnel Under the Foothills

The suggestions to construct a vehicular tunnel or new roadway from I-280 under the Stanford foothills to connect to Campus Drive involves adding a component to the proposed Project, but is not an alternative to the Project as a whole. It would reduce the traffic congestion effects of the proposed 2018 General Use Permit by eliminating new vehicle trips on existing roads between I-280 and the Project site by rerouting these trips to the vehicular tunnel or new roadway.

Under the proposed 2018 General Use Permit, Stanford has stated in its Project Application that it intends to expand the Transportation Demand Management (TDM) measures designed to prevent an increase in new vehicle trips during the peak commute hours in the peak commute direction. Annual monitoring conducted by the County's independent consultants concludes these programs were successful in achieving the No Net New Commute Trips standard under the 2000 General Use Permit. As explained in Master Response 13: Transportation and Traffic: Topic 7: Average Daily Traffic and Peak-Hour Spreading, during implementation of the 2000 General Use Permit, sustained increases in all-day trips at the campus gateways also have not been observed. Addressing potential vehicle increases through TDM programs is preferable to constructing infrastructure improvements because TDM programs have fewer negative effects on the physical environment. In addition, the environmental benefits of programs to move commuters out of their cars and onto transit extend over a wider geographic area than infrastructure improvements targeted at an isolated road segment or set of intersections.

The Draft EIR recognizes that back-up mechanisms are needed if Stanford is not able to implement TDM programs to achieve the No Net New Commute Trips standard. The Draft EIR identifies two intersections between I-280 and the Stanford campus where significant impacts could occur if the No Net New Commute Trips standard is not achieved: I-280 Northbound Off-Ramp/ Sand Hill Road (Intersection #2); and Junipero Serra Boulevard/ Foothill Expressway/ Page Mill Road (Intersection #17). The Draft EIR identifies physical improvements to each of these intersections that could be implemented to reduce the impacts to a less-than-significant level. The Draft EIR also recognizes that the impact may remain significant and unavoidable if funding mechanisms are not sufficient to collect contributions from other entities who might contribute traffic to these intersections, or in the case of Intersection #2, if the entities with jurisdiction over the intersection elect not to construct the improvements. Construction of a tunnel might provide an alternative means to reduce impacts at Intersection #2, and possibly at Intersection #17; however, this mechanism would result in far greater physical effects to the environment than the improvements identified in the Draft EIR due to the need to undertake substantial earthmoving, boring, and other construction-related activities. Similarly, construction of a new roadway would necessitate substantial earthmoving, habitat disturbance, and other construction-related activities. Further, connection of a tunnel to I-280 or new roadway connecting to I-280 would require interchange approvals by Caltrans, such that the feasibility of this solution could not be assured and would be considered more speculative than the improvements identified in the Draft EIR.

For all of these reasons, a tunnel or new roadway is not preferable to the mitigation measures identified in the Draft EIR.

Offsite Alternative

The Draft EIR discusses a potential off-site alternative on page 7-4. The Draft EIR explains that Stanford operates off-campus facilities where doing so is consistent with its educational mission, and Stanford is constructing a campus in Redwood City to house administrative departments that do not need to be on the academic campus lands in unincorporated Santa Clara County. The Draft EIR explains why moving the development proposed under the 2018 General Use Permit to an offsite location would not accomplish the project objectives. Because an EIR need not evaluate an alternative that is not capable of accomplishing most of the project's basic objectives, the EIR does not further evaluate an offsite alternative.

4.3.9 Master Response 9: Population and Housing Methodology and Calculations

Topic 1: Stanford's Growth Rates

As stated on Draft EIR Section 5.12, Population and Housing, page 5.2-12 and Draft EIR Appendix POP Section 2, in order to estimate the increase in Stanford student, faculty and staff population, Stanford calculated the Compound Annual Growth Rate (CAGR) for each population group using Stanford population data for those population groups from 2000 to 2015. The CAGR was then applied to each population segment to calculate the anticipated populations in 2035. As described on Draft EIR page 5.2-12, additional assumptions were incorporated into the population

growth rates for three population segments (undergraduates, postdoctoral students, and the "other teaching" component of the faculty population) in order to more accurately estimate growth for these populations. Draft EIR Table 5.12-7 (page 5.2-12) presents the projected 2035 population under build-out of the proposed 2018 General Use Permit, which reflects an approximate 1.2 percent CAGR. Compound Annual Growth Rate is a widely accepted method of projecting population as it accounts for fluctuations over time.

Topic 2: Clarification Regarding "Other Workers"

Several commenters stated that "other workers" are typically lower-wage than Stanford staff. However, Stanford's staff population includes most of the lower-wage employees that commenters appear to assume are in the Other Workers category. Draft EIR Table 5.12-7 shows the anticipated increase of 2,438 regular benefits-eligible employees on campus under the proposed 2018 General Use Permit (see On-Campus Staff category).

Based on University Human Resources data, the list below shows occupations that are included in the On-Campus Staff category, but are sometimes thought of as occupations that fall under third-party or "other workers" categories:

- Administrative Associates, Analysts, Program and Research Coordinators and Specialists;
- Custodians and Custodian Leaders (excludes those that are under third-party contracts);
- Equipment, Ventilation Mechanics and Specialists;
- Food Service Workers of all levels in residential dining halls (excludes those under third-party contracts in on-campus cafeterias);
- Groundskeepers, Greenskeeper (golf course maintenance), Gardeners, Tree Specialists;
- Maintenance Workers of all levels, Carpenters, Electricians, Plumbers;
- Technicians in Life Sciences, Media, Road Maintenance, Sprinkler/Landscape, Telecommunications, etc.; and
- Telecommunications Attendants.

Draft EIR Table 5.12-8 (page 5.2-13) describes the potential increase of "Other Workers" under the proposed 2018 General Use Permit. These populations fall primarily into a few categories:

- An increase of 1,239 casual, contingent, and temporary workers who work less than 50 percent time
- An increase of 733 non-employee affiliates[7]
- An increase of 72 third-party contract workers, consisting of food service workers at on-campus cafeterias such as Coupa Café, and childcare workers
- An increase of 57 janitorial workers, who are third-party contractors

[7] As discussed in the Draft EIR, other non-employee academic affiliates include affiliated teaching staff, adjunct professors, and visiting scholars. These are not typically full-time positions, with some members of this population visiting the campus only 20 percent of the time.

The individual incomes of the occupation examples above are spread out across the compensation spectrum. The Commute Survey matches affiliate type (e.g., faculty, staff), not job titles (e.g., Accountant, Food Service Worker), to household incomes.

The Draft EIR states that Other Workers were not surveyed in the 2016 Commute Survey used to determine household incomes.

As illustrated above, the occupation categories for both staff and other workers is wide-ranging and includes workers of all income levels. Therefore, the responses of the regular benefits-eligible staff were used to support the technical analyses of staff and other workers in the Draft EIR, as 4,023 out of 8,612 on-campus staff answered the survey, representing 47 percent of the on-campus staff body.

Some commenters assert that Stanford is ignoring the growth trend of subcontracted workers. Draft EIR page 5.12-13 states that "third-party and janitorial contract workers were estimated to grow at the same rate as occupied academic and academic support square footage (22.1 percent from Fall 2018 to Fall 2035).

Topic 3: Off-Campus Households and Household Adjustment Factors

Several commenters ask about the methodology used to calculate the off-campus housing demand and request clarification concerning the reduction of faculty off-campus housing demand. As stated in the Draft EIR on page 5.12-17, the Population and Housing analysis assumes that Stanford is responsible for the fraction of the household that corresponds to the number of workers per household that are affiliated with Stanford. In other words, only the housing need generated by the Stanford employee is attributable to Stanford, which is a fraction of an entire household. As an example, if a Stanford employee lives with a spouse who is employed by the City of Palo Alto, then the analysis would assume Stanford is responsible for half the household and the City of Palo Alto is responsible for half the household. Each entity in this example generates demand for half a household.

Under the proposed Project, there also would be housing units constructed on-campus. When a new affiliate moves into new on-campus housing, the housing is conservatively assumed to house only one Stanford affiliate per unit.[8] However, the Stanford affiliate may bring a spouse/partner (i.e., the working adult employed elsewhere) onto campus as well. Some of these spouses/partners (which are adults that may be employed elsewhere) who are brought onto campus may have previously occupied a housing unit elsewhere in the Bay Area, but that spouse/partner's housing need now would be fulfilled by living in on-campus housing.

For faculty, staff and other workers, the Draft EIR assumes 1.76 employed adults per household, which is the "household adjustment factor" determined from the 2011-2015 American Community

[8] It is possible that more than one Stanford affiliate might choose to live in one housing unit, but neither the analysis of off-campus demand nor the analysis of on-campus housing occupancy relies on that assumption.

Survey.[9] The household adjustment factor is not the same as household size, which would include other non-working household members such as children. For graduate students and postdoctoral scholars off-campus, the household adjustment factor is the average number of employed adults per household, determined from the 2016 Commute Survey conducted by Stanford. The household adjustment factor used for graduate students and postdoctoral scholars off-campus was determined using Stanford-specific data because these two groups have household characteristics that are different from typical workers.

In the analysis of off-campus households in Draft EIR Appendix PHD and presented in Draft EIR Section 5.12, Table 5.12-7, the Project would generate 789 new faculty, 961 postdoctoral students, and 2,438 staff. The Draft EIR explains that the Project also includes 550 on-campus housing units that may be occupied by faculty, staff, and postdoctoral scholars. For purposes of analysis, the Draft EIR assumes the 550 on-campus units are faculty units, with each unit occupied by one faculty member. If 550 out of the 789 new faculty members are assumed to live in new on-campus housing, then 239 new faculty members would live off-campus.

The household adjustment factor was then used to calculate the non-Stanford population (i.e., the other employed adults in the same household as the Stanford affiliate), who would be brought onto campus with the 550 housing units. 550 units is multiplied by 0.76 (subtracting 1 from 1.76 to account for the Stanford affiliate), which results in 418 non-Stanford working adults living in the new on-campus housing units thereby reducing the demand for off-campus housing. The 418 non-Stanford working adults living in the new on-campus housing would offset the housing demand generated by the 239 Stanford faculty who would live off-campus. The non-Stanford working adults being supplied with housing on campus (418) subtracted from the off-campus housing demand of Stanford faculty (239) results in a net reduction of 179 individuals needing housing off-campus. The household need of 179 workers divided by the household adjustment factor of 1.76 working adults per household, results in a net negative of 102 households with off-campus housing needs.

The net negative of 102 housing units needed off-campus for faculty was added to the positive off-campus housing need of other categories of Stanford affiliates, to arrive at an aggregated off-campus housing need for 2,425 households (i.e., 2,425 housing units) shown in Draft EIR Appendix PHD Table 12.

In the case of postdoctoral students, there is data about their off-campus household adjustment factor, but there is no data about their on-campus household characteristics. However, in calculating housing demand for the Additional Housing Alternatives A and B analyzed in the Recirculated Portions of the Draft EIR, postdoctoral students are assumed to take on the household adjustment factor of faculty, staff, and other workers when they are assumed to live in on-campus housing. The

[9] Table B08202: Household Size by number of Workers in Household, 2011-2015 American Community Survey 5-Year Estimates,https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t, Type in "B08202" for "Santa Clara County, California" in the Search bar. Select 2015 ACS, 5-year estimate. There is a range of the number of employed workers per household (ranging from 1 to 3 or more), and 1.76 is the average. The total number of households with 1 or more workers is 503,604.

Table S0802: Means of Transportation to Work by Selected Characteristics, 2011-2015 American Community Survey 5-Year Estimates. Dividing 885,472 by 503,604 is 1.76 workers per worker household.

off-campus and on-campus household adjustment factors for postdoctoral students are therefore 2.14 and 1.76, respectively. This means that conservatively, the analysis for the Additional Housing Alternatives A and B assumes that fewer non-Stanford adult workers would accompany postdoctoral students when they are brought into on-campus housing.

Some commenters requested a total population chart for off-site affiliated housing, similar to how the family members of on-campus graduate students, faculty and staff were indicated. The Draft EIR includes family members of graduate students, faculty, and staff in the projections of on-campus residents. The number of family members living on-campus is relevant for purposes of calculating the environmental impacts of Stanford's proposal to build housing on campus. For example, the spouse of a faculty member living on campus could make trips off-campus commuting to the (spouse's) workplace in Fremont, but if the same faculty member lived in San Jose, then the commute trips made by the spouse from San Jose to Fremont are not relevant to this EIR analysis. The population and households projected off-campus are found in Draft EIR Appendix PHD Tables 12 and 14, but these tables do not show numbers for family members, and such information is not necessary for the CEQA analysis.

Topic 4: Use of Stanford Commute Survey

Some commenters question the use of Stanford's Commute Survey in developing the distribution of off-campus housing demand. The technical analyses in the Draft EIR rely on information gathered in the Stanford Commute Survey. In the Commute Survey, respondents choose to provide work and home address information in a standardized format, in response to specific questions. The standardization allows for the data to be aggregated and analyzed to produce meaningful results. The Survey response rate, at an overall response rate of 33 percent, and has been corrected for potential biases, which makes the survey statistically significant and reliable for determining Stanford affiliate work and home locations.

The 2016 Commute Survey was a campus-wide survey conducted by Stanford. According to Stanford's Parking and Transportation Department, the response rates needed in this survey for a 95 percent confidence interval were 4 percent and 16 percent for graduate students and postdoctoral students, respectively, however the actual response rates were 29 percent and 37 percent, respectively, and the results were also weighted to account for potential biases. Therefore, the survey dataset is Stanford-specific, statistically significant, and represents the best set of assumptions available for the purposes of projecting Stanford's population.

Some commenters assert that using Stanford's current off-campus population distribution would not be reasonable given the recent increase in housing prices. The residential distribution used in the Draft EIR utilized existing information, which is the best information available to project future conditions. The Vehicle Miles Traveled (VMT) analysis presented in the Draft EIR Section 5.15 conservatively assumed a 2-3 percent increase in trip lengths to reflect assumptions from Plan Bay Area[10]. If future employees commute slightly farther than the existing population

[10] See Plan Bay Area, adopted by the Metropolitan Transportation Commission and Association of Bay Area Governments, is the region's first integrated land use and transportation plan.

commutes, those future employees would be distributed slightly more broadly than assumed in the population and housing projections. This would not change the conclusions provided in the Draft EIR.

Topic 5: Housing Linkage Ratio and Timing

Commenters question whether the housing linkage ratio should be increased to require more units in response to the region's housing crisis. The existing linkage ratio was imposed as a condition of the 2000 General Use Permit. It was intended to ensure that construction of the number of housing units that Stanford proposed to develop over the life of the 2000 General Use Permit kept pace with construction of the academic square footage authorized under that General Use Permit. This condition implements the Stanford Community Plan (pp. 49-52), which "requires that Stanford construct housing "prior to or concurrently with approved increases in academic space." (Policy SCP-H7, p. 51.)

Although the 2000 linkage ratio was not a mitigation measure for environmental impacts associated with development under the 2000 General Use Permit, it is an important policy matter that the County Board of Supervisors will consider when it decides whether, and under what conditions, the 2018 General Use Permit should be approved. The public will have the opportunity to provide comment on this issue during public hearings before the County Planning Commission and Board of Supervisors.

Impacts of the Project on housing supply are a socioeconomic issue not required to be analyzed in the Draft EIR. Nevertheless, the Recirculated Portions of the Draft EIR do discuss the indirect impacts of off-campus housing associated with the Project (Impact 5.17-1), and analyze the impacts of two new alternatives that provide additional housing on campus. For the purpose of comparison and to assist the public and decision-makers in understanding the implications of the construction of higher levels of housing on the Stanford campus, and to allow the County the option to select one of these alternatives at the conclusion of the CEQA process, the County evaluated two Housing Alternatives under which additional quantities of on-campus housing would be added to the proposed Project. The analysis of Additional Housing Alternative A and Additional Housing Alternative B will be presented to the County Board of Supervisors along with comments on the Draft EIR to assist in the Board's consideration of whether more housing should be constructed on the Stanford campus.

Topic 6: Job Multiplier

Commenters requested more information about the environmental impacts of indirect population growth, particularly of service workers. On-campus service workers are included in the direct population growth attributed to the proposed Project as explained in Topic 2, above. This assumption may differ from studies completed for other projects, which may treat service workers as indirect rather than direct job growth. For the proposed Project, on-site staff and other workers have been included in the calculations of direct population growth attributable to the Project. Draft EIR Appendix PHD further explains that job multipliers are stated as the ratio of indirect and induced jobs generated outside the university to the number of jobs provided directly by that

institution. The indirect and induced jobs are those found at the off-campus businesses supported by direct university expenditures as well as the expenditures by the employees of the university.[11] Draft EIR Appendix PHD Table 16 presents multipliers identified in studies of other colleges and universities, which range from 0.33 to 1.36 due to several factors described in the appendix.

While the multipliers cover a broad range, at 0.73 indirect and induced workers per University of San Francisco worker, the USF study[12] may provide the best "order of magnitude" estimate for regional impacts for Stanford, as it is in the same Bay Area region with the same range of available local goods and services. If Stanford's projected increase of 5,262 jobs were multiplied by 0.73, then an additional 3,843 jobs could be indirectly induced by campus growth. It is unknown where such workers would choose to live; presumably they could live anywhere in the Bay Area and may or may not travel to the Stanford campus vicinity.

Draft EIR Chapter 6, Section 6.4.3 discusses the environmental effects of such indirectly caused and induced growth. As discussed on Draft EIR page 6-7, the indirect and induced job growth (3,843 jobs) resulting from increased employment at Stanford would represent a small fraction of the regional projections of 835,240 new jobs in the Bay Area from 2015 to 2040. While the Draft EIR acknowledges that the proposed Project would likely increase overall demand in the region for housing and infrastructure, it also explains that it would be speculative to conclude where such workers would reside or be employed in the Bay Area, or to determine any associated environmental effects.

Growth near Stanford caused by new companies, e.g., technology spinoffs and consulting firms, (whether or not founded by Stanford alumni) is not attributable to the Project. If the new company requires the construction of a new office building, the environmental impacts of the building and its effects on traffic, air quality, and other environmental topics would be analyzed at that time, and population growth would be attributed to the new company. Other jurisdictions would exercise their land use authority in deciding whether or how to allow such growth.

Some commenters assert that the multiplier effect of Stanford's growth on the local economy, housing, transportation and infrastructure is higher than estimated, and contend that ABAG's projections are not accurate as they are based solely on square footage. Thus, comments assert that more housing should be provided to accommodate the regional growth. The growth projected by ABAG for the 2015-2040 timeframe is detailed in Projections 2013 and Plan Bay Area.[13] These are policy considerations for the County Board of Supervisors to consider when it determines how much housing Stanford University should build.

11 Indirect jobs are those at the suppliers of goods and services for the university, while induced jobs are created through the expenditures of the university and supplier workers' household expenditures.

12 *University of San Francisco Economic Impacts*, October 2012, BAE Urban Economics.

13 See https://abag.ca.gov/planning/housing/projections13.html; and https://www.planbayarea.org/.

4.3.10 Master Response 10: Affordable Housing

Topic 1: Affordable Housing Need

Some commenters request additional information with regard to housing demand by affordability category (e.g., "very low," "low," "moderate"), assert that non-academic service staff have been displaced from the Bay Area to the Central Valley, request that Stanford build more affordable housing both on- and off-campus, and assert that the Draft EIR does not show demand for affordable units off-campus in Palo Alto or elsewhere. As explained in Master Response 9, affordable housing issues associated with the 2018 GUP are important policy matters for the County Board of Supervisors to consider when it decides whether, and under what conditions, to approve the GUP.

Separate from the Draft EIR, the County has been analyzing the affordability of the housing need generated by the Project in an Affordable Housing Fee Nexus Study commissioned by the County Board of Supervisors. The section on Stanford's population assumptions can be found in the Affordable Housing Nexus Studies, Attachment C, pages 6-8.[14]

Also, please note that impacts of the Project on affordable housing need, as well as the specific affordable housing topics discussed below (including the use and distribution of the affordable housing fund, the amount of the affordable housing fee, and the relationship of on-campus affordable housing to the RHNA), are socioeconomic issues not required to be analyzed in the Draft EIR. Nevertheless, the Recirculated Portions of the Draft EIR do discuss the indirect impacts of off-campus housing associated with the Project (Impact 5.17-1), and analyze the impacts of two new alternatives that provide additional housing on campus.

Topic 2: Historic Use of Stanford Affordable Housing Fund

The 2000 General Use Permit requires Stanford to provide one affordable housing unit for every 11,763 square foot of constructed academic square feet (or 173 affordable units in support of 2,035,000 gross square feet of academic facilities), or pay an in-lieu housing fee tied to the City of Palo Alto's assessed commercial fee.

Since 2000, Stanford has been contributing to the County's "Stanford Affordable Housing Fund" with each additional academic square foot added to the campus. As described in Draft EIR, Appendix HSG, Section 2.3, Stanford has paid approximately $25.7 million dollars into the County-administered Stanford Affordable Housing Fund through affordable housing contributions for each square foot of academic development constructed on campus. These funds resulted in the construction or rehabilitation of 286 affordable units in five affordable housing projects, four of which (259 units) are located in Palo Alto. The current balance of the Stanford Affordable Housing Fund has been committed to the acquisition of the Buena Vista Mobile Home Park in Palo Alto, which resulted in the preservation of 116 units of affordable housing.

[14] Available at https://www.sccgov.org/sites/osh/HousingandCommunityDevelopment/Pages/Nexus-Study-Documents.aspx.

To date, the Stanford Affordable Housing Fund has contributed to the construction, rehabilitation, or acquisition of 375 affordable housing units in Palo Alto since 2000 under the 2000 General Use Permit.

Topic 3: Future Contribution to Affordable Housing Fund

Some commenters assert that Stanford's proposed contribution of $20 per square foot is too low as an affordable housing fee, and that $25 per square foot is more commensurate with other nearby jurisdictions. Commenters also stated that the fee amount should be based on the current Nexus Study that the County of Santa Clara has commissioned. Some commenters state that the fee should be linked to the Consumer Price Index (CPI) and construction costs, whereas other commenters state that housing construction costs have outpaced the CPI.

The County completed an Affordable Housing Nexus Analysis Addendum Addressing the Stanford University Campus ("Stanford Addendum"), which provided an analysis of potential affordable housing fees that could be imposed to address the socioeconomic housing impacts of development on the Stanford campus pursuant to the 2018 General Use Permit. On September 25, 2018, the County Board of Supervisors voted to increase the affordable housing fee within the Stanford Community Plan area to $68.50 per square foot starting July 1, 2020.

The amount of the affordable housing fee is not a CEQA issue, but rather a policy decision for the Board of Supervisors.

Topic 4: Process for Distribution of Affordable Housing Funds

Some commenters request clarification regarding the process for deciding how the funds are distributed. Currently, the County Board of Supervisors decides how these funds are disbursed to individual affordable housing projects based on recommendations from the County Office of Supportive Housing. The funds are currently disbursed to affordable housing projects within 6 miles of the Stanford campus boundary. The past projects that received funding from the Stanford Affordable Housing Fund also received other sources of funding. Stanford affiliates have no priority in such housing projects. If Stanford affiliates apply to live in the completed affordable housing development, their applications are processed under the same criteria as any other applicant.

Commenters also state that funding should be allocated to cities commensurate with the level of impact (i.e., number of housing units anticipated). This is a policy decision that the County of Santa Clara would need to consider at the time of Project consideration.

