ADDENDUM TO THE 2030 COMPREHENSIVE PLAN ENVIRONMENTAL IMPACT REPORT (SCH #2014052101)

City of Palo Alto 2023-2031 Housing Element

PREPARED BY:

City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301
Contact: Tim Wong, Senior Planner

PREPARED WITH THE ASSISTANCE OF:

Rincon Consultants, Inc.
449 15th Street, Suite 303
Oakland, California 94612

REPORT DATE:

April 2023

This page left intentionally blank.

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

INTRODUCTION

This document is an addendum to the Environmental Impact Report (EIR) (State Clearinghouse [SCH] #2014052101) certified in 2017 ("2017 EIR") for the 2030 Comprehensive Plan. This addendum is being prepared for the City's 2023-2031 Housing Element Update (HEU), henceforth known as the "proposed project" or "proposed HEU." The City of Palo Alto was the lead agency for the certified EIR and is the lead agency for this addendum. The addendum analyzes the environmental effects of proposed revisions to the previously approved project analyzed in the 2017 EIR to address the proposed HEU and has been prepared in accordance with relevant provisions of the California Environmental Quality Act (CEQA) of 1970 (as amended) and the *CEQA Guidelines*.

According to *CEQA Guidelines* Section 15164, an addendum to a previously certified EIR or negative declaration is the appropriate environmental document in instances when "only minor technical changes or additions are necessary" and when the new information does not involve new significant environmental effects or a substantial increase in the severity of a significant effect beyond those identified in the previous EIR. CEQA Guidelines Section 15164 states that:

a. The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred [these are listed below in Section 1.2].
b. [Omitted – applies to Negative Declarations]
c. An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.
d. The decision-making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.
e. A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record.

BACKGROUND AND PURPOSE OF THE EIR ADDENDUM

2017 EIR BACKGROUND

The City of Palo Alto prepared and certified the Comprehensive Plan Update EIR (State Clearinghouse #2014052101) on February 5, 2016. The EIR analyzed four scenarios (scenarios 1, 2, 3, and 4) and their environmental impacts. The City then prepared and certified the Comprehensive Plan Update Supplement to the Draft EIR (State Clearinghouse #2014052101) on February 10, 2017, which analyzed two more scenarios (scenarios 5 and 6) with higher buildouts compared to scenarios 1 through 4. This addendum analyzes the proposed HEU's impacts in relation to the 2017 EIR, which analyzed a maximum buildout of 6,000 new housing units and 14,080 new residents in Scenario 6. The City also prepared and adopted a Mitigation, Monitoring and Reporting Program (MMRP); CEQA findings; and a Statement of Overriding Considerations in 2017.

BASIS FOR THE ADDENDUM

As discussed in the *CEQA Guidelines*, between the date an environmental document for a project is completed and the date that project is implemented fully, one or more of the following changes may occur: 1) the project may change; 2) the environmental setting of the project may change; or 3) previously unknown information can arise. Before proceeding with a project, CEQA requires the lead agency to evaluate these changes to determine whether they affect the conclusions in the prior environmental document. When an EIR has been adopted and a project is modified or otherwise changed after adoption, additional CEQA review may be necessary. The key considerations in determining the need for the appropriate type of additional CEQA review are outlined in Public Resources Code Section 21166 (CEQA) and *CEQA Guidelines* Sections 15162 and 15164.

CEQA Guidelines Section 15162(a) provides that a Subsequent EIR is not required unless the following occurs:

1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of identified significant effects;
2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of identified significant effects; or
3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
    A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
    B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
    C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
    D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Pursuant to *CEQA Guidelines* Section 15164(a), an addendum to a previously certified EIR may be prepared if some changes or additions are necessary but none of the conditions described in Section 15162 have occurred that require preparation of a Subsequent EIR. An addendum must include a brief explanation of the agency's decision not to prepare a Subsequent EIR and must

be supported by substantial evidence in the record as a whole (Section 15164[e]). The decision-making body must consider the addendum prior to approving the project (Section 15164[d]).