Topic 5: Geographical Distribution of Affordable Housing Funds

In the 2018 General Use Permit application, Stanford proposes that its continued 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 (SB) 375], and should not be limited to within a six-mile radius of campus as it is under condition F.6.c of the 2000 GUP. 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.

Some comments oppose changing the 6-mile radius for the disbursement of funds, based on the rationale that housing impacts are locally concentrated; other comments support the expansion of the geographical distribution to areas served by high-quality transit. There were also comments to consider a geographical distribution to areas with high-quality transit, but within a reasonable commute shed. Some comments were concerned that the larger geographical distribution could be unfair for cities that are underserved by transit. Some comments requested distribution to specific cities. Similar to the other considerations regarding affordable housing funds, this is a policy decision that the County Board of Supervisors would consider at the time of Project consideration.

Topic 6: Regional Housing Needs Assessment Affordable Housing Credit

Some comments question the County's application of Stanford housing toward its Regional Housing Needs Assessment (RHNA) allocation, ask why the anticipated 900 graduate student units could result in 450 units that the County could credit toward a future RHNA allocation, and include a request from the City of Palo Alto to partner with the County during the next Housing Element cycle. Although these comments do not pertain to an environmental impact for CEQA purposes, the following information is provided for clarification.

The Department of Housing and Community Development states in its guidance documents that student housing that is constructed as separate living quarters, per the census definition, may be counted towards a jurisdiction's RHNA progress.[15]

As stated in the County of Santa Clara's 2015 Housing Element (pp. 93–94), Stanford's apartment-style graduate student, faculty, and staff housing help to satisfy the housing need of unincorporated Santa Clara County over a range of income categories. The Housing Element also states that "while this housing is directly accessible only to Stanford students, faculty, staff, and their families, it benefits the wider community by augmenting the local housing supply" (page 97).

Stanford's housing units in unincorporated Santa Clara County are constructed on Stanford lands with Stanford funds, not with public funding. Therefore, Stanford has no legal obligation to make such housing available to non-Stanford affiliates. However, as noted above, housing for Stanford affiliates increases the local housing supply.

In the County's 2015 Housing Element, apartments and studios for graduate students count towards the RHNA (page 105). Draft EIR Appendices BCR and HSG also state that an affordable housing unit must have a kitchen for RHNA purposes (p. 4.41, 4.42, 6.14). Based on past graduate student housing projects, Stanford made the conservative assumption that 900 beds might be constructed as apartment-style units with a shared kitchen between two bedrooms, resulting in approximately 450 potential affordable housing units. Depending on the ratio of 1-bedroom and 2-bedroom units that are built in the future, there could be more than 450 potential affordable housing units developed on campus.

15 See http://www.hcd.ca.gov/community-development/housing-element/docs/APR_FAQs11302017.pdf.

Some commenters assert that the housing need generated by unincorporated spheres of influence (SOI) was assigned to cities, and therefore the County's RHNA figures do not account for Stanford's housing impact. ABAG is responsible for establishing the regional housing need allocations. Page 14 of the County's 2015 Housing Element specifically explains that the cities' RHNA allocations include housing that would occur within the cities' SOI, even if the cities' SOI includes unincorporated areas. This general rule of allocating growth and housing need within a city's SOI to the city contributes to the low RHNA apportioned to the County. However, the Housing Element also points out that Stanford University's unincorporated campus lands are located within Palo Alto's SOI, but are not intended to be annexed to Palo Alto. The County has had planning and permitting authority for the academic campus lands for many years, and therefore the portion of the RHNA allocation relating to growth and development on Stanford's academic campus lands "appropriately resides with the County."

During the RHNA review and appeal process for the 2015-2023 Housing Element cycle, the City of Palo Alto requested that the County accept a transfer of some RHNA allocations from the City to the County. After discussion and analysis, the County agreed to accept a transfer of responsibility for 200 Moderate Income RHNA units from the City to the County. Comment A-PA-6 requests a similar partnership for the 2023-2030 Housing Element cycle. Any adjustments of future RHNA allocations may be considered by the decision-making bodies of the affected jurisdictions at the time of the next RHNA review and appeal process.

4.3.11 Master Response 11: Public Services

Topic 1: Emergency Access and Response Times

A number of comments were received on the Draft EIR inquiring about how emergency access (police, fire, and medical), were addressed on campus, particularly in light of project construction and congestion from future Stanford-generated traffic.

The Draft EIR addresses potential impacts to emergency service providers in several contexts. The Draft EIR Section 5.15, Transportation and Traffic, Impact 5.15-1 addressed the potential for the Project construction traffic to reduce mobility and access to land uses. As discussed in Impact 5.15-1, the type and intensity of construction activities under the proposed 2018 General Use Permit, and the associated level of construction traffic, would be similar to that which has occurred under the 2000 General Use Permit. Impact 5.15-11 noted that these impacts would be potentially significant, and Construction Traffic Control Measures are required to be implemented (Mitigation Measure 5.15-1). One of several of the traffic control measures identified in the measure includes protection and maintenance of emergency service access and routes. As slightly modified in Chapter 2 in this Response to Comments Document, Stanford shall inform the Stanford Police and Palo Alto Fire Department of construction locations, and alternate evacuation and emergency routes shall be designated to maintain response times during construction periods. Implementation of the Construction Traffic Control measures would ensure potential effects on reduced mobility during construction would be mitigated to less-than-significant levels. In addition, Draft EIR Section 5.13, Public Services, Impact 5.13-1 concluded that the Project would result in a

less-than-significant impact from the construction of additional fire protection, emergency medical, or police protection facilities in order to maintain acceptable performance standards.

The Draft EIR Transportation and Traffic Impact 5.15-7 addressed the potential for implementation of the proposed Project to result in inadequate emergency access during Project operation, including as a result of any physical features that could block or delay emergency access, or as a result of high levels of congestion that lengthen the response time of emergency providers. Impact 5.15-1 acknowledged that the proposed Project traffic analyses indicated significant impacts (increased congestion/delays) at study intersections in both 2018 with Project and Cumulative 2035 with Project conditions, and identified intersection capacity mitigations, as feasible. Impact 5.15-1 also noted that emergency responders are charged with developing fastest-response travel routes and assessing traffic conditions and developing alternate routes in real time to provide emergency services. Impact 5.15-1 concluded that the significant impacts at area intersections would not result in inadequate emergency access within the traffic study area, and the impact on emergency access would be less-than-significant. In addition, Draft EIR Section 5.13, Public Services, Impact 5.13-2 concluded that operation of the proposed Project would result in a less-than-significant impact from the construction of additional fire protection, emergency medical, or police protection facilities in order to maintain acceptable performance standards. The Draft EIR Impact 5.13-6 similarly concluded that cumulative operational impacts to emergency service providers would be less than significant.

Furthermore, as stated in the Draft EIR, page 5.13-11 the California 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. In 2015, a California Court of Appeal held that a population increase caused by a project that would result in delayed emergency response times is not an environmental impact that must be mitigated under CEQA; rather, 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.[16] Therefore, because there are no significant impacts identified in the Draft EIR related to response times, the presence of a delay would not result in a duty to mitigate under CEQA.

4.3.12 Master Response 12: Public Schools

A number of comments were received on the Draft EIR and Recirculated Portions of Draft EIR addressing student yield rates, enrollment projections, and the potential need for additional land for an elementary school. This master response addresses comments of this nature.

As an initial matter, please note that there are specific state statutory provisions pertaining to school impacts and mitigation that preempt local requirements.[17] These specific statutory provisions provide "the exclusive methods of considering and mitigating impacts on school facilities,"[18] and are "deemed to provide full and complete school facilities mitigation."[19] Consequently, the County

16 See *City of Hayward v. Board of Trustees of the California State University* (2015) 242 Cal.App.4th 833, 843.
17 Government Code Sections 65995, 65996. Section 65996(b) prohibits cities and counties from denying approvals of land use projects on the basis of inadequate school facilities.
18 Government Code Section 65996(a).
19 Government Code Section 65996(b).

does not have authority to require Stanford to pay additional fees, dedicate land, or comply with any other requirements associated with increased school enrollment.

In certain limited circumstances where a school district has determined that there are conditions of overcrowding that impair normal educational program functioning, local jurisdictions may require residential developers to dedicate land or pay in lieu fees in an amount sufficient to provide five years of interim classroom facilities to address the school needs caused by their developments.[20]

Topic 1: Student Generation Rate and Enrollment Forecasts

Student Generation Rate

Several PAUSD comments question the student generation rate considered in the Draft EIR and Recirculated Portions of Draft EIR. Several comments suggest that the student yield rate of 0.98 student/unit should be used for Stanford's proposed 550 units of faculty/staff housing under the Project in the Draft EIR, and for the additional on-campus housing under Additional Housing Alternative A and Additional Housing Alternative B in the Recirculated Portions of Draft EIR.

The Draft EIR Section, 5.13 Public Services, and Recirculated Portions of Draft EIR (Section 7.4.4, pages 2-160 to 2-162, and Section 7.4.5, pages 2-363 to 2-365) used student generation rates of 0.23 for elementary school, 0.12 for middle school, and 0.15 for high school were used, for a total student generation rate of 0.50. These student generation rates were consistent with the "moderate" student generation rates used by PAUSD's demographer, DecisionInsite, in its Fall 2016 Residential Research Summary Report. The PAUSD yield rate of 0.50 students/unit was also recently used in the Palo Alto Comprehensive Plan Update Final EIR.[21] As explained below, the 0.50 student generation rate used in the EIR is more than 30 percent higher than actual student generation rate of 0.38 for existing Stanford faculty/staff housing, and is therefore conservative.

PAUSD data was gathered for updated student enrollments from 2016/17 for existing Stanford faculty/staff multifamily housing on and near the campus. **Table MR12-1**, below, identifies the yield rate for each Stanford housing complex, distributed by unit type.[22] Table MR12-1 shows the existing faculty/staff multi-family housing on and near the campus yields a student generation rate of no more than 0.38.

20 Government Code Section 65970 *et seq*.

21 The Palo Alto Comprehensive Plan Draft EIR (February 2016) used a student yield rate of 0.18 students/unit, which was provided by PAUSD in 2015. The Supplement to the Draft EIR used an updated multi-family student yield rate of 0.50, also provided by PAUSD which was maintained for Final EIR for the Comprehensive Plan. It should be noted that the Menlo Park General Plan Final EIR (2016) used a yield rate of 0.44 for new single-family housing and 0.18 for new multi-family housing.

22 The PAUSD data showed that there is one PAUSD student living at the 108 multi-family units at 1100 Welch Road. That complex was not included in the statistics below. If 1100 Welch Road were included in the table below, Stanford's average student yield rate would be even lower.

TABLE MR12-1
STANFORD STUDENT YIELD RATE

Stanford Housing Complex	Unit Type	Total Enrollment 2016/17	Total Units	Yield Rate
Pearce Mitchell	1 BR	0	8	0.00
	2 BR	12	60	0.20
	3+ BR	2	14	0.14
Total		**14**	**82**	**0.17**
Peter Coutts	2 BR	21	78	0.27
	3+ BR	43	62	0.69
Total		**64**	**140**	**0.46**
Stanford West	1 BR	17	273	0.06
	2 BR	138	293	0.47
	3+ BR	92	62	1.48
Total		**247**	**628**	**0.39**
All	1 BR	17	281	0.06
	2 BR	171	431	0.40
	3+ BR	137	138	1.00
Total		**325**	**850**	**0.38**

SOURCE: Stanford, 2018

The housing under the proposed Project or additional housing alternatives would be located within the Academic Campus land use designation, which has a minimum density of 15 units/acre for faculty/staff housing (Community Plan Policy SCP-LU 3). Stanford's proposal for 550 housing units under the proposed Project in the Quarry Development District would result in a density of 40 units/acre. Therefore, it is reasonable to assume that the new housing units under the proposed Project would be multi-family housing units. Similarly, as discussed in the Recirculated Portions of Draft EIR (pages 2-160 and 2-363) the additional housing assumed under Additional Housing Alternative A and Additional Housing Alternative B would be multi-family units (and depending on development district could have densities of between 40 and 80 units/per acre), and therefore, the multi-family student generation rate would remain applicable for these alternatives.

Table MR12-2, below, quantifies potential student yields from Stanford's proposed multi-family housing under the Project by applying existing yield rates to a range of potential combinations of one, two and three bedroom units. The high end of the range mirrors the existing combination of unit types on Stanford land. The proposed density of 40 units/acre for the Project would be much denser housing than currently exists at Stanford and would likely result in smaller units that would have lower student yield rates. Accordingly, the table also includes two scenarios with smaller units than the current unit mix on Stanford land. Finally, for comparison, the table shows the student yield rates assumed for the Project in the Draft EIR based on the PAUSD data described above:

TABLE MR12-2
PAUSD STUDENT YIELD RATE FOR PROJECT

Housing type	Yield rate	PAUSD students
All 1-br	0.06	33
Half 1-br, half 2-br	0.23	127
Same distribution as existing Stanford multi-family units (42% 3-br units)	0.38	209
PAUSD 2016 published multi-family rate	**0.50**	**275**

The PAUSD yield rate of 0.50 students/unit used in the Draft EIR is substantially higher than the yield rates that would be expected under the range of reasonably foreseeable combinations of unit types on Stanford land indicated in Table MR12-2. Therefore, the 0.50 students/unit rate that the County relied upon is reasonable to use for the Project in the environmental analysis. Similarly, given that the expected density for additional on-campus housing under the additional housing alternatives would be even greater than the Project (i.e., 40-80 units/per acre), the 0.50 students/unit rate is also reasonable for use for the additional housing alternatives.

In its comment letter on the Draft EIR, PAUSD attached a new Residential Research Summary Report (Residential Research Summary, Winter 2018, DecisionInsite, January 2018) that presented higher student yield rates (0.66 to 0.98), depending on the type of housing, than were used in the Draft EIR (and Recirculated Portions of Draft EIR), and suggested using 0.98 students/unit rate as a more appropriate forecast for Stanford's proposed housing. Review of the Winter 2018 report by the County and Stanford shows the student yield rates in the housing sites included in the report range from 0.14 for condominium-style units to 0.98 for single-family homes. Therefore, the 0.98 student generation rate PAUSD suggests using is the average yield rate for recent *single-family* projects in Palo Alto.

As described above, Stanford would not build single-family homes under the proposed 2018 General Use Permit or under the additional housing alternatives, and therefore a yield rate of 0.98 would not be appropriate for estimating Stanford's student generation rate in this EIR. The Winter 2018 report applies a yield rate of 0.66 students/unit to multi-family housing.[23] However, it appears that all housing sites used to derive this rate were small (50 units or less) Below Market Rate (BMR) housing developments. There is no indication that these units are indicative of student yield rates that would result from on campus multi-family housing provided by Stanford, particularly when the actual Stanford-specific yield rates are much lower.[24]

Consequently, given all the reasons discussed above, the 0.50 student/unit yield rate used in the Draft EIR and Recirculated Portions of Draft EIR is a reasonable and conservative estimate of new school-age students that would be generated under the proposed Project or additional housing alternatives.

[23] It should be noted that the Mayfield Place Below Market Rate (BMR) project was not included in the calculation of multi-family housing because it is not at maturity. If it were included, the student yield rate would decrease from 0.66 to 0.58.

[24] For example, the Stanford West Apartments include a combination of market rate and BMR units. That apartment complex generates a total student yield rate of 0.39 students per unit.

Enrollment Forecast

The Draft EIR Section 5.13 presented PAUSD enrollment forecasts through its planning horizon of the 2026/27 school year under its moderate projection scenario; these enrollment forecasts were based on available PAUSD forecast data from 2016. The Draft EIR, page 5.13-6, and Recirculated Portions of Draft EIR (Section 7.4.4, page 2-160 and Section 7.4.5, page 2-364) reported that PAUSD middle school enrollment currently exceeds PAUSD middle school capacity, whereas PAUSD elementary and high school enrollment are within PAUSD capacity. The Draft EIR and Recirculated Portions of Draft EIR also noted that PAUSD projected a decline in both its elementary and middle school student enrollment through its planning horizon of 2026/27; and that while PAUSD projected a near-term increase in its high school enrollment until 2020, it projected a decline in its high school enrollment thereafter through 2026/27. The Draft EIR and Recirculated Portions of Draft EIR also noted that the projected decline in enrollment would further serve to lessen the effect of Project-generated school-age children that would attend PAUSD schools on student capacity.

The Draft EIR and Recirculated Portions of Draft EIR indicated that, if conservatively assuming that all of the students generated under the Project-generated students would be added to the PAUSD schools prior to PAUSD's planning horizon of 2026/27, when considering the existing student capacities of PAUSD schools and the declining PAUSD enrollment forecasts through its 2026/27 planning horizon, there would be sufficient remaining capacity in PAUSD elementary, middle and high school categories to accommodate all the estimated Project-generated students added students in 2026/27.

In its comment letter on the Draft EIR, PAUSD attached and referred to supplemental PAUSD enrollment forecast information (Annual Enrollment Projection Report, DecisionInsite, January 2018) to the prior available PAUSD enrollment forecast in 2016. The 2018 PAUSD enrollment projections were only forecasted through school year 2022/23, but indicated similar near-term enrollment trends, with the exception of PAUSD elementary school enrollment, which under the moderate projection was estimated to experience up to a six percent increase over the next five years.[25]

If using a highly conservative assumption that the entire increase in students that would be generated under the proposed Project would be added to the PAUSD schools prior to PAUSD's current shorter planning horizon of 2022/23, and using the Winter 2018 PAUSD enrollment projections which show higher near-term enrollment, the Draft EIR determined the Project would exacerbate an exceedance in capacity of PAUSD middle schools in 2018/19; but would not result in any exceedances in PAUSD elementary, middle or high school categories in subsequent years. Using the same conservative assumptions for Additional Housing Alternative A and B, the Recirculated Portions of Draft EIR determined these alternatives would result in exceedances in

[25] It should be noted that is not clear that the PAUSD's projected five-year increase in enrollment from its Winter 2018 report will occur given that the projections are based on possible new housing projects that are not active. Active projects include developments that are currently under construction, those with active entitlements, or any proposed future projects. However, DecisionInsite included supplementary possible new housing development projects provided by PAUSD staff that are not active and that DecisionInsite states are "speculative in nature." The speculative projects constitute more than half of the 1,000 new residential units considered in the moderate forecast, and they were assumed to be single-family attached units.

capacity of PAUSD elementary, middle and high schools within the shorter planning horizon of 2022/23.

However, the potential for the proposed 2018 General Use Permit even to contribute to a near-term exceedance in 2018/19 is unlikely because, in actuality, the increase in campus residential population, including school-age students generated by the Project that would be added to PAUSD schools, would not all be concentrated within the first year of the general use permit. It would not be possible to construct and occupy the proposed Project's faculty/staff housing by the end of 2019.

Similarly, the potential for the additional housing alternatives to result in exceedances in capacity of PAUSD elementary, middle and high schools is also unlikely, because, in actuality, the increase in campus residential population, including school-age students generated by the additional housing alternatives that would be added to PAUSD schools, would not all be concentrated within the first five years of the general use permit. It would not be possible to construct and occupy the faculty/staff housing of the additional housing alternatives within five years.

As such, based on information in the Draft EIR and Recirculated Portions of the Draft EIR, and supplemental PAUSD enrollment forecast information sufficient capacity in PAUSD elementary, middle and high school categories would likely exist to accommodate Stanford's estimated new students that would be generated by the Project and additional housing alternatives over the course of the proposed 2018 General Use Permit.

Topic 2: Additional School Site

Certain comments state that another elementary school site is needed for the northwest area of the Stanford campus as mitigation.

As explained under Topic 1, the County does not have authority to require Stanford to pay additional fees, dedicate land, or comply with any other requirements associated with increased school enrollment. However, the Government Code states that its restrictions do not limit County authority to reserve or designate real property for a school site."[26]

The comments state that Escondido Elementary School has an enrollment of over 500 students, and Nixon Elementary School is currently at 440; these enrollment estimates are similar to those reported for those schools in the Draft EIR (Table 5.13-1). As explained above under Topic 2, Enrollment Forecast, it is estimated that PAUSD as a whole could accommodate the elementary school enrollment increase projected to occur under the Project or additional housing alternatives over the course of the proposed 2018 General Use Permit. Further, published reports of PAUSD indicated that there were 32 available elementary classrooms, including at both Nixon and Escondido schools in 2017-18 and that elementary enrollment was expected to decline.[27]

[26] See Government Code Section 65998(a).
[27] Enrollment and Class Size Summary. Palo Alto Unified School District. September 12, 2017. Page 8.

Even if school enrollment were to increase such that more school capacity is needed, PAUSD would have multiple options to explore before building a new school, including reactivating existing school sites such as Cubberley, Greendell and Garland, and utilizing properties currently leased to private school providers, such as Athena Academy, and Pinewood School. PAUSD also maintains an agreement with the City of Palo Alto that allows PAUSD the right to repurchase the Ventura site for educational purposes.[28]

Given all these circumstances, construction of a new PAUSD elementary school appears to be speculative. The Draft EIR and Recirculated Portions of Draft EIR concluded that, while the proposed Project would increase enrollment in local public schools, the Project would not result in adverse physical impact from the construction of additional school facilities in order to maintain acceptable enrollment standards.

With regard to the geography of the Stanford campus, Comment A-PAUSD2-6 implies that residents of the west campus housing will want a school in the west campus location because the commute from the west campus to Escondido and Nixon Elementary Schools could be problematic. Currently, students residing in the west side of campus commute three ways to Nixon and Escondido Elementary Schools: drive students through the Stanford campus, ride a bicycle, or purchase a ride on a bus that is provided by PAUSD. All of these commute options would be viable for new students generated under the proposed Project or additional housing alternatives that would live in the Quarry Development District.

The Stanford Perimeter Trail connects the west side of campus, near the proposed Quarry Road housing sites, to Stanford Avenue on the east side of campus. In addition, as outlined in Chapter 3, Project Description, under the Project, Stanford plans to construct several bicycle and pedestrian supportive projects on the Project site that are designed to serve local area student trips to the Nixon and Escondido Elementary Schools. Stanford proposes to construct the improvements on the Project site that have been identified by the PAUSD and the City of Palo Alto as Suggested Routes to Schools. Circulation improvements on Stanford lands in and around Nixon and Escondido Elementary Schools could include such items as improved crosswalks with high-visibility yellow markings, pavement markings, additional signage, and wayfinding signs and additional traffic control. These bicycle and pedestrian improvements would also occur as part of either of the additional housing alternatives.

In addition, Stanford has committed, as part of the Project, to improve the bicycle infrastructure along Hanover Street between Stanford Avenue and Bol Park Path in Palo Alto, which would improve the bicycle connections from campus to Terman Middle School and Gunn High School, see Chapter 8, Special Considerations, of the Draft EIR. These bicycle improvements would also occur as part of either of the additional housing alternatives.

[28] Ventura Purchase Agreement between City of Palo Alto and PAUSD, 1980.

4.3.13 Master Response 13: Transportation and Traffic

Topic 1: Method for Identifying Study Intersections, Freeway Segments, and Ramps

The Draft EIR pages 5.15-8 through 5.15-13 identifies the methodology that was used for identifying study intersections, freeway segments and ramps. The study boundaries for intersection, freeway segment and ramp analysis were determined based on an assessment of the potential for traffic from the proposed Project to result in significant impacts.

The Draft EIR evaluated 95 intersections and 29 freeway segments. To identify which study intersections would be evaluated, trips were assigned to the roadways and then each intersection that met the Santa Clara Valley Transportation Authority (VTA) 10-trip-per-lane rule was integrated into a point system that considered the following criteria:

- Is the intersection a Congestion Management facility?
- Is the intersection a State facility?
- How close is the intersection to campus?
- What is the level of cross street traffic and access served?
- Was the intersection included in a previous Stanford EIR, either the 2000 General Use Permit or Stanford University Medical Center Renewal and Replacement project?

The freeway segments were selected in consultation with the County, and finalized based on VTA Transportation Impact Analysis (TIA) Guidelines. Freeway segments were included for analysis if the proposed Project was expected to add traffic equal to or greater than one percent of the freeway segment's capacity. Freeway ramps, which provide direct access to and from the Project site via US 101 and I-280, were also selected for analysis.

Topic 2: Existing Intersection, Freeway Ramp, and Freeway Mainline Conditions

Several comments on the Draft EIR question the methodology used to evaluate existing queuing and congestion along major corridors within the City of Menlo Park.

The Draft EIR pages 5.15-13 through 5.15-24 presents existing congestion conditions at intersections, freeway segments and ramps within the applicable study boundaries. The existing conditions intersection LOS analysis in the Draft EIR indicates congested conditions, including LOS D, E and F conditions, in the AM and/or PM peak hours at Sand Hill Road/Santa Cruz Avenue, Bayfront Expressway/University Avenue, Bayfront Expressway/Willow Road, and Willow Road/Newbridge Avenue. The US 101/ Willow Road interchange intersections were under construction during preparation of the Draft EIR traffic analysis, and thus turning movement counts could not be taken at those intersections. Instead, as noted on page 60 of Appendix TIA-REV in this Final EIR, Caltrans Performance Measurement System (PeMS) data during the month of October 2016 were used to determine existing ramp volumes on the Willow Road ramps.

The County follows the VTA TIA Guidelines to model and represent intersection, ramp and freeway conditions. The VTA TIA Guidelines require use of the Traffix 8.0 model. The TIA prepared for the proposed 2018 General Use Permit and the results presented in the Draft EIR reflect the inputs and outputs from the Traffix model. The Traffix model's representation of existing conditions was calibrated based upon the observed field conditions at each of the study intersections, with the exception of the US 101/ Willow Road interchange intersections described above. See Appendix TIA-REV Part 2 (p. 94) which describes how field observations were used to calibrate the model to match field conditions. (As explained above, those intersections were calibrated based on PeMS data collected during the month of October 2016.)

While other modeling tools may be selected by other jurisdictions, the Traffix model is considered by VTA, which is the County's regional congestion management agency with expertise in evaluating traffic conditions, to be a valid and reasonable method for conducting the intersection analysis. It is correct that Traffix is an isolated intersection analysis tool; however, isolated intersection analysis is the method that is commonly used for purposes of assessing intersection traffic impacts under CEQA, and this method is also used by Menlo Park and the San Mateo City/County Association of Governments (C/CAG) to assess intersection impacts. The C/CAG TIA Guidelines accept several software applications for LOS calculations, including Traffix. The City of Menlo Park uses the Vistro software for LOS analysis, which was developed from the Traffix software and applies the HCM methodology similarly to Traffix. The traffic engineers who prepared the TIA for the proposed 2018 General Use Permit, as well as the traffic engineers retained by the County to perform an independent peer review of the TIA, found the method used in the TIA to assess impacts to be valid and reasonable.

The VTA TIA Guidelines require calculation of freeway conditions based on density calculations that the VTA performs bi-annually. These density calculations are not performed for freeway segments in San Mateo County. Therefore, existing conditions calculations of service levels for freeway segments in San Mateo County were based on the 2015 C/CAG Level of Service and Performance Measure Monitoring Report.[29] Freeway ramp analyses evaluate whether the ramp has the capacity to accommodate the additional traffic volume anticipated to result from the proposed Project. Operation of the ramp falls under the responsibility of Caltrans, which manages queue spillback to ensure there is no adverse effect on freeway mainline conditions. Please note that the existing conditions ramp analysis in the Draft EIR at the I-280/Sand Hill Road interchange indicates right turn queues that exceed available storage on the northbound off-ramp in the AM and PM peak hours (refer to Draft EIR Table 5.15-7 on page 5.15-23). The analysis of existing ramp conditions at the US 101/Willow Road interchange indicates that the off-ramp volumes are below the hourly capacity of the ramps (refer to Table 5.15-8 on Draft EIR page 5.15-24).

Topic 3: Travel Demand Forecasts

Several comments stated that the VTA traffic model has known flaws for predicting traffic, which the commenters assert brings into question the validity of the traffic forecasts used to assess traffic impacts in the Draft EIR.

[29] See http://ccag.ca.gov/wp-content/uploads/2015/10/2015-San-Mateo-Monitoring-Report-091415.pdf.

The Draft EIR pages 5.15-61 to 15.15-68 presents the traffic forecasting process used to evaluate future effects of the proposed Project. The forecasting process includes use of the Santa Clara VTA Countywide Travel Demand Model (VTA Model) as the base, and adds the trip generation and distribution for Stanford trip growth.

The modeling approach used by Fehr & Peers was performed in accordance with procedures and standards recommended by Caltrans, the California Transportation Commission, and the national Transportation Research Board. The VTA model was calibrated, as described in the Draft EIR, Appendix TIA (see Appendix I, Forecasting Report, page 9), to take into account factors not always captured in simpler models including intersection and driveway spacing, turning restrictions, and other variables affecting route choice. The resulting model meets or exceeds industry and Caltrans standards. The Draft EIR, Appendix TIA (see Appendix I, Forecasting Report, page 22) provides greater detail on the calibration methods used as prescribed by the National Cooperative Highway Research Program.

For the traffic growth forecasts, the model's base-year calibration is a platform for estimating the future behavior of all traffic in response to changes in both traffic demand volumes and street conditions. The model logic uses traffic flow equilibrium balancing to identify future use of individual streets, taking into account drivers' recognized tendency to select their best available route subject to the choices of all other drivers. The model is able to assess the condition of the overall network and relative competitiveness of alternate routes available to drivers and to route traffic accordingly, recognizing a relatively new capability available to many drivers to select routes informed by app software such as Waze. The resulting forecasts take into account the effects of the street network form and connectivity and variations in traffic over the course of the typical weekday as well as effects of increased traffic at one location on another. The forecasting process predicts where traffic will increase, but also can predict where volumes on certain movements would decrease as traffic shifts in response to the above factors, as is the case for certain traffic movements at Sand Hill Road/Santa Cruz Avenue and El Camino Real/ Ravenswood Avenue, when comparing the Existing, 2018 and 2035 traffic scenarios.

Neighborhood street volumes were estimated based on the major street estimates produced by the model's calibrated and validated travel-time equilibrium forecasts on the major streets such as University Avenue and Stanford Avenue. Because the model's level of specificity does not fully represent local conditions through neighborhoods, methodological steps were taken through model output post-processing to account for the effects of traffic barriers and deflections within the neighborhoods and the proportional routing choices made by current drivers, as described in the Draft EIR Appendix TIA, pages 209 to 217.

The County's consultant, AECOM, peer-reviewed the validation methodology and adjustments, and determined that Fehr & Peers' approach was acceptable. In addition, the County Roads and Airports Department reviewed the modeling assumptions, and also agreed that the approach was acceptable. The above information demonstrates that the model and approach used in the Draft EIR are appropriate and reasonable for analyzing the Project's congestion impacts in the Project vicinity.

2018 Baseline Model

The Draft EIR at pages 5.15-62 and 5.15-63 describes the 2018 Baseline modeling conditions. The Draft EIR Appendix TIA (see Appendix I, Forecasting Report) describes the steps taken to develop traffic forecasts for the TIA used in the Draft EIR.

Selection of the Baseline Year

As discussed in Master Response 6: Approach to 2018 Baseline Environmental Setting and Cumulative Scenarios, the proposed 2018 General Use Permit was not expected to considered by the County for approval until 2018 (now 2019), after which implementation would commence if the permit is approved. For purposes of this EIR, the County established 2018 as the baseline environmental setting to coincide with the approval and first year of implementation of the 2018 General Use Permit. Accordingly, 2018 serves as the baseline year against which environmental impacts of the Project are evaluated.

Model Development

The process for developing the 2018 Baseline scenario for transportation included use of the Santa Clara Valley Transportation Authority (VTA) Countywide Travel Demand Model (VTA Model) for 2020, which includes growth anticipated from new development and employment growth. In addition, the 2018 Baseline scenario for transportation includes construction and occupancy of the remainder of the academic and academic support square footage remaining under the 2000 General Use Permit. The 2018 Baseline scenario for transportation also includes construction of the additional housing units/beds authorized by the 2000 General Use Permit, except that the 2018 Baseline scenario does not include occupancy of the Escondido Village (EV) Graduate Student Residences. This is because occupancy of EV Graduate Student Residences is not anticipated until Fall 2020. Finally, the 2018 Baseline scenario for transportation includes near-term projects near the Stanford campus. The Draft EIR Appendix TIA (see Appendix I, Forecasting Report, Table 4-3 on page 13) lists the near-term projects that were incorporated into the 2018 Baseline model scenarios.

The Draft EIR travel demand forecasts for growth outside the project site (the University campus within unincorporated Santa Clara County) is derived from the VTA-C/CAG Travel Demand Forecasting model, which is maintained by the Santa Clara County Valley Transportation Authority and includes San Mateo County. Several comments asked about traffic generation from off-campus properties affiliated with Stanford. The Stanford Redwood City Campus would not be fully occupied by 2018; it is, however, included in the 2035 Cumulative model (see below). There are no pending or approved projects for the expansion of Stanford Shopping Center listed in the City of Palo Alto website. Therefore, no increase in existing conditions at the Shopping Center was assumed. The recent renovations of the Stanford Shopping Center did not add net new floor area to the center and were largely completed at the time baseline traffic counts were taken for the traffic impact analysis presented in the Draft EIR.

Several comments requested an evaluation of the potential travel patterns between Stanford's academic campus in unincorporated Santa Clara County and the Stanford Redwood City campus. The Stanford Redwood City campus is designed for departments that support the University, but

do not need to be on campus on a regular basis. Therefore, employees at this location would not regularly travel to the academic campus in unincorporated Santa Clara County. There are no academic classrooms on the Redwood City campus.

Please also see Master Response 6: Approach to 2018 Baseline Environmental Setting and Cumulative Scenarios**,** Topic 1: Approach for 2018 Baseline Environmental Setting, Topic 2: Approach for Cumulative Scenario and Topic 3: Consideration of Non-Project Stanford-Related Development Outside General Use Permit Boundary.

2035 Cumulative Model

The Draft EIR at page 5.15-63 describes the 2035 Cumulative Model. The VTA-C/CAG Travel Demand Forecasting model was used to determine traffic volumes in the years 2018 and 2035. For the traffic growth forecasts, the model's base-year calibration is a platform for estimating the future behavior of all traffic in response to changes in both traffic demand volumes and street conditions. The model logic also uses traffic flow equilibrium balancing described above to identify future use of individual streets. In Year 2035, when congestion on the freeways is expected to be worse than today, drivers may choose alternative routes, such as El Camino Real or Foothill Expressway. Therefore, shifts in traffic patterns are estimated to occur.

The cumulative traffic forecasts were developed with the VTA-C/CAG Travel Demand Forecasting Model. The process is described in detail in Draft EIR Appendix TIA (see Appendix I, Forecasting Report), and included a review of land use growth projections in the cities of Menlo Park, Palo Alto and East Palo Alto. It also included adjustments, where needed, to ensure that approved projects and projects that have had a traffic study prepared in these jurisdictions were included in the future year models. The VTA-C/CAG Travel Demand Forecasting model includes growth projections that are periodically updated to reflect ABAG and local jurisdiction growth forecasts.

Some comments ask whether the traffic analysis considers how growth at the campus would increase traffic between the campus and other local land uses outside the General Use Permit area that have affiliation with Stanford, such as the Stanford Research Park, Stanford University Medical Center (SUMC), SLAC National Accelerator Laboratory, the Stanford Shopping Center, and Veteran's Administration Palo Alto Healthcare System (VAPAHCS). The Cumulative 2035 transportation analysis includes growth at each of these facilities to the extent such growth is consistent with the relevant jurisdiction's adopted plans and projects. The transportation analysis also includes background regional growth, as predicted by the VTA-C/CAG Travel Demand Forecasting Model using land use data, as described above. The trip distribution for the Stanford campus, as presented in Draft EIR Section 5.15, Transportation and Traffic, assigned trips to various approaches to campus that capture travel between the campus and these and other land uses. The distribution was derived from Stanford's Commuter Travel Survey and information on commuter places of residence, and Census Transportation Planning Package (CTPP) data for the census tracts in which most Stanford campus residents live. The CTPP is a State Department of Transportation-funded, cooperative program that produces special tabulations of American Community Survey (ACS) data, that have enhanced value for transportation planning and analysis. Refer to Draft EIR pages 5.15-67 and 5.15-68 and Figure 5.15-6, as well as Draft EIR Appendix TIA.

While campus growth and growth at outside locations are taken into account in the Draft EIR's analysis, there is not a direct correlation between campus growth and trips to/from the offsite Stanford-affiliated locations described above. For example, growth in academic facilities on the campus does not directly cause more trips to the Stanford Shopping Center. To the extent that a Stanford campus employee might visit the Shopping Center on his or her way to or from work, that trip is a diverted trip not a new trip. Nor does growth in facilities on the campus directly cause more trips to the Stanford University Medical Center. Stanford's Marguerite shuttle provides connections between the campus, the Stanford University Medical Center, the Stanford Research Park, the SLAC National Accelerator Laboratory, and the VAPAHCS, which reduces the likelihood that such trips would be made by car.

Please see also Master Response 6: Approach to 2018 Baseline Environmental Setting and Cumulative Scenarios, Topic 2: Approach for Cumulative Scenario, and Topic 3: Consideration of Non-Project Stanford-Related Development Outside General Use Permit Boundary.

Topic 4: Trip Generation and Distribution

Several comments raised concerns about the accuracy of the methodology used to establish Stanford trip generation rates, specifically with respect to the cordon counts. Further, several comments questioned the accuracy of Stanford's commuter survey results used to establish trip distribution patterns. The Draft EIR on pages 5.15-64 to 5.15-67 describes the methodology used to calculate Stanford's future peak-period vehicle trip generation. Additional detail is provided in Appendix TIA-REV (TIA Part 1, Chapter 3, and Appendix B referenced therein). The methodology uses actual counts of vehicle trips entering and exiting the Stanford campus to calculate the existing trip generation rate for the campus as a whole. The methodology also uses actual counts of vehicles entering and exiting student and faculty/staff residential locations to calculate the existing vehicle trip generation rate for the subset of the overall campus trips that is associated with on-campus housing.

It should be noted that, under existing conditions, the Stanford campus is not generating more peak period trips than were generated under measured baseline conditions at the beginning of the 2000 General Use Permit in 2001. Campus growth over the past 17 years has not resulted in an increase in the number of peak period trips. Further detail and evidence of this is provided in Master Response 13: Transportation and Traffic, Topic 6: No Net New Commute Trips Standard, below.

As described in the Draft EIR on page 5.15-67, as with the trip generation estimate for remaining development under the 2000 General Use Permit, the 2018 General Use Permit trip generation estimates are based on the conservative assumption that the net new academic and academic support square footage would generate trips at the existing trip generation rates (i.e., there would be no further expansion of existing programs to reduce external vehicle trips). This is a conservative assumption given that Stanford has stated in the Project Application that it intends to continue to achieve the No Net New Commute Trips standard and intends to expand its existing TDM programs under the 2018 General Use Permit.

The Draft EIR on pages 5.15-67 to 5.15-71 describes the methodology used to calculate Stanford's future vehicle trip distribution. Two trip distributions are assumed: one for off-campus residents commuting to and from Stanford, and one for Stanford campus residents commuting from and to Stanford. The commuter trip distribution is based on travel survey data information on the place of residence of Stanford commuters. Adjustments were made to account for survey data bias. The campus resident trip distribution is based on data from the CTPP for the three census tracts surrounding Stanford. (As mention in the master response for Topic 3, the CTPP is a State Department of Transportation-funded, cooperative program that produces special tabulations of ACS data, that have enhanced value for transportation planning and analysis.)

A description of the types of survey bias and actions Stanford takes to reduce bias is included in Appendix TIA-REV Part 1, pages 11-13. A brief overview is provided below

Potential bias for the survey was controlled in the following manner:

- Comparison of survey data to the cordon monitoring data.
- Review of transit data including Marguerite shuttle and Caltrain ridership and reported transit mode use.
- Weighting of results based in employee participation in the Commute Assist Club (CAC). CAC participants are given a lower weight and non-CAC employees a higher weight due to the level of responses by these groups. This weighting helps to reduce voluntary and non-response bias.
- Coordination with managers to ensure that employees without access to computers are provided a means to participate in the survey.

Efforts to control bias combined with the high response rate (33 percent in 2015 and 41 percent in 2016) from workers and students make the annual survey a reasonable source of data for evaluating commute travel by Stanford workers and students. As noted in Draft EIR Appendix TIA Part 1 (page 11), the survey respondents self-select, and a random sample approach is not used, so confidence intervals are not calculated.

For issues related to peak hour spreading, please see Topic 7: Average Daily Traffic and Peak-Hour Spreading, below.

Topic 5: Intersection Impacts and Mitigation

Some comments on the Draft EIR suggest that specific measures to reduce vehicles trips should be identified and that Stanford should be required to implement or fund measures and make fair-share payments to operation and capacity improvements to address regional congestion.

As outlined in the Stanford Community Plan (page 64), the standard of no net new commute trips establishes a goal that there be no additional automobile trips over the calculated baseline in the peak commute direction during peak commute hours. Under the no net new commute trips program, Stanford designs and implements transportation demand management (TDM) programs to achieve compliance with the no net new commute trips standard as defined by the County's

approved Stanford Community Plan. Vehicle trips entering and exiting the Stanford campus are measured on an annual basis by the County's consultant AECOM. In addition, Stanford receives credits for vehicle trips that are removed from the roads outside the campus as a result of its TDM programs. As long as the no net new commute trips standard is achieved through Stanford's TDM programs and off-campus vehicle trip reduction credits, no additional mitigation for commute-direction trips is required. Mitigation Measures 5.15-2, 7A.15-2 and 7B.15-2 have been expanded to include an upfront fair-share payment by Stanford to address the impact of peak-hour, off-peak direction Project-generated vehicle trips (i.e., reverse commute) that are not accounted for in the no net new commute trips standard. Please see the discussion, under the heading "Reverse-Commute Intersection Impacts and Mitigation" below, for additional detail on this topic. The no net new commute trips program is discussed in more detail in Master Response 13: Transportation and Traffic, Topic 6: No Net New Commute Trips Standard, below.

Barring unforeseen circumstances, Stanford anticipates achieving the no net new commute trips standard throughout buildout of the proposed 2018 General Use Permit. However, if the standard is not achieved, then Mitigation Measure 5.15-2 requires Stanford to pay a fair share contribution towards the cost of improvements for adversely affected intersections. Mitigation Measure 5.15-2 has been modified to clarify how the County would use the fair share contribution to fund one or more of the intersection improvements identified in the Draft EIR, or if use of such funding for intersection improvements is infeasible, to fund off-campus projects that reduce peak period traffic.

Intersection Impacts

The Draft EIR Impact 5.15-2 on pages 5.15-74 to 5.15-95, and Impact 5.15-9 on pages 5.15-112 to 5.15-136 discusses impacts at area intersections under 2018 Baseline conditions and 2035 Cumulative conditions. The Draft EIR identified six intersections with significant impacts under 2018 Baseline with Project conditions, and 21 intersections with significant impacts under 2035 Cumulative with Project conditions. As explained above, the traffic analysis is conservatively based on the assumption that Stanford does not expand its existing transportation demand management programs, despite the fact that Stanford has committed to expand its existing TDM programs in its application for the proposed 2018 General Use Permit to achieve the no net new commute trips standard.

Please see Chapter 2 in this Response to Comments Document for two updates to the Draft EIR's intersection analysis. First, the Draft EIR identified Intersection #31, Foothill Expressway/San Antonio Road as having a significant impact under 2018 Baseline with Project conditions; that result was due to a volume error that has since been corrected. The Final EIR now identifies five intersections with significant impacts under 2018 Baseline with Project conditions. Second, the 2035 Cumulative No Project and 2035 Cumulative with Project conditions scenarios have been updated to reflect a 4-lane configuration for the length of Page Mill Road. The model provided by the VTA for use in the EIR traffic analysis erroneously had included a six-lane configuration for Page Mill Road in the 2040 model. Correction of this model assumption did not change the location or number of intersections with significant impacts under 2035 Cumulative with Project conditions, although it did require revision of the mitigation measure for Intersection #17

(Junipero Serra Boulevard - Foothill Expressway/ Page Mill Road), as discussed below. These two updates are reflected in the revised TIA in Appendix TIA-REV in this Final EIR.

Several commenters requested that future road closures due to Caltrain grade separation improvements should be analyzed in the County's traffic analysis for the proposed 2018 General Use Permit. There are 42 at-grade crossings in the Caltrain corridor.[30] Caltrain has started on its Business Plan process, which will identify future service patterns and help Caltrain prioritize grade separation projects.[31] The construction process related to electrification and completing grade separations in the local communities will be complex, and Caltrain has recognized that its work will temporarily influence local circulation patterns during the construction period. However, these impacts will be appropriately defined and addressed in the environmental review of the grade-separation projects, when the projects are funded and undergo permitting and environmental review. Since it is unknown when or if the projects will be constructed, the 2018 General Use Permit EIR cannot feasibly include these potential, temporary effects in the impact analysis because their timing and extent are not currently reasonably foreseeable.

There is no question that the Caltrain grade separation projects will result in temporary impacts to local roadways and users of those roadways during the construction process. However, the purpose of the traffic analysis in the Draft EIR is to determine if there would be a significant change in roadway congestion due to the proposed 2018 General Use Permit. Therefore, the comparisons in the Draft EIR are between with and without Project scenarios, in which case the number of train crossings would be the same. It is further noted that the lack of information about which grade separation projects might be constructed and in what order makes any future forecasting with grade separation assumptions too speculative to include in the EIR analysis.

Intersection Mitigation

The Draft EIR identifies proposed mitigation strategies (Mitigation Measure 5.15-2) to address the transportation impacts of the proposed Project on pages 5.15-74 to 5.15-90. The intersection improvements are identified in Draft EIR Table 1 on pages 5.15-84 through 5.15-86.

Mitigation Measure 5.15-2 requires that Stanford mitigate the impacts of its additional development and population growth under the proposed 2018 General Use Permit either by

a) implementation of a program of no net new commute trips, or

b) the contribution of fair share fees for the cost of improvements for adversely affected intersections.

Please see Chapter 2 in this Response to Comments Document for an update to the Draft EIR's identification of intersection improvements. As noted above under Intersection Impacts, the 2035 Cumulative No Project and 2035 Cumulative with Project conditions scenarios have been updated to reflect a four-lane configuration for the length of Page Mill Road. Correction of this model

[30] See http://www.caltrain.com/Assets/Caltrain+Modernization+Program/Presentations/Grade+Separation+Update.pdf (slide 3).