An addendum to the 2017 EIR is appropriate to address the proposed project, because the proposed modifications to the 2030 Comprehensive Plan project do not meet the conditions of Section 15162(a) for preparation of a Subsequent EIR as described herein.

This addendum presents an analysis of the environmental topics identified in Appendix G of the *State CEQA Guidelines* using a modified checklist that determines for each topic whether the circumstances set forth in Public Resources Code Section 21166 and its implementing *State CEQA Guidelines* sections 15162 and 15163 are present with respect to the proposed project or the circumstances surrounding the project.

The 2017 EIR and this addendum serve as documents to inform decision-makers and the public of the potential environmental consequences of approving the proposed project. This addendum neither controls nor determines the ultimate decision for approval of the proposed project. The information presented in this addendum to the certified EIR will be considered by the City of Palo Alto alongside the certified EIR prior to deciding whether to approve the proposed project.

This page intentionally left blank.

PROJECT DESCRIPTION

The proposed project, herein referred to as the "Housing Element Update," "proposed Housing Element Update," or "HEU," would amend the City of Palo Alto's 2030 Comprehensive Plan (hereinafter referred to as the "2030 Comprehensive Plan") by replacing the current Housing Element with the proposed 2023-2031 Housing Element and amending the 2030 Comprehensive Plan and Palo Alto Municipal Code (PAMC) as needed for consistency and HEU implementation.

The proposed HEU establishes programs, policies, and actions to further the goal of accommodating projected housing demand, as mandated by the State; increasing housing production to meet this demand; improving housing affordability; preserving existing affordable housing; improving the safety, quality and condition of existing housing; facilitating the development of housing for all income levels and household types, including special needs populations; improving the livability and economic prosperity of all Palo Alto residents; and promoting fair housing choice for all.

This section describes the proposed project, including the project location, major project characteristics, project objectives, and discretionary actions needed for approval.

LEAD AGENCY NAME, ADDRESS, AND CONTACT

City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301

Contact: Tim Wong, Senior Planner, Tim.Wong@cityofpaloalto.org, 650-329-2493

PROJECT LOCATION

The study area considered in this analysis includes the entire city of Palo Alto (hereinafter referred to as "City" or "Palo Alto"). Palo Alto is located 35 miles south of San Francisco and 14 miles north of San Jose. Palo Alto encompasses an area of approximately 26 square miles, about a third of which is open space, including 34 city-owned parks, and 1,700 acres of protected Baylands. The regional location of Palo Alto is shown in Figure 1 and the city limits are show in Figure 2.