[31] See http://www.caltrain.com/Assets/__Agendas+and+Minutes/JPB/CAC/Presentations/2018/2018-02-01+CBP+Staff+Report.pdf.

assumption did not change the location or number of intersections with significant impacts under the 2035 Cumulative with Project conditions. However, the correction did change the mitigation measure identified for Intersection #17 (Junipero Serra Boulevard - Foothill Expressway/ Page Mill Road). The revised mitigation measure, which includes the original mitigation measure, plus the addition of a westbound through lane on the westbound approach, with a corresponding receiving lane on the west side of the intersection, would reduce the impact at this intersection to a less-than-significant level under the 2035 Cumulative with Project conditions (please refer to Chapter 2 in this Response to Comments Document).

One comment states that the mitigation measure proposed for Intersection #17 (Junipero Serra Boulevard-Foothill Expressway/Page Mill Road) is reasonable, but ignores the widening of Page Mill Road that has been proposed for this intersection. The Tier 1 improvement in the draft Santa Clara County Expressway Plan 2040 to widen Page Mill Road from just east of Junipero Serra Boulevard-Foothill Expressway to the I-280 ramps was included in the VTA Travel Demand Model provided by VTA to the TIA preparers, and was assumed to be completed by Year 2035 in the 2018 General Use Permit TIA and Draft EIR. However, based on subsequent direction from VTA and the County, a new analysis assuming that this segment of the roadway remains in its existing four-lane configuration in 2035 was prepared, and revised mitigation for the 2035 Cumulative with Project condition was developed that includes the original mitigation measure, plus the addition of a westbound through lane on the westbound approach with a corresponding receiving lane on the west side of the intersection. This mitigation measure would reduce the proposed Project's impact to a less-than-significant level under the four-lane Page Mill Road Cumulative (2035) with Project condition. This mitigation measure aligns with the geometry assumed along Page Mill Road by 2035 for the four-lane Page Mill Road Cumulative (2035) with Project condition. Stanford would provide funding that the County could apply to improvements at this intersection if Stanford does not achieve the no net new commute trips standard per Mitigation Measure 5.15-2 (see p. 5.15-74 of the Draft EIR).

Several comments indicate that Stanford should be responsible for constructing physical improvements identified in mitigation measures, rather than making a fair-share contribution towards those improvements. One comment specifically identifies the I-280 Northbound Off-Ramp/Sand Hill Road and El Camino Real intersections as locations where a fair share contribution is not adequate. Draft EIR Table 5.15-19 on page 5.15-75 shows that under 2018 Baseline conditions, the I-280 Northbound Off-Ramp/ Sand Hill Road intersection (Intersection #2) would operate at unacceptable LOS F conditions. While the proposed Project's contribution to the unacceptable conditions at this intersection would be significant in the event the no net new commute trips standard is not met (as conservatively assumed in the traffic analysis), the Project would not be the only cause of the unacceptable conditions. New traffic resulting from regional growth or other nearby development unrelated to the Project would also contribute to the unacceptable conditions in this location. Under these circumstances, a project proponent is only required to pay its fair share contribution toward intersection improvements rather than fully fund or construct such improvements. Pursuant to CEQA Guidelines section 15127.4 (4)(B), mitigation measures must be "roughly proportional" to the project's impacts.

The Draft EIR does not identify any significant impacts from the proposed Project at intersections on El Camino Real under the 2018 Baseline with Project conditions. The Draft EIR at Table 5.15-29, commencing on page 5.15-113 identifies the 2035 Cumulative with Project conditions, which shows that the proposed Project would make a cumulatively considerable contribution to five intersections on El Camino Real (Intersections Nos. 20, 37, 38, 41, and 48). It is appropriate that a project's contribution to cumulative impacts be mitigated through fair-share contributions to intersection improvements because the Project is not the sole cause of the impact.

Reverse-Commute Intersection Impacts and Mitigation

The Draft EIR evaluated the impacts of traffic traveling in all directions, based on a conservative assumption that Stanford does not expand its transportation demand management programs to achieve the No Net New Commute Trips standard (see Topic 6: No Net New Trip Standard, below). The impact analysis therefore assumed an increase in both commute direction vehicle trips and reverse-commute direction vehicle trips would occur. The impact analysis identified the intersections and freeway segments that would experience significant impacts under this conservative worst-case scenario.

Mitigation Measure 5.15-2 in the Draft EIR addresses the potential impacts of the proposed Project through a tiered approach. First, the mitigation measure requires Stanford to fund County monitoring of the campus gateways. Second, the mitigation measure requires calculation of trip reduction credits approved by the County of Santa Clara for trips removed outside the campus within the local impact area, and requires a comparison of the number of vehicle trips at the campus gateways as modified by trip reduction credits to a baseline count established in 2001 to determine whether the baseline has been exceeded by more than one percent. Third, the mitigation measure requires payment of a fair share contribution if the comparison in step two is exceeded in two of three consecutive years. The fair share contribution would be used to fund intersection improvements identified in the Draft EIR, or if such funding is infeasible, the contribution would be used to fund substitute mitigation to reduce trips. The Recirculated Portions of Draft EIR applies this same mitigation approach to address impacts of Additional Housing Alternatives A and B.

Commenters on the Draft EIR and Recirculated Portions of Draft EIR questioned whether a mitigation approach that monitors vehicle trips in the commute direction will ensure that there is not a significant impact triggered by an increase in reverse-commute direction trips. In other words, could an increase in reverse direction vehicle trips result in significant impacts that are not addressed by Mitigation Measure 5.15-2, even if the No Net New Commute Trips standard is achieved? To address this concern, a supplemental analysis of reverse-commute impacts was conducted, which is included in Appendix RCA in this Response to Comments Document. The results of the analysis are summarized below.

The Stanford Community Plan (Policy SCP-C 1, page 70) describes the no net new commute trips standard as applicable to "campus-related trips in the commute direction . . . ." With respect to reverse-commute direction trips, the Community Plan provides (policy SCP-C 7, p. 70): "In addition to meeting the no net new commute trips standard, encourage Stanford to reduce

automobile travel at non-commute hours and in non-commute directions, such as traffic associated with lunchtime activities by employees or travel by families of on-campus residents."

The analysis of reverse-commute direction impacts conservatively assumed that Stanford achieves the No Net New Commute Trips standard using TDM measures, but that the TDM measures do not have any effect on reverse-commute direction vehicle trips. This is considered unlikely, as historical data indicate that Stanford has controlled the growth in reverse-commute direction trips along with growth in commute direction trips under the 2000 General Use Permit (see Topic 7: Average Daily Traffic and Peak-Hour Spreading, below).[32] This conservative sensitivity analysis was performed for the proposed 2018 General Use Permit, as well as for Additional Housing Alternatives A and B.

The determination of significance for impacts under the reverse-commute direction analysis was based on the same policies, regulations, goals, and guidelines defined by the County of Santa Clara and the surrounding jurisdictions of San Mateo County, Palo Alto, Menlo Park, East Palo Alto, Mountain View, Los Altos, and Atherton, as described in Section 5.15.5 of the Draft EIR. The analysis indicates that, under the conservative assumptions used to prepare the sensitivity analysis, some significant intersection impacts would occur if reverse-commute direction trip growth occurs even if Stanford meets the No Net New Commute Trips standard for commute direction trips. Those intersections significantly impacted by the reverse-direction project trips are a subset of the significantly impacted intersections already identified in Draft EIR and the Recirculated Draft EIR. The number of significant reverse commute direction intersection impacts is five for the proposed Project, nine for Additional Housing Alternative A, and seven for Additional Housing Alternative B. These impacts could be reduced through payment of Stanford's fair share contribution to the intersection improvements needed to mitigate the reverse-commute direction impacts. Each jurisdiction could then use this funding toward their preferred intersection improvements. Additional detail is provided in Appendix RCA in this Response to Comments Document.

Mitigation Measures 5.15-2, 7A.15-2 and 7B.15-2 have been expanded to include an upfront fair-share payment by Stanford to address the impact of peak-hour, off-peak direction Project-generated vehicle trips (i.e., reverse commute) that are not accounted for in the no net new commute trips standard. Please see Chapter 2 in this Response to Comments Document for the full text and table updates to the EIR reflecting these revisions. An example of the mitigation measure revisions included in Chapter 2 for Mitigation Measure 5.15-2 is provided below; revisions are similar for Mitigation Measures 7A.15-2 and 7B.15-2:

> **Mitigation Measure 5.15-2(b):** Stanford shall mitigate the transportation impacts of its additional development and population growth with respect to reverse-commute impacts through the contribution of fair share fees for the cost of improvements for adversely affected intersections specified in Table 2 (a subset of the adversely affected intersections specified in Table 1), which funds shall be expended by the County to fund transportation mitigation efforts in the same manner as provided in Mitigation Measure 5.15-2(a)6)(a) and (b).

[32] See https://www.sccgov.org/sites/dpd/Programs/Stanford/Pages/Archive.aspx.

TABLE 2
STUDY INTERSECTION REVERSE-COMMUTE MITIGATION MEASURES UNDER 2018 GENERAL USE PERMIT

ID No.	Intersection	Jurisdiction/ Congestion Management Program (CMP)	Mitigation Measure	2018 Baseline with Project Conditions	2035 Cumulative with Project Conditions	Fair-Share Contribution[1]
13	I-280 SB Off-Ramp / Page Mill Rd	Santa Clara County (SC CMP)	Contribute fair share funding toward the installation of a traffic signal.	X		12.9%
17	Junipero Serra Blvd – Foothill Expy / Page Mill Rd	Santa Clara County (SC CMP)	Contribute fair share funding toward installation of an overlap signal phase for northbound and southbound right-turning vehicles and widening of southbound Junipero Serra Boulevard to two lanes between Stanford Avenue and Page Mill Road to align with the existing designated right-turn lane.	X	X	12.6%
20	El Camino Real / Page Mill Rd - Oregon Expressway	Santa Clara County (SC CMP)	Contribute fair share funding toward the reconfiguration of the east leg of the intersection to include one right-turn lane, two through lanes, two extended left-turn lanes, two receiving lanes, and no on-street parking; and to the extension of the double left-turn lanes, identified in the Page Mill Expressway Corridor Study Report.		X	7.3%
41	El Camino Real / Ravenswood Rd	Menlo Park	Contribute fair share funding toward the conversion of the northbound right-turn lane to a shared through/right-turn lane.		X	4.3%
58	Alma St / Charleston Rd	Palo Alto	Contribute fair share funding toward the addition of a designated northbound right-turn lane.	X		1.5%

NOTE:

[1] The fair-share contribution is estimated based on the total number of proposed Project reverse-commute direction trips at the intersection divided by the difference between the total cumulative intersection volume and the existing intersection volume. The value presented in this table represents the maximum percentage of the AM and PM peak hours. Additional calculations are provided in Appendix RCA. It should be noted that these percentages are projected based on Baseline and Cumulative projects known at this time, and are subject to change if new projects (i.e., projects not included in Baseline and/or Cumulative analysis scenarios) that would add volumes to the study intersections are approved prior to issuance of the first building permit authorized under the 2018 GUP.

None of the revisions made to the EIR to disclose reverse commute impacts, or the augmented mitigation to reduce significant reverse commute effects, would result in any of the conditions of CEQA Guidelines Section 15088.5(a) being met, and consequently recirculation of the Draft EIR on the basis of this information is not warranted. In particular, significant reverse commute intersection impacts occur on the significantly impacted intersections already identified in the Draft EIR and the Recirculated Portions of Draft EIR, and reverse commute direction trips are a subset of the trips previously analyzed in the Draft EIR and Recirculated Portions of Draft EIR. See Master Response 4: Environmental Review Process, Topic 2: EIR Recirculation for additional information.

Topic 6: No Net New Commute Trips Standard

The Draft EIR summarizes the Stanford Community Plan's transportation policies on pages 5.15-42 to 5.15-45. The Stanford Community Plan is a component of the County General Plan. The Circulation chapter of the Stanford Community Plan establishes the County's policy framework for addressing transportation impacts associated with Stanford campus growth. The Community Plan (page 64) establishes a goal "that there be no additional automobile trips over the calculated baseline in the peak commute direction during peak commute hours." The Community Plan also includes a policy to establish a system for direct, independent, and verifiable monitoring of Stanford's level of achievement with the no net new commute trips standard (page 71). In addition, the Community Plan (page 72) establishes a goal to "alleviate local congestion in the context of commute trip reduction." The Community Plan also includes a policy to require contribution toward intersection improvements at impacted locations or equivalent funding toward other transportation impact mitigation if Stanford does not meet the no net new commute trips standard, to a degree proportional to the effect of the new development on future traffic levels (page 74).

Consistent with the Stanford Community Plan's transportation strategy and policy direction, Draft EIR Mitigation Measure 5.15-2 (commencing on page 5.15-74) defines the no net new commute trips standard, describes the methodology used by the County to monitor achievement of the standard, and describes the fair share contribution that is required if the standard is not achieved.

No Net New Commute Trips Standard Feasibility

A number of comments were related to the feasibility of Stanford continuing to achieve the no net new commute trips standard under the proposed 2018 General Use Permit. Some comments suggest that the EIR should identify the current and future transit and transportation demand management (TDM) programs that will be relied on to meet the no net new commute trips standard. Some comments request that the effectiveness of specific programs be evaluated and monitored. One comment requests a public process for Stanford's selection of its TDM programs. Multiple comments question how Stanford can expand its TDM program to achieve the no net new commute trips standard in the future. These comments are addressed in this master response.

Flexibility to Implement Programs to Achieve the No Net New Commute Trips Standard

Stanford's single-occupancy vehicle rate has dropped from 69 percent in 2003 to 43 percent today.[33] This reduction illustrates that the TDM program has been successful in moving Stanford commuters to alternative modes of transportation. The TDM program is described in detail in Draft EIR Appendix TIA (Part 1 on page 8) and in Draft EIR Appendix BCR (page 4.47). The current program also is summarized below and is available on the Stanford Parking and Transportation Services website. [34]

The Stanford Community Plan states (page 64): "While the Community Plan calls for a more direct monitoring system than was used under the 1989 General Use Permit, it maintains the County's role of establishing the overall standard and allowing Stanford to use a variety of mechanisms as appropriate to meet the standard." Stanford's transportation programs, which predate the 2000 General Use Permit, are intended to encourage alternative transportation modes for commuting. For example, paid parking for commuters has been in place since 1975. Issuance of the 2000 General Use Permit was followed by the ramping up of several existing programs and the introduction of others; notably, the Marguerite shuttle program was expanded, the Clean Air Cash benefit was increased, parking costs were increased, and East Bay buses were introduced. Stanford TDM programs designed to reduce single-occupancy drivers include:

- Free employee transit passes;
- Free Stanford-sponsored shuttle service to make first/last mile connections to public transit;
- An extensive ride- and car-share program;
- Charging for parking on campus; and
- A Commute Club program that offers cash incentives for employees who do not purchase a parking pass.

The flexibility afforded by the Stanford Community Plan to allow Stanford to adjust its programs to meet a numeric standard has proven to be effective. The County has monitored Stanford's overall compliance with the no net new commute trips standard through cordon counts. For more discussion of the cordon count methodology, see Master Response 13: Transportation and Traffic, Topic 7: Average Daily Traffic and Peak-Hour Spreading, below.

No Net New Commute Trips Standard under Proposed 2018 General Use Permit

Under the proposed 2018 General Use Permit, Stanford has stated in its Project Application that it intends to expand its TDM programs to achieve the no net new commute trips standard and has expressed confidence that, barring unforeseen circumstances, it will achieve this standard.

Prior to submitting the 2018 General Use Permit application, Stanford worked with transportation engineering firms Arup, Fehr & Peers, and Alta Planning and Design to understand the feasibility of continuing to achieve the no net new commute trips standard. Arup developed a mode share

33 See https://gup.stanford.edu/transportation.
34 See https://transportation.stanford.edu/.

model for Stanford's populations to better understand current Stanford commuters' preferences for selecting a particular transit mode and to provide a tool to assess programs that could meet the needs of the Stanford commuter populations in the future.

The mode share model utilizes the information received each year from Stanford's annual Parking & Transportation Services commute survey, including mode choice, age, gender, geography, and departure time. The mode share model predicts the mode split outcomes of potential future TDM measures, both on their own and acting together as packages of improvements, with the assumption that Stanford commuters select a mode that optimizes their personal travel time, convenience and cost. This allows for predictions of specific numbers of commute trips that could be expected under various TDM improvement scenarios, and a comparison with current TDM options and the no net new commute trips standard.

Stanford reports that potential future enhancements of TDM programs that have been modeled by Arup to successfully achieve the no net new commute trips standard with the population projected at buildout of the proposed 2018 General Use Permit in 2035 include:

- Transit priority measures and infrastructure investments (e.g., traffic signal priority, or dedicated bus lanes, express bus service);
- Dynamic real-time carpooling (such as partnering with Scoop);
- Use of daily parking rates and possible use of increased parking rates to increase disincentives for driving;
- Continued financial incentives as a lever to reduce trips (Clean Air Cash);
- Enhanced incentives to reduce trips for on-campus residents and part-time employees;
- Expansions of express bus services and commuter shuttle bus routes that serve the campus;
- Increased use of telework and flexible work schedules;
- Working with Caltrain to optimize service (such as contributing to the Caltrain Business Plan); and
- Filling gaps in off-campus infrastructure for bicyclist and pedestrians.

Draft EIR Table 5.15-17 on page 5.15-67 shows that, absent enhancements to Stanford's current TDM programs, the proposed Project would result in roughly 800 additional peak hour campus commute direction car trips by total buildout of the proposed 2018 General Use Permit over 17 years. This means that to achieve the no net new commute trips standard, Stanford would need to convert approximately 50 commuters each year from driving alone to an alternative commute mode (800 divided by 17 years equals 47 commuters per year). The pool from which to convert these drive-alone commuters to alternative transportation modes would be comprised of over 3,000 existing drive-alone commuters plus future commuters.

There are tools available to shift these drive-alone commuters to alternative travel modes. For example, Stanford could add a new express bus service that would move 50 single-occupancy drivers onto a single bus. That bus would then remain in service, keeping 50 riders off the road in future years. Alternatively, Stanford could coordinate with local transit agencies to extend their services to the campus to move another 25 to 50 commuters from driving alone in a single-occupancy vehicle to a public bus line. The improvements to bicycle infrastructure that Stanford has offered to fund as part of the 2018 General Use Permit (described in Chapter 8 in the Draft EIR) could encourage 80 to 90 Stanford commuters to leave their cars at home, as well as other commuters in the nearby communities. Those improvements would continue to provide this benefit every year after they are constructed. Stanford could also increase parking prices by a sufficient amount to discourage 150 to 300 commuters from driving and paying for parking, and instead shift to an alternative commute mode.

By continuing to monitor, enhance and periodically expand its TDM options throughout the 17-year span anticipated for buildout of the 2018 General Use Permit, Stanford has expressed confidence that it can move 50 commuters each year from driving alone to a commute alternative to reach the no net new commute trips standard.

The provision of substantial new housing for campus faculty, staff and students in the 2018 General Use Permit would add local trips made by residents, including reverse-commute direction trips; however, the housing included in the proposed Project is considered a beneficial component of the Project. The no net new commute trips standard, as articulated by Stanford Community Plan Policy SCP-C1, does not include reverse-commute direction trips. The reason they have not been part of this standard is that the majority of peak hour trips generated by the campus as a whole are unidirectional – inbound to campus in the AM peak hour and outbound from campus in the PM peak hour. However, Mitigation Measures 5.15-2(b), 7A.15-2(b) and 7B.15-2(b) have been added to include an upfront fair share payment by Stanford to address the impact of peak-hour, off-peak direction Project-generated vehicle trips (i.e., reverse commute) that are not accounted for in the no net new commute trips standard. Please see the 2018 Stanford General Use Permit: Reverse-Commute Analysis (included in Appendix RCA in this Response to Comments Document) for a detailed analysis of reverse-commute project impacts.

TDM Expansion Ideas

Comments suggest ideas to expand the Stanford TDM program. Specific examples include, expanding Marguerite shuttles in to the local community, increasing commute club incentives, and subsidizing Zipcar memberships.

Many of these comments reference strategies that are part of Stanford's current TDM program. For example, there are approximately 60 Zipcars available at more than 20 Stanford locations. Stanford has the largest Zipcar program of any university. Currently, Stanford affiliates can join for $15 in the first year and members of the Commute Club earn driving credits each month. There are special promotions for residential student staff, tour guides, and orientation leaders. It should also be noted that Stanford sponsors a Zipcar promotion for Escondido Village Graduate Residents Car Free Club members. Further, Zipcar currently offers free department membership

to Stanford departments. There is no fee to join and no limit on the number of members who can be added to a department account.

The Marguerite shuttle, Stanford's free public shuttle service, travels around campus and connects to nearby transit, shopping, dining and entertainment and is free for everyone, not just for Stanford affiliates. Multiple comments suggest expanding the Marguerite shuttles into the neighboring communities. Currently Marguerite shuttles provide service to Town and County Shopping Center, San Antonio Shopping Center, the Stanford Research Park, SLAC National Accelerator Laboratory, Oak Creek Apartments, Safeway, Rosewood Hotel, and other intermittent stops on El Camino Real. Because the Marguerite shuttle is a private shuttle system, the capacity and route planning is evaluated continuously and capacity is expanded when there is sufficient demand. Stanford manages the Marguerite shuttle to be an effective and efficient service for the Stanford community.

Several commenters suggested that Stanford should extend TDM incentives to "other workers." As discussed on Draft EIR page 3-10, "other worker" populations that contribute to the on-campus population include casual, contingent and temporary employees; non-employee academic affiliates; and third-party contractors including some janitorial staff, some food service and daycare workers, and construction contractors. "Other workers" who are non-Stanford affiliates are eligible for TDM incentives and enrollment in the Commute Club if sponsored by a University department or campus organization. Non-Stanford affiliates registered for TDM incentives work at retail outlets, childcare centers, cafes and restaurants on campus, UG2 Janitorial Services, Stanford Credit Union employees, employee agencies (i.e., Option1, Slingshot and Manpower), and Wells Fargo Bank. Contract and subcontract workers can be sponsored as part of this program. Other TDM programs, such as bicycling to campus and the Marguerite shuttle, are free to both Stanford and non-Stanford affiliates.

Effectiveness of the No Net New Commute Trips Standard Under the 2000 General Use Permit

Annual monitoring for the 2000 General Use Permit, includes traffic monitoring conducted by AECOM for the County. The annual monitoring process is described in Draft EIR Appendix TIA (Part 1, page 7). The annual monitoring reports are posted on the County's website[35] and are reviewed annually by the Community Resource Group and approved by the County Planning Commission as part of the Annual Reporting process.

Figure MR13-1 and **Figure MR13-2** present the results of the County's cordon monitoring for the a.m. and p.m. commute since 2001. The annual monitoring results demonstrate the effectiveness of Stanford's TDM programs.

35 Santa Clara County, 2018. Programs. Stanford University. Plans, Reports, and Documents. Annual Reports. https://www.sccgov.org/sites/dpd/Programs/Stanford/Pages/Docs.aspx.

Figure MR13-1
Annual AM Commute Trip Count

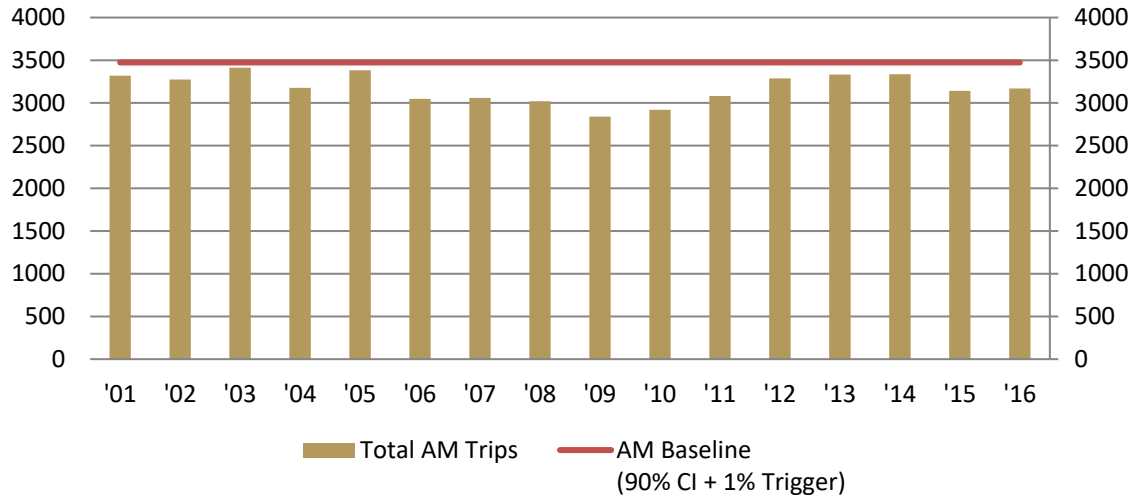
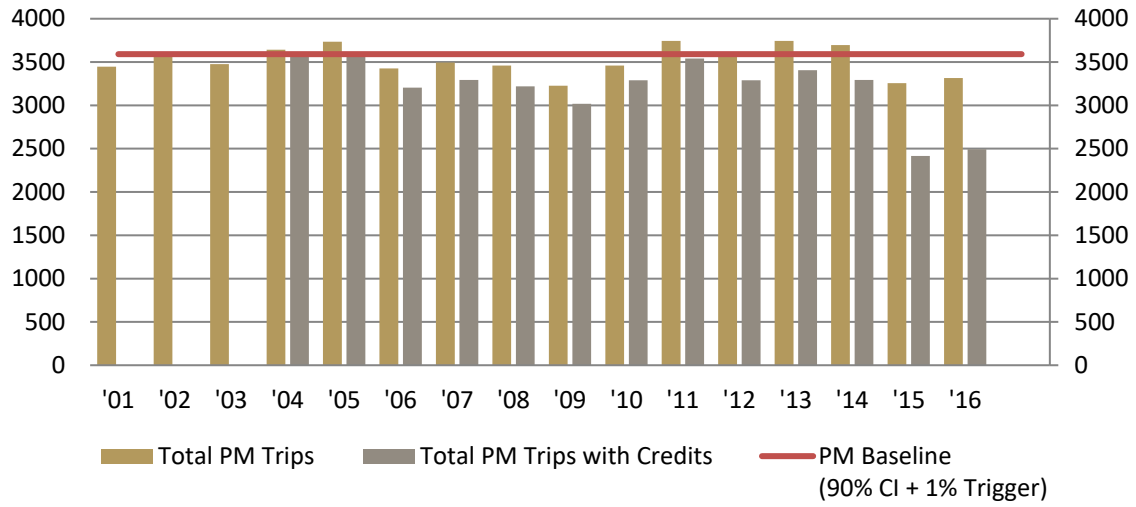


Figure MR13-2
Annual PM Commute Trip Count



No Net New Commute Trips Standard as Mitigation

The Stanford Community Plan (page 70, SCP-C1) establishes the County policy to apply a no net new commute trips standard for campus-related trips in the commute direction during peak hours. Mitigation Measure 5.15-2(1) on Draft EIR page 5.15-74 similarly defines the "no net new commute trips" standard as "no increase in automobile trips during peak commute times in the peak commute direction, as counted at defined cordon locations around the central campus." Mitigation Measure 5.15-2(1) further states: "The peak commute period is defined as the one-

hour period in the morning (AM) and afternoon (PM) with the highest volume of traffic at the campus cordon, as determined by the traffic counts."

The Stanford Community Plan (page 69) recognizes the challenge for Stanford to meet the no net new commute trips standard; therefore, the Community Plan "provides an additional mechanism for trip reduction efforts by the University through policies and implementation programs that recognize Stanford's future participation in trip reduction efforts that occur in other jurisdictions."

The Stanford Community Plan (page 73) states that the " 'no net new commute trips standard' should be adequate to reduce the effects of growth at Stanford from impacting the transportation system." However, the Community Plan also recognizes that modification of intersections can provide a back-up mechanism to mitigate traffic impacts "if Stanford is unable or unwilling to achieve the "no net new commute trips' standard."

The Stanford Community Plan (page 74) includes a policy to require contribution toward intersection improvements at impacted locations or equivalent funding toward other transportation impact mitigation if Stanford does not meet the no net new commute trips standard, to a degree proportional to the effect of the new development on future traffic levels.

Several comments on the Draft EIR state that the Draft EIR is unclear and contradictory as to whether the proposed Project will actually meet the no net new commute trips standard. As outlined in the Draft EIR Project Description on page 3-25, Stanford commits to: continue to implement, and expand as needed, its TDM programs designed to achieve the no net new commute trips standard; continue to implement its off-campus trip reduction programs as contemplated by the Stanford Community Plan's trip reduction credit policy; and if needed, provide funding to the County for other programs to reduce trips within a defined area or for intersection improvements. Stanford has stated in its Project Application that it intends to achieve the No Net New Commute Trips standard. However, the Project Description, the Project Application and the Stanford Community Plan all recognize that if the goal is not achieved, Stanford will remain in compliance with the general use permit by contributing funding for transportation mitigation that is proportional to the effect of new development on future traffic levels. While there is evidence showing that it is likely that Stanford will achieve the standard, the EIR recognizes in the Project Description and throughout the impact analyses that it is unknown whether the standard will in fact be met.

Draft EIR Mitigation Measure 5.15-2 similarly requires that Stanford mitigate the transportation impact of its additional development and population growth either through a program of no net new commute trips or through the contribution of funding equivalent to Stanford's proportionate share of intersection improvements. The Draft EIR is consistent in its presentation and description of these alternative means to address traffic impacts. It should be noted that the Stanford Community Plan acknowledges the County's ability to impose TDM requirements, such is the no net new commute trips standard, is currently restricted by state law (see page 68). However, Stanford has committed to implementing the no net new commute trips standard in its application for the Project. Consequently, the EIR incorporates the no net new commute trips standard as an enforceable mitigation measure (Mitigation Measure 5.15-2(a). For this reason, Mitigation

Measure 5.15-2(a) includes mechanisms to ensure that Stanford must pay its fair share toward intersection impacts if it does not meet the no net new commute trips standard. Furthermore, as noted above under Topic 5: Intersection Impacts and Mitigation, Mitigation Measure 5.15-2(b) has been added, which includes an upfront fair-share payment by Stanford to address the impact of peak-hour, off-peak direction Project-generated vehicle trips (i.e., reverse commute) that are not accounted for in the no net new commute trips standard.

As stated on Draft EIR page 5.15-67, the 2018 General Use Permit trip generation estimates are based on the conservative assumption that growth in academic and academic support square footage would generate trips at the existing 2015 trip generation rates (i.e., there would be no expansion of existing programs to reduce external vehicle trips). This is a conservative assumption given that Stanford has committed to continue to design transportation demand management programs to achieve the no net new commute trips standard and intends to add to and expand its existing TDM programs under the proposed 2018 General Use Permit. This conservative approach taken in the Draft EIR is necessary to identify the back-up intersection improvements that could be needed if the no net new commute trips standard is not achieved.

Deduction for Cut-through Trips

Several comments on the Draft EIR ask how ride-hailing services are counted in the commute trips. Commenters indicate that cut-through traffic has increased because of the introduction of services such as Uber and Lyft. If a campus resident, worker or visitor were to use a ride-hailing service such as Uber or Lyft, the trip by Uber or Lyft would be counted as a trip that crosses the campus cordon.

In some cases, the trip by the Uber or Lyft vehicle will be included in the trips counted against the No Net New Commute trips standard. This would occur if an Uber or Lyft vehicle enters or exits the campus during a peak commute hour, and does not leave the campus shortly thereafter. For example, a driver may enter the campus at 8 AM to drop off a Stanford visitor, and then wait for the next call. If the driver does not exit the campus within 20 minutes of entry, the trip entering the campus will be counted against the No Net New Commute Trips standard, as would the trip leaving the campus more than 20 minutes later.

In other cases, the trip by the Uber or Lyft vehicle may be removed from the trips counted against the No Net New Commute Trips standard because the trip is deducted as a cut-through trip. Draft EIR Mitigation Measure 5.15-2(4) on page 5.15-87 explains how cut-through traffic is removed from the cordon counts used to monitor satisfaction of the no net new commute trips standard. Through trips are identified through license plate surveys. Most vehicles that enter and exit the campus within a defined period are considered cut-through trips without a campus-related purpose. Mitigation Measure 5.15-2(a) has been clarified to state that the County will include in the rideshare trips (e.g., Uber and Lyft) and other trips associated with drop-offs and pick-ups of people from locations within the cordon line that are not using public or Stanford-sponsored transit programs. Please see Chapter 2 in this Response to Comments Document for the revised Mitigation Measure 5.15-2(a) language.

Monitoring data collected during implementation of the 2000 General Use Permit have been reviewed to investigate whether use of Uber or Lyft has resulted in an increase in cut-through trips. As explained below, the percentage of cut-through trips as compared to overall trips entering and exiting the campus has not increased over the 15 years of data collection. This shows that use of Uber and Lyft is not causing an increase in cut-through trips.

Data collected during annual monitoring show that trips passing through the Stanford campus have not been increasing as a percentage of total trips. As reported in the Annual Traffic Monitoring reports prepared for the County by AECOM, the percentage of cut-through traffic varies from year to year, and has stayed roughly between 10-15 percent of total peak hour traffic (see **Table MR13-1**). There is no evidence in the traffic monitoring data that the launch of Uber in 2011 or Lyft in 2012 has substantially altered the total number of vehicles that are passing through the campus. As shown in Table MR13-1, when compared to data reported in other year's annual reports, the highest cut-through year was in 2005 when Sand Hill Road was under construction.

TABLE MR13-1
CUT-THROUGH TRAFFIC PERCENTAGE REDUCTIONS FROM THE ANNUAL TRAFFIC MONITORING REPORTS

Report Year	Spring		Fall	
	AM	PM	AM	PM
2003	12.1%	12.8%	12.1%	15.2%
2004	14.14%	18.55%	15.53%	17.47%
2005	15.1%	17.29%	18.73%	19.15%
2006	13.94%	15.72%	12.73%	15.5%
2007	12.27%	14.88%	16.54%	17.13%
2008	13.63%	14.4%	15.35%	15.99%
2009	14.85%	17.21%	14.74%	17.35%
2010	14.81%	16.42%	13.53%	14.78%
2011	13.33%	14.48%	12.28%	13.36%
2012	15.05%	14.87%	12.37%	9.91%
2013	11.85%	12.91%	12.59%	13.57%
2014	10.84%	12.19%	11.18%	12.98%
2015	13.91%	15.04%	10.73%	15.24%
2016	13.58%	15.27%	11.13%	12.33%

Trip Credits

Draft EIR Mitigation Measure 5.15-2(5) on page 5.15-88 references Stanford Community Plan Policy C-8, which establishes a policy to credit participation in off-campus trip reduction efforts that benefit the streets surrounding the campus toward Stanford's achievement of the no net new commute trips standard. Mitigation Measure 5.15-2 states that Stanford will receive credit commensurate with the actual number of trips reduced outside the cordon due to Stanford's efforts and the proportion of the cost of the program that Stanford is contributing.

In 2003, Stanford, the County Planning Office and the County's transportation consultant discussed potential methodologies for providing credits to Stanford. The County developed a set of draft guidelines, which were reviewed by the Community Resource Group, and the Planning Office approved the final guidelines on October 9, 2003. These guidelines are presented in the "Stanford Traffic Cordon Count Credit Guidelines" dated October 28, 2003. The County Planning Office provided revised guidelines, entitled "GUP Trip Credits: Guideline 3 Commute Club Members," to the Community Resource Group for review in April 2015, and the Planning Office approved the final revisions to the guidelines in October 2015.[36]

Under the County-approved methodologies, the forms of trip reductions outside the cordon that are currently counted include: 1) Marguerite shuttle riders outside the cordon who are not traveling to a campus destination; 2) Hospital employees in the Commute Club; and 3) Hospital employees on the Stanford-subsidized East Bay bus service. Credits are submitted to the County for review as part of the annual traffic monitoring process and are reviewed by the Community Resource Group.

During implementation of the proposed 2018 General Use Permit, if Stanford funds or provides additional trip reduction programs outside the campus cordon, Stanford can request that the Planning Office revise the credit guidelines. The process for revising the guidelines would be similar to the process followed during implementation of the 2000 General Use Permit. On page 5.15-88 of the Draft EIR, Mitigation Measure 5.15-2(5) explains that the County Planning Office will determine the appropriate trip credit and monitoring methodology for each program in which Stanford proposes to participate, and the County Planning Office will require that Stanford provide evidence of its participation in the program in a manner that can be independently verified. Similarly, any proposal for credits associated with funding of off-campus circulation infrastructure improvements will be reviewed by the County to determine how and to what extent the infrastructure project would remove vehicular trips from the local impact area.

As an example of off-campus circulation infrastructure improvements, Stanford is proposing to fund certain off-site bicycle facility improvements in several communities surrounding Stanford, including the cities of East Palo Alto, Palo Alto and Menlo Park; and unincorporated San Mateo County. These improvements are discussed in detail in Chapter 8 of the Draft EIR. As noted in Section 8.1, these facilities are intended to reduce the potential for local vehicle congestion effects by encouraging use of alternative modes of transportation and reducing automobile trips.

Both the County and Stanford have met with the planning and public works departments of the jurisdictions surrounding Stanford to establish whether there are other similar improvements that could be feasibly implemented to encourage alternative modes of transportation and reduce trips outside the campus boundary within the impact area. Jurisdictions consulted include Menlo Park, Palo Alto, East Palo Alto, Los Altos, Mountain View, Los Altos Hills, the County of Santa Clara (Roads and Airports Department), Caltrain, and VTA. The types of projects identified include:

- Protected bike lanes, including multi-city routes
- Closing gaps in the bicycle network

[36] See https://drive.google.com/file/d/0B0BM4gZWP7M6ZWxZZHctOVJBSUk/view.

- Bike share, or other bike connections, particularly serving Caltrain stations
- Community shuttles, new or expanded
- Last mile programs such as joint programs involving transportation network companies (e.g., Uber, Lyft)
- Support for Caltrain station and service improvements

Credits provided by infrastructure projects, such as the four bicycle improvement projects described in Chapter 8 of the Draft EIR and the other potential infrastructure projects of the type listed above, would be applicable to every year following construction so long as those improvements continued to exist. These credits could provide a reasonable level of assurance that the no net new commute trips standard would not be exceeded. In essence, Stanford and the County would create a credit cushion, or buffer ("bank"), to offset a potential future exceedance at the cordon.

Many trip reduction services, programs and projects would affect the entire traffic impact area, thus providing areawide benefit. However, others would most directly affect certain zones or sub-areas of the traffic impact area. The County may utilize an approach whereby trip reduction credits with areawide benefit would be tracked separately from trip reduction credits with specific sub-area benefits (please see Credit Boundaries, below). The approach would balance credits across sub-areas to ensure equity among the areas impacted by Project-generated traffic.

Credit Boundaries

Draft EIR Figure 5.15-8 on page 5.15-89 illustrates the revised cordon credit area in which Stanford could receive trip reduction credits under the proposed 2018 General Use Permit. The credit area is based on the locations where significant intersection impacts could occur if Stanford does not achieve the no net new commute trips standard.

Several commenters suggest that credits should have some spatial or geographic relevance based on the gateways around the campus, stating specifically that Sand Hill Road and El Camino Real north of Stanford are not served by Stanford's TDM programs, or otherwise do not have TDM infrastructure or program support that would reduce trips from the north side of campus. Stanford operates a number of Marguerite shuttle lines along Sand Hill Road, including the S, SLAC, OCA and C lines.[37] Further, the forms of trip reductions outside the cordon that are currently counted as credits include: 1) Marguerite shuttle riders outside the cordon who are not traveling to a campus destination; 2) Hospital employees in the Commute Club; and 3) Hospital employees on the Stanford-subsidized East Bay bus service. Removing hospital-related trips from the roadways benefits the area to the north of Stanford. Further, the hospital employees in the commute club and the Marguerite riders accessing destinations outside the campus cordon largely use Caltrain rather than driving. Thus, the trips removed would be considered regional, as these commuters could drive into the areas near the campus from multiple approaches, including along Sand Hill and El Camino Real north of the campus, if they were not riding Caltrain.

[37] See https://transportation.stanford.edu/sites/default/files/2018-06/marguerite-map-6.18.2018.jpg.

Commenters also express concerns that credits might be given for trip reductions in one geographic region, while another gateway to the campus is becoming more congested. As indicated below, under Topic 7: Average Daily Traffic and Peak Hour Spreading, the monitoring data collected during implementation of the 2000 General Use Permit do not indicate that the no net new commute trips framework (including the use of trip reduction credits) has resulted in shifts of trip from one campus gateway area to another. Figures MR13-5 and MR13-6 show that the relative volume of daily vehicle trips at each campus gateway has remained consistent during implementation of the 2000 General Use Permit with the exception of discrete time periods when construction occurred near a particular campus gateway, which would have resulted in a greater volume of pass through trips in that location.

Under the 2000 General Use Permit, most of the trip reduction credits corresponded to removal of trips from the local impact areas that would have been coming to Stanford from throughout the region. Stanford proposes to continue to receive credits for these existing programs under the 2018 General Use Permit. However, to the extent that an off-campus trip reduction measure would not be targeted to reduce regional trips but instead might only reduce trips from one local area, the County Planning Office will take such factors into consideration when deciding whether and to what extent to credit the trip reduction measure would count toward satisfaction of the no net new commute trips standard under the proposed 2018 General Use Permit.

Comments question whether there should be a limit or cap on percentage of trip credits during the life of the project. Limiting trip reduction credits would discourage Stanford from providing offsite programs that reduce trips in the local community. Under the 2000 General Use Permit, Stanford provided offsite trip reduction programs every year, but only relied on trip reduction credits in 4 out of 15 years. These excess credits continue to result in trip reductions even if they are not officially “used” as credits.

The credit area in the 2000 General Use Permit corresponds to the area in which the EIR for the 2000 General Use Permit determined impacts to local intersections could occur if Stanford were not achieving the no net new commute trips standard. The area of impact has expanded under the EIR for the proposed 2018 General Use Permit, and thus the credit area would expand to match.

Penalty for Non-compliance

Mitigation Measure 5.15-2(a)(6) requires that, upon the determination that the no net new commute trips standard has been exceeded by 1% or more in two out of three consecutive years, the County will require Stanford to pay its fair share contribution toward improvements at adversely affected intersections and roadways based on all exceedances of the no net new commute trips standard.

Several comments on the Draft EIR suggest that the penalty fee shifts the burden of mitigation to neighboring cities and instead Stanford should be required to collaborate with neighboring agencies to design and construct physical infrastructure and provide resources to help implement necessary programs to reduce trips. Mitigation Measure 5.15-2 has been revised to clarify that the County would use intersection improvement fees collected from Stanford to fund intersection improvements identified in Table 1 of that measure. The priority order for funding such

intersection improvements would be determined by the County Planning Office in consultation with the affected jurisdictions. If use of the funds for intersection improvements is infeasible then the fees can be used for substitute mitigation that encourages and improves use of alternative transportation modes or otherwise reduces peak period traffic. In addition, the trip reduction credit mechanism described in the preceding section of this response creates an incentive for Stanford to work with neighboring agencies to implement trip reduction programs to receive credit toward achieving the no net new commute trips standard. To the extent Stanford achieves the standard through a combination of trip reductions at the campus cordon and participation in off campus trip reduction programs, no fair share contribution would be required.

Several commenters suggest that the proposed fair share contribution methodology would not mitigate Stanford's contribution toward impacts as sufficient funds would not accrue to cover the construction cost of the necessary mitigation, nor does the method account for the escalation in construction costs over the life of the 2018 General Use Permit. The no net new commute trips program enacted by the Stanford Community Plan prioritizes trip reduction as the preferred mechanism for preventing impacts, rather than construction of infrastructure improvements. Moving drivers out of their cars onto transit and other alternative transportation modes eliminates a vehicle trip for the entire distance of the transit commute. This approach reduces trips on freeway segments, at intersections that would not experience significant impacts, and at intersections that otherwise would experience significant impacts. By contrast, contribution to physical intersection improvements increases capacity at the single intersection where the improvement is constructed. To the extent that Stanford achieves the no net new commute trips standard, its growth would be contributing fewer trips to local intersections, and therefore Stanford's financial contribution to improvements at those intersections would be less. The fair share contribution approach recognizes this and creates an ongoing incentive to achieve the standard. If a single exceedance necessitated payment of the full fair share contribution without regard to the number of trips actually reduced or that could be reduced in the future, there would be no incentive to continue to achieve the standard once the payment has been made. Nor would there be a reason to reduce as many trips as possible if an exceedance is likely. Except for reverse-commute direction trips, the fair share contribution approach is designed to maintain a focus on trip reduction throughout the life of the permit.

Topic 7: Average Daily Traffic and Peak-Hour Spreading

Several comments on the Draft EIR state that the Stanford Community Plan's no net new commute trips program is not adequate because trip monitoring focuses on peak hour traffic, and that Stanford-related vehicular traffic outside the peak hour appears to have increased over time.

The Draft EIR and the adopted Community Plan policies focus on peak hour traffic for the following reasons:

- Mitigation measures must be tied to the impact that they are designed to mitigate. Traffic Impact Assessments have traditionally measured impacts based upon changes in Level of Service; in particular, intersection congestion and delay during the peak hour.
- The peak hour is the highest amount of traffic that occurs daily, and is the time of day when the most people are affected by traffic congestion.

Nevertheless, the Community Plan (Policy SCP-C (i) 5, page 71) also provides that the annual review of Stanford's TDM program should include the following: "Programs serving intra-campus or off -peak travel should be primarily aimed at making it possible for employees and residents to conduct their daily activities without a car." See also Community Plan Policy SCP-C 12 (page 74). These are issues that the County Board of Supervisors may address when considering the Project.

In addition to the peak-hour analysis, the Vehicle Miles Traveled (VMT) analysis presented in Draft EIR Section 5.15-6 (commencing on page 5.15-143) considers the number and length of trips by Stanford commuters, regardless of time of day. The Bay Area averages 16.18 daily miles traveled by car per worker. The State of California Governors' Office for Planning and Research suggests that a land use project like the Stanford General Use Permit should be held to a standard of achieving 15 percent below the regional average. For the Bay Area, this would be 13.75 daily miles traveled by car per worker. The Draft EIR concludes that Stanford currently averages 4.66 daily miles traveled by car per worker; and that average would drop to 4.53 vehicles daily miles traveled by 2035 under the proposed 2018 General Use Permit. This low average VMT is achieved through moving commuters out of cars to alternative transportation modes.