Figure 1 Regional Location

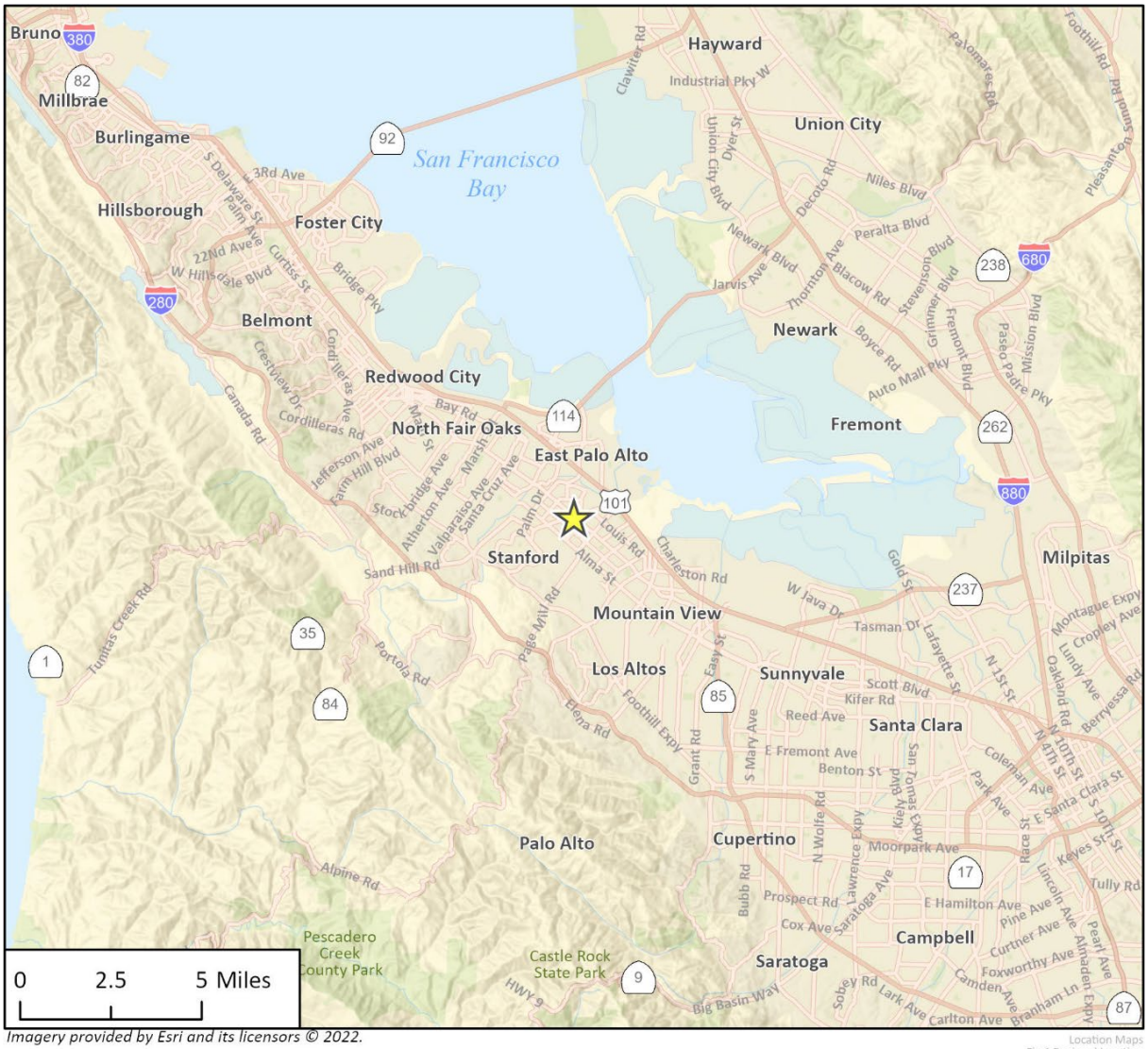


Figure 2 City of Palo Alto Location

Imagery provided by Microsoft Bing and its licensors © 2022.

Location Maps
Fig 2 Project Location

EXISTING SETTING

Palo Alto includes primarily single-family residential uses (approximately 61 percent of Palo Alto) as well as schools, civic buildings, parks and open space, and commercial uses. The developable area within Palo Alto, located between Junipero Serra Boulevard and the Bayshore Freeway (US 101), is largely built out. Less than 0.5 percent of the developable land area is vacant. A large percentage of Palo Alto's land area is also undeveloped Baylands and hillsides. The housing stock of Palo Alto in 2022 was made up of 16,403 single-family detached residences, 1,218 single-family attached residences, 1,958 multi-family residences with 2 to 4 units, 9,489 multi-family residences with 5 or more units, and 97 mobile homes (California Department of Finance [DOF] 2022[1]).

PROJECT CHARACTERISTICS

The proposed project consists of a complete update to the Comprehensive Plan Housing Element. The updates are intended to enable Palo Alto to accommodate housing in accordance with State law while continuing to provide services, parks, schools, and environmental setting, and offering new programs that support the city's diversity and housing affordability.

HOUSING ELEMENT UPDATE

The Housing Element is one of the State-mandated elements of the Comprehensive Plan. The current Housing Element was adopted in 2014 and is in effect through January 31, 2023. The Housing Element identifies Palo Alto's housing conditions and needs, and establishes the goals, objectives, and policies that comprise the City's housing strategy to accommodate projected housing needs, including the provision of adequate housing for low-income households and for special-needs populations (e.g., unhoused people, seniors, single-parent households, large families, and persons with disabilities).