Stanford's consultant Fehr & Peers reviewed thirteen years of data (2004 through 2016) collected by the AECOM for Santa Clara County during the annual monitoring performed for the 2000 General Use Permit.[38] The annual monitoring process is described in Draft EIR Appendix TIA Part 1 (page 7). A summary of characteristics of traffic patterns based on that data is discussed below.

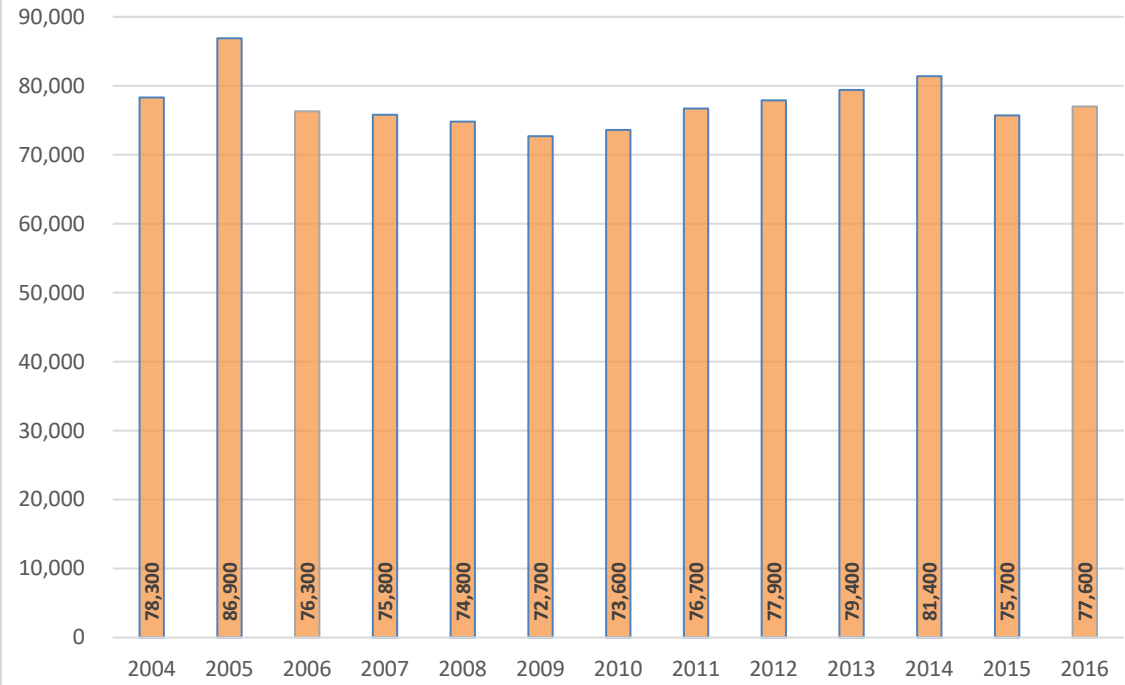
Average Daily Traffic Patterns

The monitoring data collected annually throughout implementation of the 2000 General Use Permit indicate that (1) the average daily number of vehicles entering and exiting the campus has not increased over time, (2) the average daily number of trips entering and exiting the campus is not substantially different during summer months compared to the months when Stanford offers a full course load, and (3) there has been no shift in vehicle traffic from one campus gateway to another. The data are consistent from year to year.

Every year, AECOM installs cordon counters at 16 campus gateways to electronically count all vehicles entering and exiting the campus. The cordon counters measure trips throughout the day (24 hours). The counters are installed for a total of eight weeks, split between the University's fall and spring semesters. **Figure MR13-3** presents the compilation of all eight weeks (40 weekdays) for each year of traffic monitoring since 2004, with the bars representing the average number of cars crossing the cordons each weekday. Figure MR13-3 demonstrates that, while there has been some fluctuation from year to year, the average daily number of cars crossing the cordon has remained relatively steady.

[38] Note that because data for the years 2001 through 2003 is not available, this analysis starts in the year 2004.

Figure MR13-3
All Daily Trips Crossing Cordon



It is important to understand that the all-day cordon counts measure all vehicles entering and exiting the campus, including non-Stanford related vehicles passing through the campus on their way to another destination. These all-day counts are used by the County's consultant to identify the peak hour for that year. During the peak hour, AECOM performs license plate surveys to identify non-Stanford related cars passing through the campus so that those cars can be removed from the monitoring data. Because the all-day counts necessarily include non-Stanford related trips, those counts cannot be used to measure Stanford's compliance with a numeric goal.

The historical all-day annual monitoring conducted by AECOM for the County shows that the total number of cars crossing the cordon each weekday - including Stanford and non-Stanford cars - has not increased during buildout of the 2000 General Use Permit.[39] Although daily traffic volumes fluctuate over the years, similar to the trends in the economy, the all-day campus cordon traffic has remained stable. In 2004 the average daily traffic (ADT) was at 78,300 vehicles per day (vpd), compared to 77,600vpd in 2016. The ADT peaked in 2005 at 86,900 vpd, and was at its lowest during the economic recession in 2009 at 72,700 vph.

Although 2005 and 2014 had the highest ADT during the monitoring years, those were years of abnormal traffic patterns passing through the cordon due to large construction projects outside of the academic campus. In 2005, Sand Hill Road was under construction and the number of non-Stanford vehicles cutting through Stockfarm Road, Campus Drive West and Welch Road was high because of traffic diversion during construction. Likewise, in 2014, Welch Road was

[39] See https://www.sccgov.org/sites/dpd/Programs/Stanford/Pages/Archive.aspx.

reduced to one-way traffic due to construction of the new Stanford Hospital. This change likely caused a high number of hospital workers and visitors to pass through the campus.

A comment suggested that traffic on campus is substantially less when Stanford is in its academic sessions in versus out of session. Monitoring data do not support this assertion. Although the academic year is the main function of the University, the summer sessions, conferences and camps hosted on the campus means that Stanford is active year around. In July 2016, Stanford collected two weeks of cordon data to understand how traffic patterns at the campus gateway fluctuate during the year as shown in **Figure MR13-4**. The ADT for the two-week period in July 2016 was approximately 77,500 vehicles per day, which is similar to the 77,600 vpd observed in the 2016 academic year and slightly higher than the 2015 ADT (75,700 vpd) for the academic year. Based on this data, it does not appear that traffic to and from the Stanford campus is fluctuating as much as traffic outside the campus in the surrounding community.

Some comments suggest that some of the 16 campus gateways may be experiencing higher growth volumes than others. This assertion is not supported by the monitoring data. **Figures MR13-5** and **MR13-6** show the all-day average inbound and outbound traffic at each of the primary and secondary access points to campus. Like the other all-day counts, non-Stanford cars have not been removed from these counts. However, the graphs in Figures 6 and 7 illustrate that traffic patterns have not substantially changed over the implementation of the 2000 General Use Permit. The anomalies at Campus Drive West and Stockfarm Road in 2005 and 2014 are likely attributable to the construction detours related to Sand Hill Road and Welch Road, as described above.

Figure MR13-4
Comparison of Average Hourly Volume – Inbound & Outbound

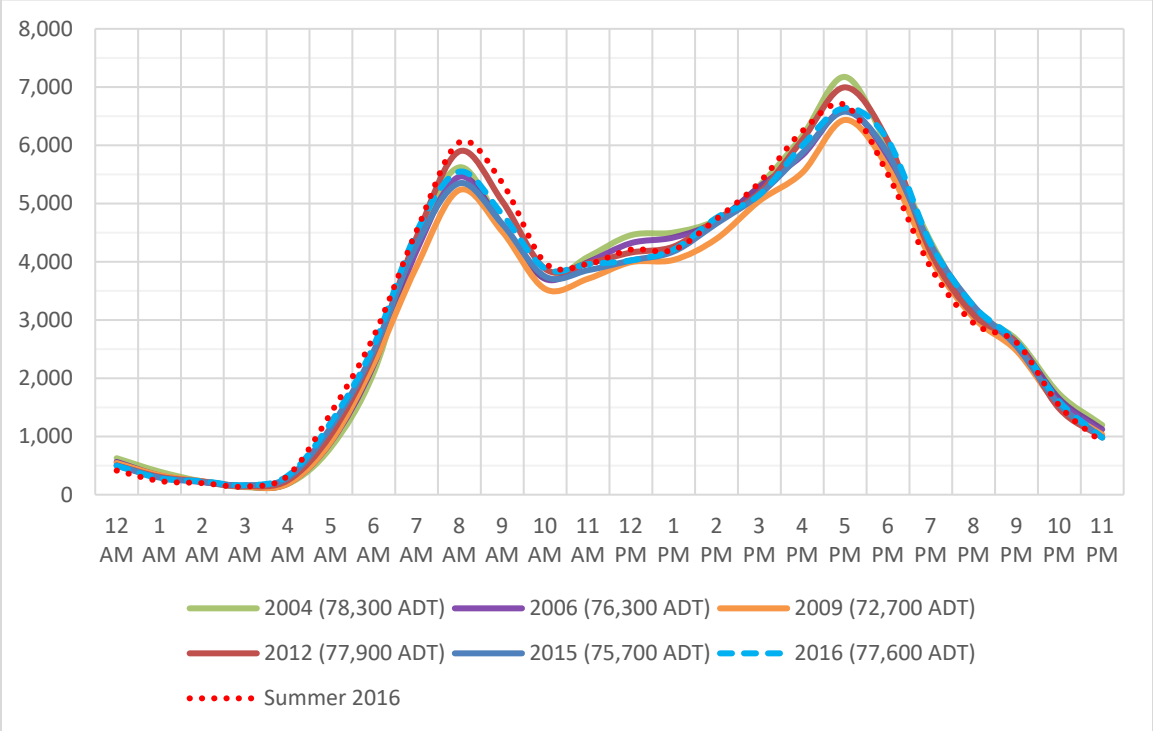


Figure MR13-5
Primary Gateway Average Daily Traffic

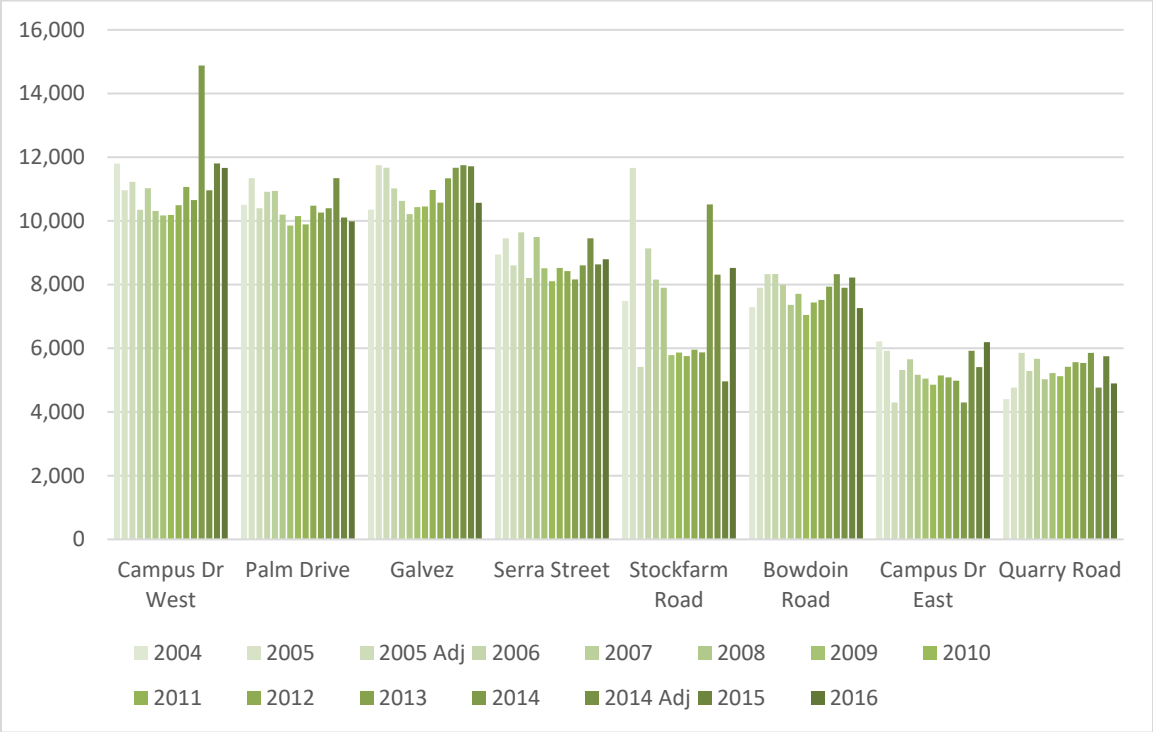
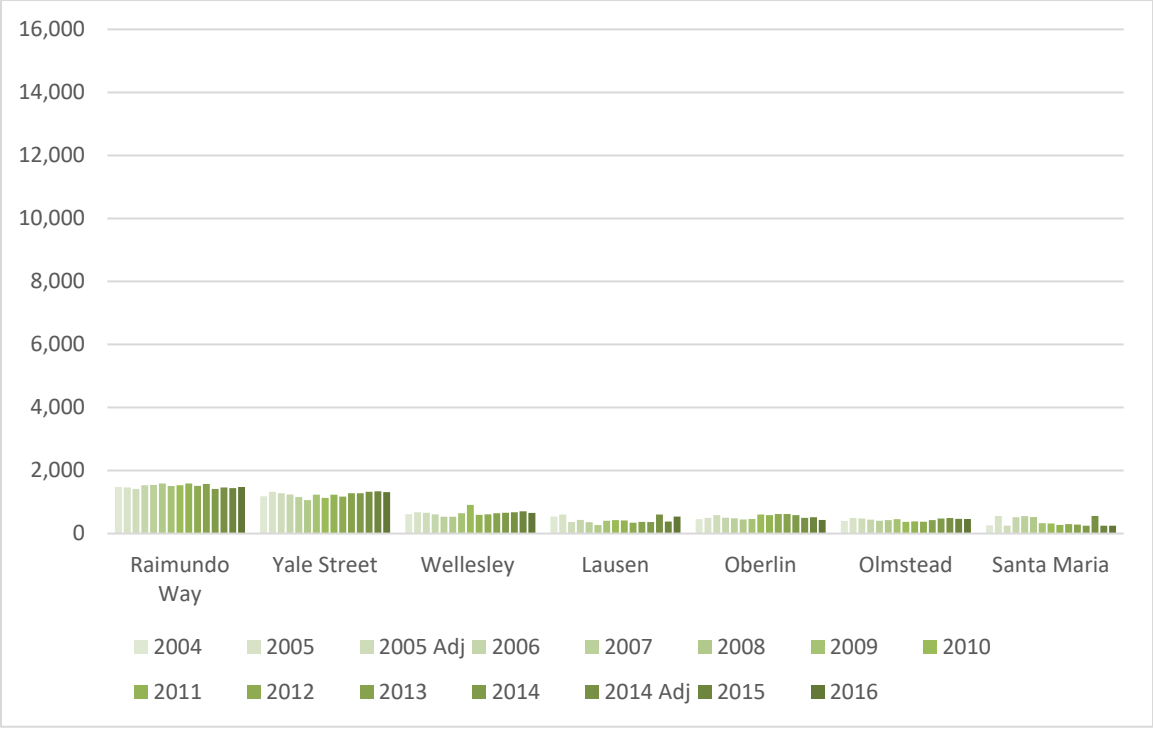


Figure MR13-6
Secondary Gateway Average Daily Traffic



Peak-hour Spreading

Comments on the Draft EIR express concern that the no net new commute trips standard focuses on the peak hour and therefore does not account for peak hour spreading. Peak spreading occurs when traffic congestion grows during the peak travel times, causing motorists to shift their departure time to a non-peak hour. The no net new commute trips methodology considers all trips throughout the peak period, and identifies the peak hour that occurs within the peak period during each monitoring period, which represents the highest point of project impact. The monitoring data collected each year during implementation of the 2000 General Use Permit show that peak spreading has not occurred.

The traffic monitoring reports prepared annually by AECOM for the County between 2004 and 2016 found that the peak hours consistently occur between 8:00-9:00 AM and 5:00-6:00 PM. During the AM peak periods, the recorded peak hours were 7:00-8:00, 7:15-8:15, 7:30-8:30, 7:45-8:45, and 8:00-9:00. During the PM peak periods, the recorded peak hours were 4:00-5:00, 4:15-5:15, 4:30-5:30, 4:45-5:45, and 5:00-6:00. The peak is established independently for each day between 7:00 am and 9:00 AM and again from 4:00 PM to 6:00 PM. The peak hour that has been most often recorded is between 8:00-9:00 AM and 5:00-6:00 PM. In its comments, the City of Palo Alto states “Hexagon's spot review of the raw cordon count data in the 2015 and 2016 Stanford University Traffic Monitoring Reports indicates that the AM peak hour frequently occurs after the 7:00 - 9:00 AM period. Similarly, the PM peak hour frequently occurs after the 4:00 - 6:00 PM period." It is unclear how Hexagon determined that the peak travel periods for the campus are happening outside the peak period through spot checks, as the comment does not reference any specific finding. A similar spot check at major gateways, such as Campus Drive West, Galvez, and Welch, in 2016 found that the peak period does capture the peak hour. Further, as outlined in the traffic monitoring methodology, the peak hour is established for the campus based on the cordon line counts, which are then adjusted for cut-through traffic and non-university parking.[40] Figure MR13-4 depicts hour by hour daily trips to and from the campus throughout a 24-hour period. The figure shows that the peak period and peak hour have remained consistent across many years of data collection.

Figures MR13-7 and **MR13-8** illustrate the average daily traffic flow at the campus gateways between 2004 and 2016 for the inbound and outbound movements respectively. The graphs illustrate that the daily distribution of traffic at the campus gateways is consistent year by year. There are clear peaks in the am (8:00) and pm (5:00) that reflect commuters with relatively fixed schedules (8:00 am to 5:00 pm). The pattern shows that the morning peak is more pronounced than the evening peak, which is not an atypical pattern for both employment centers and academic institutions. These figures also illustrate that there is no evidence of peak hour spreading as the curves remain the same throughout the years the data has been collected. The curves also show that, for the campus as a whole, traffic peaks within the 7 – 9 AM and 4 – 6 PM periods, not outside those periods.

40 See https://www.sccgov.org/sites/dpd/DocsForms/Documents/SU_2016_Traffic.pdf (see page i).

Figure MR13-7
Comparison of Average Hourly Inbound Volume

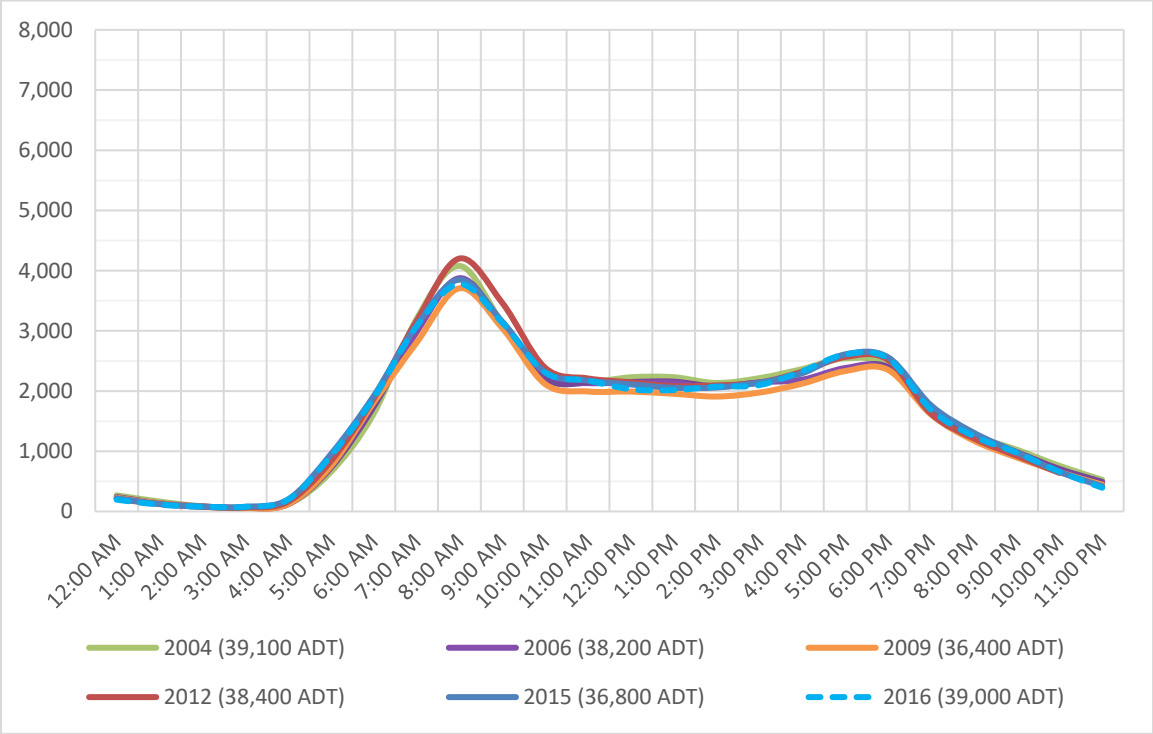
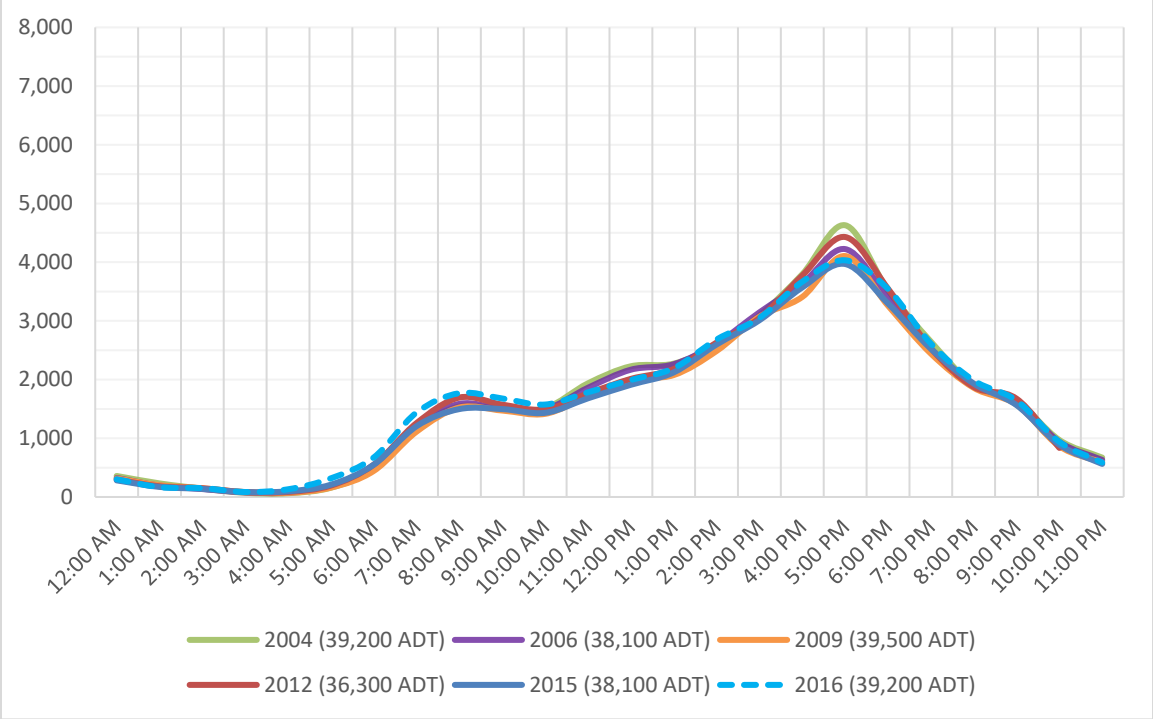