The proposed HEU would bring the element into compliance with State legislation passed since adoption of the 2015-2023 Housing Element and with the current Regional Housing Needs Allocation (RHNA). In December 2021, the Association of Bay Area Governments (ABAG) Executive Board adopted the 6th Cycle Final RHNA, which includes a "fair share" allocation for meeting regional housing needs for each community in the ABAG region.

The proposed HEU includes the following components, as required by State law:

- **Evaluation of the 2015-2023 Housing Element**: An evaluation of the results of the goals, policies, and programs adopted in the 2015-2023 Housing Element that compares projected outcomes with actual achieved results.

[1] California Department of Finance (DOF). 2022. E-5 Population and Housing Estimates. https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/

- **Demographics and Housing Needs Assessment**: An analysis of the existing and projected housing needs of the community. It provides a profile of socio-demographic information, such as population characteristics, household information, housing stock, tenure, and housing affordability. The assessment also considers local special housing needs, such as seniors, farmworkers, unhoused persons, large households, and female-headed households.
- **Housing Capacity Analysis and Methodology**: An inventory listing adequate sites that are suitably zoned and available within the planning period to meet the city's fair share of regional housing needs across all income levels.
- **Housing Resources**: An identification of resources to support the development, preservation, and rehabilitation of housing.
- **Constraints to Housing Production**: An assessment of impediments to housing production across all income levels covering both governmental (e.g., zoning, fees, etc.) and nongovernmental (e.g., market, environmental, etc.) impediments.
- **Housing Plan**: This section provides a statement of the community's goals, policies and quantified objectives to maintain, preserve, improve, and develop housing, as well as a schedule of implementable actions to be taken during the planning period. Quantified objectives are included to make sure that both the existing and the projected housing needs are met, consistent with the city's share of the RHNA.

The draft Housing Element is available on the City's website:
https://paloaltohousingelement.com/

REGIONAL HOUSING NEEDS ALLOCATION

The Housing Element must address the City's fair share of the regional housing need and specific State statutory requirements and must reflect the vision and priorities of the local community. ABAG has allocated the region's 441,176 housing unit growth needs among each city and county in its region through a process called the Regional Housing Needs Determination. From the determination, ABAG assigns each jurisdictions Regional Housing Needs Allocation (RHNA). The RHNA represents the minimum number of housing units that the City is required to plan for in its Housing Element by providing adequate sites through the Comprehensive Plan and zoning.

As shown in Table 1, Palo Alto's RHNA for the 2023-2031 planning period is 6,086 units, which is distributed among four income categories (a fifth category for extremely low-income households is added in Table 1).

Table 1 RHNA Allocation and Percentage of Income Distribution for Palo Alto

Income Level	Percent of Area Median Income (AMI)	Units	Percent
Extremely Low	<30%	778	12.7%
Very Low	<50%	778	12.7%
Low	50-80%	896	14.7%
Moderate	80-120%	1,013	16.6%
Above Moderate	>120%	2,621	43.0%
Total	**–**	**6,086**	**100%**

Source: Association of Bay Area Governments Methodology and numbers were approved by ABAG's Executive board on January 21, 2021 (Resolution No. 02-2021).

MEETING THE RHNA

To meet the RHNA and provide sufficient capacity to accommodate future housing development, the HEU specifies sites suitable for residential development, identifies sites to increase permitted residential densities to meet affordability requirements, and includes other goals, policies, and programs to encourage housing. However, the Housing Element in and of itself does not develop housing – it is a plan. This housing plan would be supported by new and revised zoning standards. Not all of the housing anticipated by the RHNA will necessarily be built, as housing development is mainly accomplished by the private sector and dependent on factors independent of City control, such as financial resources. The sections below introduce the Sites Inventory, sites proposed to meet the RHNA, and then a subset of the inventory describing sites that require rezoning to meet the RHNA.

The Department of Housing and Community Development (HCD) guidance is to identify enough housing sites inventory to not only cover the jurisdiction's RHNA, but to also provide for an additional buffer capacity to accommodate realistic production rates of affordable housing units. Having a surplus or buffer can also allow for instances when a smaller residential unit count may have to be considered for a given property. The "No Net Loss" Law (Government Code Section 65863) requires maintenance of sufficient sites to meet the RHNA for all income levels throughout the planning period.

SITES INVENTORY

The City assessed capacity in entitled and proposed development, accessory dwelling units (ADU) and underutilized sites to meet the RHNA. Some of the underutilized sites are already zoned to accommodate multifamily housing at appropriate densities. However, other sites require rezoning to increase densities to allow multifamily housing and meet the remaining shortfall in accommodating the RHNA. These categories are further explained below. The City has identified 289 sites that could provide housing to meet the City's RHNA and buffer. These sites are shown on Figure 3.

ENTITLED AND PROPOSED DEVELOPMENT

Approved and permitted residential developments can be credited towards the City's RHNA for the 6th cycle Housing Element provided it can be demonstrated that the units will be built during the planning period. The city has identified 19 projects that are entitled or under review. Entitled and proposed development would generate 1,016 new units within the city.

ACCESSORY DWELLING UNITS

The City anticipates that it will permit an average of 64 accessory dwelling units (ADU) per year or 512 units during the planning period. ADUs, also referred to as granny flats or secondary units, provide an affordable housing option and are an important tool to help meet the housing needs in communities. The ADUs can also be credited towards RHNA. The proposed HEU includes programs for the City to incentivize and promote ADUs, such as by new incentives for rent-restriction ADUs that are affordable to low and very low income households and by allowing the construction of an ADU or Junior ADU with the construction of a new residence, whether on vacant property or on any property that is proposed to be redeveloped. The 64-unit annual projection is based on the City's average ADU production from 2019-2021.