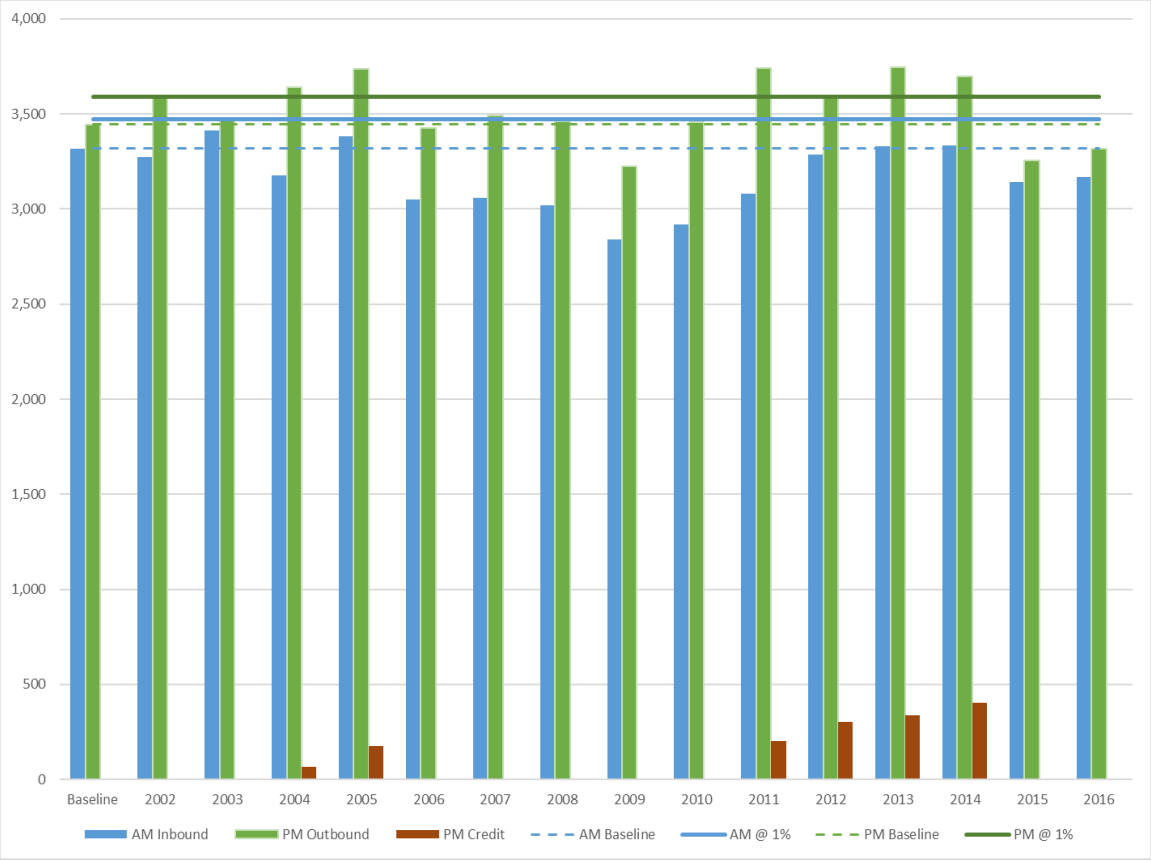
Figure MR13-8
Comparison of Average Hourly Outbound Volume



Monitoring data is collected throughout the day and the monitoring data are publicly available. Focusing the no net new commute trips standard on the peak hour has not pushed trips to the shoulder hours or encouraged peak hour spreading. TDM programs at Stanford are designed to get people out of single-occupancy vehicles, as evidenced in the published single-occupancy vehicle rate; there are no incentives or programs that encourage drivers to travel outside the monitoring period.[41] There is no evidence that extending the monitoring period to the peak period, such as 7-9 AM and 4-7 PM, rather than the peak hour would change the conclusion that Stanford has maintained trips at a level that is less than the baseline identified in 2001.

Figure MR13-9 shows the annual monitoring results including the 2001 baseline and the 1 percent threshold specified by the 2000 General Use Permit Conditions of Approval. The resulting standards are 3,474 inbound trips in the morning peak hour and 3,591 outbound trips in the evening peak hour. In 2004 and 2005 there were exceedances in the PM peak hour and Stanford documented sufficient trip credits to offset the cordon trips. Between 2006 and 2010, Stanford met the No Net New Commute Trips standard. Between 2011 and 2014, there were again some exceedances in the PM peak hour at the cordon and Stanford used trip credits to offset cordon trips. In 2015 and 2016 peak hour trips at the cordon once again fell below the 2001 baseline.

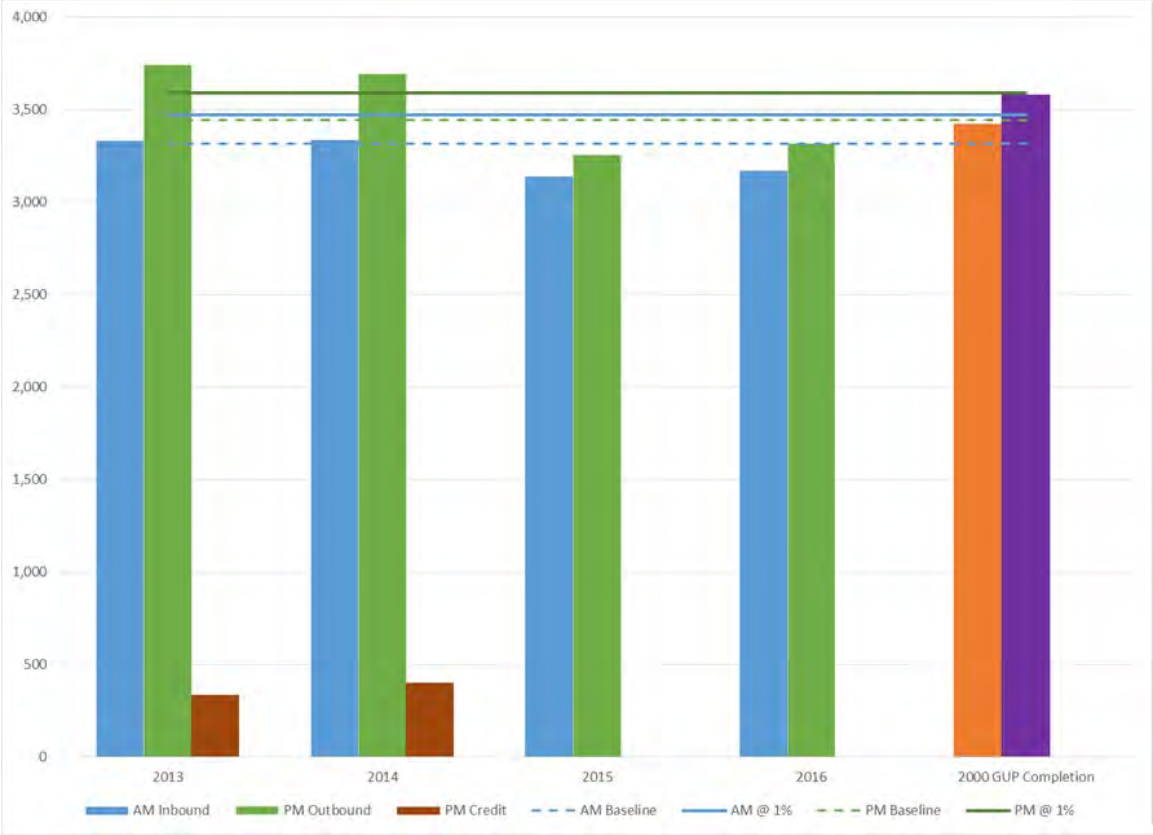
Figure MR13-9
Historic 2000 General Use Permit Monitoring Results, 2001 – 2016



41 See https://sustainability-year-in-review.stanford.edu/2017/.

Figure MR13-10 shows the cordon count projection with completion of all development under the 2000 General Use Permit, using the 2016 monitoring results and adding the trip generation associated with the remaining development. The projections indicate that, at completion of the 2000 General Use Permit development allocation (including the completion and occupancy of the Escondido Village Graduate Residences Project in 2020), the cordon counts would be slightly under the AM peak hour inbound threshold and right at the PM peak hour outbound threshold. Thus, the best available projections of trip generation at commencement of the 2018 General Use Permit align with the actual 2001 baseline.

Figure MR13-10
Projected Cordon Trips at Completion of the 2000 General Use Permit



Topic 8: Neighborhood Street Impacts

Methodology

Some comments state that the EIR should use Menlo Park's methodology to assess neighborhood streets rather than Palo Alto's Traffic Infusion on Residential Environment (TIRE) methodology, provide more detail on neighborhood traffic patterns, further evaluate neighborhoods such as Southgate and Evergreen Park; and explore methods for reducing neighborhood traffic by providing direct access to I-280.

Other comments suggest that other streets or neighborhoods should have been included, including those in the Willows and Belle Haven neighborhoods in Menlo Park, the Old Palo Alto neighborhood in Palo Alto, Bayfront Expressway, University Avenue, Willow Road, and Alpine Road.

The Draft EIR on page 5.15-13 and pages 5.15-102 through 5.15-106 explains the methodology that was used to identify neighborhood streets for the impact analysis. Similar to identification of the study boundaries for intersections, freeway segments and ramps, the study boundaries for the neighborhood streets evaluation were determined based on an assessment of the potential for traffic resulting from the proposed Project to result in significant intrusion into the residential neighborhoods, whose borders are defined in the analysis based on the generally accepted public understanding of the different neighborhoods. More specifically, the streets for which neighborhood traffic impacts were assessed are local streets within these neighborhoods, bounded by arterial or collector roadways (for which impacts are appropriately assessed via the intersection level of service analysis, where they meet the intersection criteria for selection as described in Draft EIR Section 5.15.2), that could be expected to serve project traffic based on their position within the larger roadway network and the origins and destinations of project trips.

Several different methodologies could have been used to assess neighborhood streets. The Draft EIR uses the TIRE methodology because most of the neighborhoods that would experience increases in traffic are located in the City of Palo Alto, and this is the methodology that Palo Alto uses. The TIRE methodology is also a reasonable method to assess neighborhood street impacts in other cities. The TIRE index is a numerical representation of a resident's perception of the effect of street traffic on activities such as walking, cycling or playing. This method assumes any change in daily traffic that would cause an index increase of 0.1 or more would be noticeable to residents. The method is different than the traffic capacity-based impact assessment applied to peak hour intersection operations on arterial and major collector roadways; it is intended to assess the qualitative impact on the residential environment, on streets that provide direct access to homes. Peak hour intersection level of service analysis is designed to assess *traffic operations and congestion* during the two highest-volume hours of the day on streets serving as arterials, and in some cases collector roadways – that is, streets that are intended to serve most of the traffic within the roadway network. This type of analysis, while sometimes performed by a local jurisdiction when traffic safety or operations are a concern, is not typically used in project impact evaluation because the collector/arterial portions of the roadway network are designed and intended to serve most trips. The relatively small number of project trips that would be assigned to local streets would typically not result in a peak hour operational impact at the neighborhood intersections. The selection criteria for study intersections described in Draft EIR Section 5.15.2, which takes into account many factors including proximity to campus, functional level of both streets at the intersection, and type of adjacent land use access, did not result in any study intersections on the local neighborhood streets addressed in the Draft EIR.

In contrast to the peak hour intersection operations analysis, the TIRE analysis assesses the effect of traffic over the course of the day on residential streets, and as such is not a traffic operations assessment method, but a measure of the daily impact of traffic passing by a home. The TIRE index is a numerical representation of a resident's perception of the effect of street traffic on

activities such as walking, cycling or playing. The research underlying the development of the index, conducted by Professor Donald Appleyard of UC Berkeley, was based on surveys of residents' perceptions of different traffic volumes, including what minimum level of daily traffic increase is noticeable to residents. The resulting TIRE index method assigns a logarithmic number to increasing traffic levels, and based on the research, any change in daily traffic volume that would cause an index increase of 0.1 or more would be noticeable to residents. As such, it reflects the Project's impact on residents of the street over the full day, rather than the two commute hours, and is considered by Palo Alto and many other jurisdictions to be an appropriate impact assessment method for neighborhood streets.

Consideration of Additional Neighborhood Streets

The selection of neighborhood streets to assess for traffic intrusion is described in Draft EIR Impact 5.15-5 and in Draft Appendix TIA (TIA Part 2, Section 8.3). These sections explain that the neighborhoods were selected for evaluation based on the current conditions within the neighborhoods and the expected 2018 General Use Permit trip distribution and assignment. The Willows, Belle Haven, and Old Palo Alto neighborhoods were not selected based on the low projected level of Project traffic using adjacent regional roadways as well as the low potential for traffic to divert to neighborhood streets given comparable travel times for those alternate routes. In addition, Draft EIR page 5.15-105 explains why the Southgate and Evergreen Park neighborhoods would be unlikely to experience significant traffic intrusion. Churchill Avenue provides one of the few access points across the railroad tracks and borders the Southgate neighborhood. Churchill Avenue carries traffic along the edge of the neighborhood, meaning traffic on Churchill Avenue is not expected to travel within the neighborhoods. The purpose of the neighborhood intrusion traffic analysis is to determine if vehicles are using neighborhood streets to bypass congested, major roadways. Churchill Avenue is not a neighborhood cut-through street; rather, it is preferred that drivers use Churchill Avenue instead of nearby, local streets cutting through the neighborhood. Alpine Road is an arterial roadway that carries sub-regional traffic between a freeway (I-280) and another arterial, Junipero Serra Boulevard. As such, it is intended to serve non-local trips (in addition to trips to and from connecting streets within the section between I-280 and Junipero Serra Boulevard), and such trips are not considered cut-through trips. Similarly, University Avenue, Bayfront Expressway, and Willow Road in East Palo Alto were not selected for this analysis because they are arterial roadways carrying regional traffic.

Impact Evaluation

Impact 5.15-5, commencing on page 5.15-102 of the Draft EIR, addresses traffic intrusion in nearby neighborhoods. The Draft EIR explains why, after considering the potential for traffic intrusion into several surrounding neighborhoods, the analysis focuses on the Crescent Park and College Terrace neighborhoods in the City of Palo Alto. The Draft EIR concludes that the proposed Project would not result in significant traffic intrusion into these neighborhoods.

Residential areas are especially sensitive to traffic increases because traffic can impact the livability of the street. As noted previously, the method employed by Palo Alto for evaluating the effect on residential neighborhoods of traffic added by development projects is the TIRE, which provides a means for qualitatively measuring impacts on the character of residential streets

caused by increases in traffic volumes due to the project's trips. The TIRE analysis uses average daily traffic (ADT) rather than looking at the peak period or a single peak hour. This allows for a comparison of the day-long effect of additional Project traffic on the quality of the residential environment on local streets. The data used in the 2018 General Use Permit Traffic Impact Analysis were collected mid-week over 48 hours for each of the three study roadway segments. Therefore, the analysis includes project trips passing through the neighborhood during the peak commute travel hour as well as off-peak periods.

The neighborhood traffic analysis in the 2018 General Use Permit Traffic Analysis shows that University Avenue carries substantial traffic on a daily basis (Draft EIR Appendix TIA; TIA Part 2, Table 8-4).[42] However, during the evening three-hour peak period, there are more trips using Hamilton Avenue than University due to the existing area-wide congestion that affects multiple streets and most particularly University Avenue. The congestion along the University Avenue corridor is generally caused by regional traffic accessing US 101 and the Dumbarton Bridge.

The best way to minimize cut through traffic in neighborhoods near arterials is to minimize the total number of cars on the roadway. The focus on achieving the no net new commute trips standard, and limiting single-occupant vehicle trips in general, is an effective means of minimizing the Project's potential to contribute to cut through traffic in nearby neighborhoods. No additional mitigation is required given that the analysis shows there would be no significant impacts to neighborhood streets.

Topic 9: Design Hazards and Safety Impacts

Several comments raised concerns about how the Draft EIR addressed the potential *off-campus* impacts of Project-generated traffic increases on bicycle, pedestrian, and vehicular safety, as well as potential impacts to emergency responders. Please refer to Master Response 11: Public Services, Topic 1: Emergency Access and Response Times, which provides a comprehensive discussion of how *on-campus* emergency access (police, fire, and medical) were addressed in the Draft EIR, particularly related to project construction and congestion from future Stanford-generated traffic.

Draft EIR Impact 5.15-6 on page 5.15-110 addresses the potential for the proposed Project to increase hazards due to a design feature or incompatible uses. The Draft EIR concludes that the proposed 2018 General Use Permit would not create adverse safety effects for passenger vehicles, transit users, pedestrians or bicyclists because the project would not change roadway configurations except to the extent that Stanford may be required to contribute funding toward intersection improvements designed to improve roadway capacity. The Draft EIR states that any such intersection improvements would be constructed according to design standards of the relevant jurisdiction, which conform to industry standards for roadway and intersection design and operation. In addition, the proposed Project would not change the mix of vehicles (e.g., trucks, passenger vehicles, etc.) on area roadways. The Draft EIR notes that the first-level mitigation approach is to eliminate congestion impacts and obviate the need for the intersection mitigation measures.

[42] University Avenue is an arterial roadway, and is not included in the TIRE assessment; the volume is reported on that roadway for use in comparing it to the parallel streets in the neighborhood street impact analysis.

Draft EIR Impact 5.15-7 on page 5.15-11 addresses effects on emergency access. The Draft EIR concludes that the proposed 2018 General Use Permit would not result in infrastructure changes outside the project site, and thus would not create fixed physical barriers to, or impede, emergency access. The Draft EIR also concludes that, while the proposed Project might increase congestion at local intersections, emergency responders are charged with developing fastest-response travel routes and developing alternative routes in real time to provide emergency services. Therefore, the identified significant impacts at area intersections would not result in inadequate emergency access within the traffic study area. Further, the Draft EIR explains on page 5.13-11 why increased emergency response time is not considered to be an environmental impact that must be mitigated under CEQA; rather, an environmental impact only occurs 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. *City of Hayward v. Board of Trustees of the California State University* (2015) 242 Cal.App.4th 833, 843.

Topic 10: Bicycle and Pedestrian Analysis

A number of comments raised concerns about how the Draft EIR addressed the adequacy of existing bicycle and pedestrian facilities, the Project's responsibility for addressing such deficiencies, and the safety analysis conducted to assess the Project's impact on bicyclists and pedestrians in the vicinity of the Project. As an initial matter, please note that the purpose of the Draft EIR is to identify the Project's potential impacts on bicycle and pedestrian facilities, not to remedy existing gaps or other deficiencies in such facilities. Nevertheless, this master response discusses some projects that Stanford has agreed to fund to remedy existing deficiencies.

Offsite Bicycle Infrastructure Improvements Proposed under 2018 General Use Permit

Draft EIR, Chapter 8, commencing on page 8-1, describes Stanford's proposal to fund four sets of offsite bicycle facility improvements to reduce the potential for local vehicle congestion by encouraging use of alternative modes of transportation. The improvements include:

- Improved Clarke Avenue - Newell Road connections in East Palo Alto;
- Improved Hanover Street - Bol Park connections in Palo Alto;
- Improved Oak Grove Avenue connections in Menlo Park; and
- Improved Santa Cruz Avenue - Alameda de Las Pulgas connections in unincorporated San Mateo County.

Bol Park Path

Several comments on the Draft EIR (including A-PA-83, A-PA-119) relate to the proposed funding for offsite bicycle facility improvements outlined in Chapter 8 of the Draft EIR. The comments state that the Hanover-Bol Park bicycle project has not been designed and the offered funding would only cover a signal modification, which may be covered by a pre-existing agreement between the City of Palo Alto and County of Santa Clara. As noted on page 8-4 of the Draft EIR, Stanford would fund bicycle infrastructure improvements in Palo Alto to connect

existing bicycle facilities such as the Bol Park path and the Stanford Perimeter Trail. Stanford worked with Alta Planning and Design, a leading bicycle consulting firm that Palo Alto also works with, to develop a concept and cost estimate to implement that concept. The concepts were presented to Palo Alto staff prior to publication of the Draft EIR. Although the final planning and design would be at the discretion of the City, the conceptual design considered the County's proposed improvements at Page Mill Expressway and Hanover Street.

The funding proposal is in addition to, not a substitute for, the intersection modification that the City plans to undertake. In the staff report from the August 28, 2017 Palo Alto City Council meeting, the total project cost for the intersection project was estimated to be $5,200,000. The City offered to provide up to $3,200,000 in traffic impact fees, noting that Measure B would be used to provide the balance of project costs.[43] At the intersection with Hanover Street, the intersection modifications tentatively included:

- Creation of dedicated left-turn lanes for both approaches on Hanover Street and a switch to 8-phase operation;
- Provide continuous bicycle lanes in both directions of Hanover Street through the intersection with Page Mill Road;
- Design for (and possibly include) a second westbound left-turn lane from Page Mill Road to southbound Hanover Street; and
- Investigate and possibly include design features for future bicycle and pedestrian pathway improvements along the east side of Hanover Street.

Bicycle Infrastructure Improvements Proposed by Commenters

Several commenters suggest that bike mode share is low from the Palo Alto Transit Center because of poor connections. The Marguerite shuttle service from the Palo Alto Transit Center to the Stanford campus directly competes with the bike mode share from the transit center, which likely explains why the bicycle mode share is low in this location. Caltrain riders who wish to access the Stanford campus can take a Marguerite shuttle rather than bringing their bicycles onto Caltrain and riding to campus from the Palo Alto Transit Center. Alternatively, Caltrain riders can bring their bicycles onto the Marguerite shuttles.

The commenters further suggest that Stanford partner with Caltrans and the City of Palo Alto to improve bike connections from University Avenue and Palm Drive, and from Quarry Road to the Transit Center. As part of the Development Agreement for the Stanford University Medical Center Renewal and Replacement Project, the Hospitals provided Palo Alto with substantial funds to improve bicycle and pedestrian access from Quarry Road to the Transit Center. These improvements include the pedestrian path from El Camino Real to the Transit Center and improvements to the bicycle lanes on Quarry Road. Additional contributions to these types of improvements could be proposed by Stanford to the County as trip reduction credits toward satisfaction of the no net new commute trips standard. Alternatively, the County may consider these types of improvements as uses of trip fees collected from Stanford if Stanford does not

[43] See https://www.cityofpaloalto.org/civicax/filebank/documents/60905.

achieve the no net new commute trips standard, and funding for intersection improvements is determined by the County to be infeasible.

The commenters further suggest a connection to Everett Avenue from the Transit Center. Palo Alto is considering the Everett Avenue pedestrian and bicycle connection as part of the Connect Palo Alto study. Again, contributions to these types of improvements could be proposed by Stanford to the County as trip reduction credits toward satisfaction of the no net new commute trips standard. Alternatively, the County may consider these types of improvements as uses of trip fees collected from Stanford if Stanford does not achieve the no net new commute trips standard, and funding for intersection improvements is determined by the County to be infeasible.

Stanford is working with local partners to improve access, including collaborating on design solutions. Combined with the Transit Center connections, improvements on Palm Drive across El Camino Real could prove a low-stress bikeway at one of Stanford's primary entries.