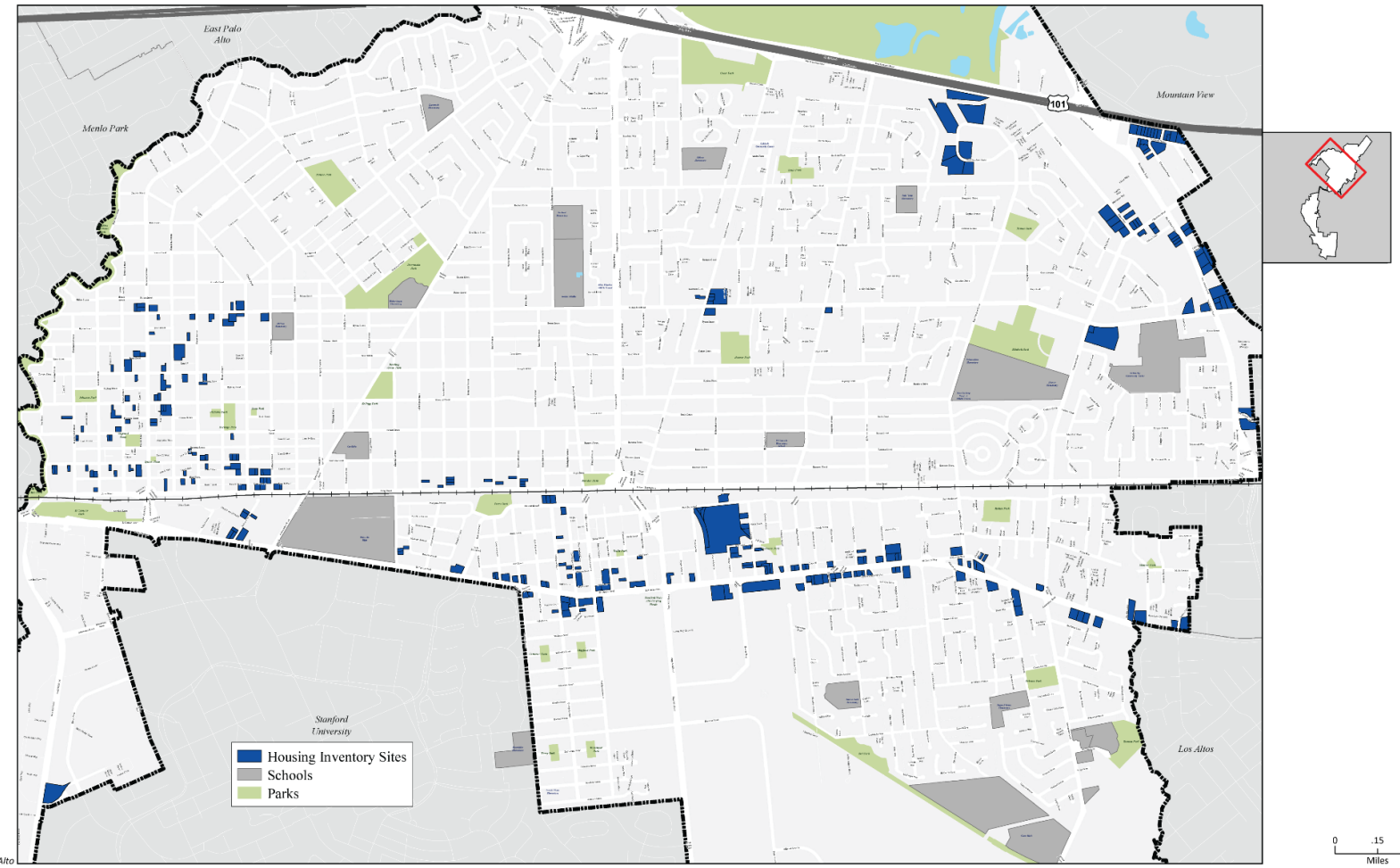
IDENTIFYING UNDERUTILIZED SITES

After crediting the entitled or under review 1,106 units and the 512 projected ADUs towards total RHNA (and buffer) of 6,695 units, there is a shortfall of 5,077 units. The proposed HEU identifies 289 sites that could accommodate 5,189 units[2] to meet the RHNA allocation during the 2023-2031 period plus an additional buffer. Most of the parcels are developed but underutilized. Parcels that were considered during this phase included:

- Underutilized sites such as lots with uses that are no longer needed or need rehabilitation
- Locations where housing could be denser
- Locations near public transit and services
- Locations where housing could be added near commercial buildings or in business parks to create "live-work" neighborhoods

[2] Note that the identified sites' yield of 5,189 exceeds the calculated shortfall of 5,077 units by 112 units; the revised total unit yield to meet RHNA is 6,807 units.

Figure 3 Housing Element Update Sites Inventory Locations



Source: City of Palo Alto

Not To Scale

Due to a lack of vacant available parcels, the City relies on non-vacant and underutilized sites to accommodate nearly all of its RHNA.

SITES REQUIRING ZONING CHANGES

Of the 289 sites identified to meet RHNA, the majority (166 sites) would need to be rezoned to a higher density to meet the estimated unit yields. The sites that do not require rezoning already allow for the development density to reach the estimated unit yields.

STRATEGIES TO MEET RHNA

The City identified nine strategies to identify additional housing opportunity sites to accommodate for the remaining total shortfall of 5,077 residential units. These strategies include:

1. General up-zone of sites that allow for multi-family residential use;
2. Sites located within ½ mile of a Caltrain station;
3. Sites within ½ mile of high-frequency bus transit corridors;
4. Parking lots owned by the City;
5. Surface parking surrounding local faith-based institutions;
6. Sites within the General Manufacturing (GM) zone;
7. Sites within Research, Office, and Limited Manufacturing (ROLM) zone;
8. Sites owned by Stanford University; and,
9. Additional sites identified by City staff.

Overall, it is estimated that 166 sites would be rezoned and these rezoned sites would have a capacity for an estimated 4,000 residential units distributed among all income categories. These sites are also shown on Figure 3.

GENERAL UP-ZONING STRATEGIES

The City would allow more residential development by increasing the maximum allowable density on sites where multi-family development is currently allowed. Medium to high density residential zones, or commercial zones that currently allow a maximum density of 20 dwelling units per acre would be up-zoned to allow a maximum of 30 dwelling units per acre. Similarly, areas zoned for a density of 30 dwelling units per acre would be up-zoned to allow up to 40 dwelling units per acre. Those identified parcels within 0.25 mile of Caltrain stations would receive an up-zone to 50 dwelling units per acre while those sites within a quarter to half a mile would be up-zoned to 40 units per acre.