East Palo Alto specifically requests a mitigation fund for Class I bicycle facilities such as the University Avenue bike pedestrian bridge and the Rail Spur trail. Mitigation Measure 5.15-2 does not designate specific facility improvements that must be funded to achieve credits toward the no net new commute trips performance standard. However, if Stanford does not achieve the no net new commute trips standard, the County may elect to use trip fees collected from Stanford to fund additional bicycle facility improvements in neighboring cities if funding for intersection improvements is determined by the County to be infeasible.

Pedestrian and Bicycle Safety

Existing Pedestrian Facilities

Several comments were received on the Draft EIR suggesting that sidewalks are needed around the campus to protect pedestrians. Pedestrian facilities are described on Draft EIR page 5.15-27, which found that the pedestrian network surrounding the campus is mostly built-out, and there are only minor sidewalk gaps. Sidewalks are present in most parts of Palo Alto and Menlo Park. The Draft EIR noted that sidewalks are present on both sides of University Avenue, Embarcadero Road, Churchill Avenue, Park Boulevard, Yale Street, Wellesley Street, Oberlin Street, Bowdoin Street, Peter Coutts Road, Stanford Avenue, Welch Road, Vineyard Lane, and Arboretum Road. Signalized crossings on El Camino Real, which have pedestrian signals to provide safe crossings, are provided at numerous locations in the study area, including Sand Hill Road, Quarry Road, University Avenue/Palm Drive, and Embarcadero Road.

StreetScore+ Methodology

Several comments also questioned the applicability of StreetScore+, the analytical tool that was used to evaluate the safety and comfort of pedestrians and bicyclists in the Draft EIR. As described in the StreetScore+ Methodology Description in Draft EIR Appendix TIA, the evaluation tool's methodology is based on well-established research in built environment-based evaluations of bicycle and pedestrian comfort. The tool directly applies the "Level of Traffic Stress" methodology for bicyclists that was developed by Mekuria, Furth and Nixon (2012), with enhancements to address innovations including bicycle boulevards and cycle tracks, and is

consistent with several relevant forms of design guidance including the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities, the Caltrans Highway Design Manual, the California Manual on Uniform Traffic Control Devices and the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide. The level of traffic stress evaluation approach has been used nationwide by agencies to evaluate bicycle facilities, plan improvements, and assess impacts. The tool's pedestrian evaluation approach is similar to the bicycle evaluation approach, using several relevant forms of design guidance to develop a level of traffic stress rating system for pedestrian facilities. Referenced design guidance includes AASHTO's A Policy on Geometric Design of Highways and Streets, the Caltrans Highway Design Manual, the Public Rights-of-Way Accessibility Guidelines, the NACTO Urban Street Design Guide and safety research conducted through the National Cooperative Highway Research Program and Institute of Transportation Engineers. This built environment approach to evaluating pedestrian facilities is becoming commonplace as agencies seek to evaluate roadway and intersection needs with a multi-modal approach.

Impact Evaluation

Draft EIR Impact 5.15-8 on pages 5.15-111 and 5.15-112 addresses the question of whether the proposed Project would conflict with adopted policies, plans or programs regarding bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. The Draft EIR finds the proposed Project would result in a less-than-significant impact to bicycle or pedestrian facilities. The proposed Project would not create a new hazardous condition for pedestrians or bicyclists, nor would the Project result in any infrastructure changes that would preclude implementation of planned bicycle or pedestrian facilities.

The Draft EIR also identifies the intersections that would experience significant traffic impacts from Project-related vehicle trips if Stanford does not achieve the no net new commute trips standard. Physical intersection improvements have been identified where feasible to increase capacity of the intersections that could experience significant impacts. The Draft EIR assesses whether those intersection improvements would adversely affect bicyclists and pedestrians. The Draft EIR concludes that none of the identified intersection improvements would result in a significant adverse effect to bicyclists and pedestrians (see discussions under Impacts 5.15-2 [pages 5.15-91 through 5.15-94], 5.15-8 [pages 5.15-111 and 5.15-112], and 5.15-9 [pages 5.15-123 through 5.15-133).

Several comments on the Draft EIR express concern that pedestrians and bicyclists would be adversely affected by increased traffic as a result of the proposed 2018 General Use Permit, and that mitigation measures should be required to address this concern. Commenters are also concerned that parents will not be able to get their children to school safely or on time, and request financial assistance for crossing guards at nearby intersections.

The Draft EIR's significance criteria focus on whether the Project would result in physical impediments to pedestrian and bicycle travel, or physical changes to roadways and intersections that could present safety hazards. The Technical Advisory for Evaluating Transportation Impacts in CEQA published by the Governor's Office of Planning and Research references research

summarized in Appendix B of the State of California General Plan Guidelines related to the current state of roadway safety analysis. The research emphasizes three strategies that form the basis for effective safety management and analysis: 1) reduce speeds and increase driver attention; 2) protect vulnerable road users; and 3) reduce overall vehicle miles travelled and sprawl. The research does not identify a linkage between increased traffic levels at a given location (an intersection or roadway segment) and increased accident risk, but rather points to reducing VMT:

Higher total amounts of motor vehicle travel create higher crash exposure. Reducing vehicle miles traveled reduces collision exposure and improves safety (Dumbaugh and Rae, 2009, p. 325; Ewing, Scheiber, and Zegeer, 2003). As a result, infill development, which exhibits low VMT, itself provides safety benefits by reducing motor vehicle collision exposure, lowering speeds, and increasing pedestrian and cyclist volumes leading to "safety in numbers" (in addition to improving overall health broadly and substantially).

The research further points to reducing VMT as one of the recommended transportation safety mitigation measures that are most effective at improving safety.

The 2018 General Use Permit VMT analysis presented in the Draft EIR demonstrates that the Project would result in infill development that would exhibit low VMT, well below regional benchmarks on a per-worker and per-resident basis. Therefore, the Project would have a beneficial effect on safety based on the current safety research described above. It is also noted that, under the 2018 General Use Permit, Stanford would continue to provide transit and transportation demand management measures, improving these services and programs over time as conditions require.

In addition, as outlined in Chapter 3, *Project Description*, of the Draft EIR, under the 2018 General Use Permit, Stanford plans to construct several bicycle and pedestrian supportive projects on the Project site that are designed to serve local area student trips to the Nixon and Escondido Elementary Schools. Stanford also proposes to construct the improvements on the Project site that have been identified by the PAUSD and the City of Palo Alto as Suggested Routes to Schools. Circulation improvements on Stanford lands in and around Nixon and Escondido Elementary Schools could include such items as improved crosswalks with high-visibility yellow markings, pavement markings, additional signage, and wayfinding signs and additional traffic control. These improvements would benefit both pedestrian and bicycle circulation in the immediate area of both schools.

With respect to off-campus traffic, the primary method of mitigating the Project's traffic impacts is compliance with the no net new commute trips standard (Mitigation Measure 5.15-2), and fair share contributions to intersection impacts if that standard is not met. Any intersection improvements that may be funded would be designed to avoid any adverse impacts on pedestrians and bicyclists.

Topic 11: Vehicle Miles Traveled

The Draft EIR page 5.15-1 recognizes that legal requirements pertaining to transportation analyses under CEQA are in transition. Traditionally, transportation impact analyses have focused on level of service, which assesses roadway congestion during peak hours. These analyses focus on the highest, or peak, impacts that are predicted to occur, and identify mitigation measures to increase maximum road capacity. In contrast, a Vehicle Miles Traveled (VMT) analysis evaluates vehicle trips made throughout the day, and focuses on the number and length of vehicle trips made by project workers and residents. Measures to reduce VMT include locating a project near major transit stops and high-quality transit corridors, improving bicycle and pedestrian facilities, and instituting programs to encourage travel by modes other than driving alone. Rather than increasing road capacity, a VMT analysis focuses on getting people out of their cars.

Senate Bill 743 (SB 743), passed by the California State Legislature in 2013, required amendments to the CEQA Guidelines to establish criteria for determining the significance of transportation impacts of projects within transit priority areas. In developing the criteria, the Governor's Office of Planning and Research (OPR) is to recommend potential metrics to measure transportation impacts that may include, but are not limited to, vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. After the new guidelines take effect, automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment for projects in transit priority areas for purposes of CEQA. OPR has proposed a new CEQA Guideline section 15064.3 to comply with this mandate[44]. The proposed Guideline states that vehicle miles traveled is generally the most appropriate measure of transportation impacts, and that a land use project's effect on automobile delay shall not constitute a significant environmental impact. However, this "does not relieve a public agency of the requirement to analyze a project's potentially significant transportation impacts related to air quality, noise, safety, or any other impact associated with transportation." (Public Resources Code Section 21099(b)(3).) The proposed Guideline Section 15064.3(b)(4) gives lead agencies discretion to choose the particular VMT methodology employed.

OPR has explained that, although proposed CEQA Guideline Section 15064.3(b)(1) states that lead agencies should generally presume that certain types of projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) that are proposed within ½-mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT, this presumption would not apply if project- or location-specific information indicates that the project will generate significant levels of VMT. (See April 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA, the Governor's Office of Planning and Research (OPR), pp. 11-12.[45]

The Draft EIR, commencing on page 5.15-143, presents an analysis of the proposed Project's transportation impacts using the VMT metric rather than the level-of-service metric. The VMT

[44] See http://resources.ca.gov/ceqa/docs/update2018/attachment-A-CEQA-guidelines-15-day-revisions-july-2-2018.pdf.

[45] Available athttp://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf.

metric is applied to the Stanford campus in two ways. First, the Draft EIR considers whether the proposed Project is presumed to result in a less-than-significant transportation impact because it would be located within 1/2 mile of a major transit stop or along a high-quality transit corridor.[46] The Draft EIR demonstrates the proposed Project would meet both of these criteria. There is no project- or location-specific information indicating that the Project would generate significant levels of VMT. The Draft EIR considers whether average daily VMT per campus worker and average daily VMT per campus resident will be at least 15 percent less than average daily VMT per worker and per resident for the region.[47] The analysis concludes that the Project would achieve these criteria, and therefore would not result in a significant transportation impact.

VMT Generation

As explained in Draft EIR, Appendix VMT on page 29, estimated trip lengths for the worker and resident categories were calculated using the Stanford annual travel survey and the VTA travel model. However, for third party contractors, janitorial contractors and construction contractors, non-Stanford household members, and home-based other trips, Stanford did not have data for trip length so default trip lengths from the VTA model were used. A comparison between the Santa Clara countywide average trip lengths by trip type from the VTA model and the average trip lengths for the county among respondents to the California Household Travel Survey (CHTS) generally confirms the reasonableness of the VTA model estimates. The VTA model estimates are about 7 percent higher than CHTS for Home Based Work trips and about 11 percent higher for Home Based Other trips. Therefore, the VTA model estimates were used for this analysis where site-specific data were not available to maintain consistency between the project-specific analysis and the model-produced benchmark to which it is compared.

Increases of 2 percent to 3 percent in trip length were applied to the final calculations presented in Draft EIR Appendix VMT's Appendix C, Table 1 of 6, on the line just below the Totals for Commuters and Residents. The title of the row reads "2035 Trip Length Adjustment based on VTA Model." These increases were applied to future trip lengths in 2035 to reflect the future assumptions in Plan Bay Area. No adjustments were made to Draft EIR Appendix VMT's Appendix B because Appendix B focuses on 2018 conditions.

Regarding third party workers' trip length, the two sources used in the Draft EIR's analysis provide detailed data on travel characteristics for all categories of employment as defined in terms of national industry-specific occupational employment (NAICS) codes covering employment of all individual types noted. The CHTS data includes trip logs from 42,000 households representing a statistically valid sample of over 3.4 million Bay Area work trips, including 955,000 work trips from Santa Clara County, and contains trip lengths for each direct-to-work and indirect commute trip as well as all other trip purposes. The VTA travel model has been validated and calibrated against this and other empirical data to estimate, using established modeling standards and

[46] Under the proposed revision to CEQA Guidelines Section 15064.4(b)(1), land use projects within one-half mile of an existing major transit stop or a stop along a high quality transit corridor should be presumed to cause a less-than-significant transportation impact.

[47] The proposed SB 743 Guidelines gives a lead agency the discretion to choose the most appropriate methodology to evaluate VMT. However, the April 2018 OPR Technical Advisory on SB 743 implementation recommends as a reasonable threshold of significance a per capita or per employee VMT that is 15 percent below that of regional averages. http://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf.

meeting industry-prescribed validation criteria, trip origin-to-destination connections for all trips in NAICS groupings occurring within the county and the region disaggregated into 2,980 traffic analysis zones.

Concerning "other" VMT (i.e., vehicle trips made by drivers who are not Stanford workers and residents, such as vendor trips and visitor trips), these are considered in the air quality analysis but not in the transportation and traffic analysis. For the analysis of transportation impacts in CEQA documents, the Governor's Office of Planning and Research recommends that the analysis focus on the home-based work component of VMT for workers, and the home-based-work and home-based-other component of VMT for residents, to allow consistent comparison against regional and State commute VMT benchmarks.[48]

Topic 12: Transit and Bicycle Capacity

Several comments raised concerns about the ability of transit and bicycle facilities in the Project vicinity to accommodate the increased demand generated by development associated with the 2018 General Use Permit, and the Draft EIR impact conclusion that the impact(s) would be less than significant.

The Draft EIR on pages 5.15-155 to 5.15-169 presents a transit and bicycle facility analysis. The Draft EIR recognizes that a project that blocks access to a transit route may interfere with transit functions. By contrast, OPR has opined that a project that increases transit ridership is not considered to result in a significant adverse environmental impact. On pages 15 and 16 of its April 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA, the Governor's Office of Planning and Research (OPR)[49] states that:

> When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.
>
> Increased demand throughout a region may, however, cause a cumulative impact by requiring new or additional transit infrastructure. Such impacts may be adequately addressed through a fee program that fairly allocates the cost of improvements not just to projects that happen to locate near transit, but rather across a region to all projects that impose burdens on the entire transportation system, since transit can broadly improve the function of the transportation system.

The Draft EIR provides information showing that the proposed 2018 General Use Permit would not increase Caltrain or public bus ridership such that the capacity of those transit systems would be exceeded, nor would the Project increase bicycle ridership such that campus gateways could not accommodate the increase.

48 See http://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf.
49 See http://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf.

The Draft EIR addresses bicycle capacity starting on page 5.15-167. Campus gateways contain Class 1 (bike path) and Class II (bike lanes) bicycle facilities. Both types of bicycle facilities are capable of handling many more than 3.1 cyclists per minute without cyclists needing to ride side by side. A Class I facility can accommodate approximately 1,500 bicyclists per hour and a Class II facility can accommodate approximately 1,000 bicyclists per hour. The bicycle capacity analysis indicates that anticipated growth in bicycle commuters under the proposed 2018 General Use Permit would not exceed bicycle infrastructure capacity. The analysis finds that even if the bicycle mode share were to increase significantly due to improvements that encourage more cycling, capacity would not be a concern.

Caltrain

Comments from the Caltrain Joint Powers Board (JPB) note that the average number of seats per car on Caltrain's existing diesel train cars is generally about 126 seats, and the average train length varies between five and six cars during the peak period. This results in an estimated total seated peak hour capacity of 3,705 seats per peak hour. The 120 percent seated capacity standard is consistent with the JPB's adopted Title VI standard and would result in a total capacity of 4,446 passengers per peak hour. In Draft EIR Section 5.15.7, page 5.15-155, the analysis assumed total capacity could accommodate 120 percent of seated capacity, for a total of 3,900 passengers per peak hour.

A Transit and Bicycle Capacity Analysis Addendum (included in Appendix TBC-ADD in this Response to Comments Document.) provides an updated analysis based on capacity assumptions provided by Caltrain. Specifically, the updated analysis includes the assumption that that current peak hour trains are a mix of five- and six-car trains and the assumption that electric multiple unit (EMU) train cars, to be put in service beginning in 2021, will average 112 seats. The revised analysis continues to find that the seated and total capacity during the peak hour in 2035 would be sufficient to accommodate projected demand including that of Stanford commuters.

The JPB also describes the assumptions for 2035 used in the Draft EIR (see page 5.15-157), including the total capacity assumptions and the Peninsula Corridor Electrification Project (PCEP), a nearly $2 billion project that is fully funded and commenced construction in 2017. It notes that the PCEP will replace 75 percent of Caltrain's existing diesel train fleet with electric multiple units (EMUs) and will install the electrification infrastructure necessary to support their operation between San Francisco's 4th and King Station and San Jose's Tamien station. The project is on track to be complete by 2022, which is also when electric train service is anticipated to commence. These assumptions are reflected in the Transit and Bicycle Capacity Analysis Addendum.

The JPB also states that, based on the current EMU configuration and planned mix of six-car EMUs and seven-car diesel consists, it believes that the seated peak hour capacity of the corridor in 2022 will be 4,088 seats – a 10.3 percent increase from today. At 120 percent of seated capacity this equates to a peak hour passenger capacity of 4,906. These assumptions are reflected in the Transit and Bicycle Capacity Analysis Addendum.

The JPB states that there is uncertainty as to what the actual Caltrain capacity will be in 2022 (and hence the EIR's 2035 analysis year) since a service plan for the electrified trains has not yet been finalized, although it is forthcoming in the Caltrain Business Plan. Assumptions concerning service and capacity were based on the best available published information at the time the Draft EIR was prepared as documented in the Transit and Bicycle Capacity Analysis. This included the PCEP EIR and the Caltrain Short-range Transit Plan FY 2015-2024. The assumptions stated in the JPB comment letter are reflected in the Transit and Bicycle Capacity Analysis Addendum. This is the best analysis that can be done without engaging in speculation.

Topic 13: Parking Supply and Restrictions

Several comments raised concerns about the potential impact that additional parking demand could have on neighboring streets.

The Draft EIR pages 5.15-170 to 5.15-177 addresses parking. Section 5.15.8 On-Campus Parking Supply and Off-Campus Parking (page 5.15-170) provides information regarding Stanford's on-campus parking supplies and the surrounding communities' off-campus parking restrictions. The Draft EIR also references analysis and findings in the Appendix BCR and Appendix PKG. The parking analysis was presented to respond to concerns raised by community members regarding the potential for Stanford commuters and residents to park in off-campus residential neighborhoods.

On-campus Supply

Several comments on the Draft EIR suggest that the County should reduce the on-campus parking supply and not allow Stanford to expand parking under any circumstance, as the number of parking spaces can influence the amount of traffic. As discussed Draft EIR Project Description on page 3-24, and in Draft EIR Section 5.15-8 on page 5.5-171, Stanford has proposed to not exceed parking levels approved under the 2000 General Use Permit.

However, Stanford's proposed 2018 General Use Permit includes an option to construct up to 2,000 additional parking spaces (from a "parking reserve"), subject to Planning Commission review and approval, if any one of the following conditions apply: 1) Stanford is achieving the No Net New Commute Trips standard; 2) such parking serves 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 3) unforeseen circumstances occur due to changes in background conditions would require provision of additional parking (such as prolonged or permanent disruption of transit service).

Under the first two circumstances, Stanford would still be required to adhere to the no net new commute trips standard and no increase in peak hour vehicular trips would occur. The third circumstance, which relates to unforeseen circumstances such as a disruption of transit service cannot be evaluated in this EIR because the circumstances under which it would occur are not known at this time.

The Stanford Community Plan recognizes the tension between reducing trips to the campus and avoiding "spillover" of parking into neighborhoods. Policy SCP-C 6 states:

> "Continue to regulate parking supply as a mechanism for transportation demand management, while avoiding 'spillover' of parking into neighborhoods adjacent to the campus. Over time, require Stanford to maintain a consistent level of parking in proportion to students, faculty and staff, as compared to the current ratio of 1.03 spaces per student, faculty and staff member."

Stanford's Project application (at Tab 3) proposes that the combination of the remaining spaces authorized by the 2000 General Use Permit and the full amount of additional spaces held in the parking reserve together would equal the number of new spaces that would be needed to accommodate parking demand if existing parking demand ratios remain constant. Thus, even if use of the parking reserve is approved by the Planning Commission, the Project would not increase the current parking ratio compared to the ratio that exists today. Further, the proposed Project would require a County approval process to authorize the development of parking from the parking reserve.

Comments further suggest that the parking reserve is in direct contradiction to Stanford meeting the no net new commute trips standard and that Stanford would not need the additional parking unless it was pushing vehicle trips outside the peak hour or using credits to meet the trip standard. An increase in on campus parking supply would not necessarily prevent achievement of the no net new commute trips standard. First, some parking on the Stanford campus is not directly associated with peak period traffic congestion. For example, parking near campus residential areas often is used to store cars onsite when they are not in use. As another example, visitor and event parking areas often are occupied during off-peak periods when external roadway congestion is lighter than during peak periods. Second, the Stanford Community Plan (SCP-C 8) establishes a policy to credit Stanford's participation in off-campus trip reduction efforts that benefit the streets surrounding the campus toward Stanford's achievement of the no net new commute trips standard. This policy means that if Stanford reduces trips within the local area, those trip reductions can be used to offset a corresponding increase in trips crossing the campus cordon. As a result, more vehicles may cross the cordon than cross the cordon today- and those vehicles may need additional parking spaces.

With regard to the possibility that increased parking could enable the peak period to spread, the data collected during implementation of the 2000 General Use Permit do not support such a conclusion. As described above in Topic 7: Average Daily Traffic and Peak-Hour Spreading, monitoring data collected each year for over 15 years show that (1) there has been no increase in the daily number of vehicles entering and exiting the Stanford campus; and (2) the peak period has remained consistent, and has not spread or shifted. Stanford has added to and subtracted from its parking supply during this time period as needed without any effect on the peak period. As of Fall 2018, there are 1,641 fewer parking spaces on the campus than existed in 2000 because two major parking areas are under construction. Once the Center for Academic Medicine and the Escondido Village Graduate Residents are completed, there will be nearly 1,000 more spaces than in 2000.[50]

[50] See Appendix TRF-MISC in this Response to Comments Document.

Stanford Affiliates Parking Off-campus

Several comments state that the Draft EIR does not address the impacts of off-campus parking and the effects it has on the City's programs to manage on-street parking in the campus vicinity, including how Marguerite bus routes push parking into the neighborhoods.

Off-campus parking restrictions are presented in the Draft EIR on pages 5.15-173, including a description of the City of Palo Alto's existing and pending parking programs. The areas are illustrated in Draft EIR Figure 5.15-21. Further, Draft EIR Figure 5.15-22 presents the parking permit areas with a 5-minute walk of those Marguerite shuttle stops that are served by a shuttle operating every 15-minutes or less during the morning and evening peak commute periods. As illustrated in the figure, the City's Residential Parking Permit (RPP) areas cover the neighborhoods where accessing a Marguerite stop would be most likely to occur. Although parking in these neighborhoods may have occurred before the RPP program was initiated, the program is designed to prevent parking in these neighborhoods. The Draft EIR analysis found that substantial Stanford-affiliate parking in neighborhoods near shuttle routes that operate less frequently during the commute period is unlikely to occur.

As noted on Draft EIR page 5.15-176, on-street parking adjacent to the campus that is not time-restricted is very limited. The exception is along El Camino Real between Encinal Avenue and Stanford Avenue. The on-street parking occupies both the Stanford and the Palo Alto side of El Camino Real, and extends south to Grant Avenue. There are approximately 150 parking spaces on the Stanford side of El Camino Real fronting the Stanford campus. It should be noted that the City of Palo Alto has install 2-hour time limits along portions of El Camino Real between Churchill Street and Park Street as part of its Southgate RPP program. Residents with permits are exempt from the parking limits.