This strategy would increase the capacity of the city's RM-20, RM-30, CN, CC, and CS zones on 99 sites. These sites are generally spread throughout the city but are predominately located within the CS zone along El Camino Real with additional sites in the Downtown and North Ventura Coordinated Area Plan (NVCAP) areas, and along Colorado Avenue and San Antonio Road.

SITES WITHIN 0.5 MILE OF A CALTRAIN STATION

This strategy focuses on facilitating transit-oriented residential development within a 0.5-mile buffer of the three Caltrain stations that serve Palo Alto, which includes the Downtown, California Avenue, and San Antonio Stations. Twenty-seven sites located within 0.25 mile of one of these stations were identified to be re-zoned to allow multi-family development at densities up to 50 dwelling units per acre, while 21 sites within 0.25 to 0.5 mile of one of these stations were identified to be re-zoned to allow up to 40 dwelling units per acre. These sites are primarily located in proximity to the Downtown and California Avenue Stations.

SITES WITHIN 0.5 MILE OF FREQUENT BUS ROUTES

This strategy would increase residential densities in areas located within walking distance of frequent bus and shuttle service stops, specifically VTA route 22, 522-El Camino Real and VTA route 21 – San Antonio Avenue, Middlefield Road, and University Avenue. These sites are primarily located along El Camino Real.

CITY-OWNED PARKING LOTS

Several city-owned surface parking lots can be redeveloped to include affordable housing, if appropriate. Four of these sites are located in the University Avenue Downtown area and two additional sites are located near California Avenue, within the California Avenue Business District.

SURFACE PARKING AND VACANT LAND ON SITES WITH FAITH-BASED INSTITUTIONS

Underutilized areas on sites occupied by faith-based institutions, such as excess parking lots and vacant segments of properties, could accommodate additional residential units.

GM AND ROLM ZONES

Nearly all sites in GM and ROLM zones are currently occupied by, or reserved for, office uses. This strategy would rezone these sites to allow for high-density multi-family residential uses and would accommodate approximately 35 percent of the city's overall remaining need. Program 1.1 of the proposed HEU would rezone ROLM and GM zoned properties to allow multi-family residential housing as a permitted use with a base density of 65 dwelling units per acre for those properties nearest Bayshore Freeway and generally bounded by East Charleston Road and Loma Verde Avenue.

STANFORD SITES

Stanford University owns multiple properties within city limits that could be used as sites for potential housing. Two sites were identified for use as residential development under the proposed HEU, which would be available for Stanford University affiliated employees and not for students.

ADDITIONAL SITES IDENTIFIED BY CITY STAFF

Nineteen additional sites were included in the Sites Inventory. These are sites where development interest has been expressed, sites that have been pre-screened by developers for residential projects, or the sites adequate for Palo Alto's Housing Incentives Program (HIP).

TOTAL SITES INVENTORY

Table 2 shows the total inventory of sites and units to meet the RHNA. The City of Palo Alto has assumed a 10 percent buffer which requires the site identification of an additional 609 units for a total of 6,695. As shown in the table, with entitled and proposed development, ADUs, underutilized sites with no rezoning required, and rezoning to meet the RHNA, a total of 6,807 units can be accommodated, which is more than the RHNA plus 10 percent buffer of 6,695 units.

Table 2 Total Housing Element Proposed Sites and Units to Meet the RHNA

	Sites	Units
Entitled and Proposed Development – Credit	N/A[1]	1,1,06
ADU – Credit	N/A[2]	512
Underutilized Sites (no rezoning required)	123	1,187
Rezoning to Meet the RHNA	166	4,002
Total	**289**	**6,807[4]**

[1] The 19 project sites for entitled and proposed development are not counted in the 289 RHNA sites therefore they are not included in this table.

[2] ADU development is assumed throughout the city.

OTHER ZONING CHANGES NOT REQUIRED TO MEET THE RHNA

The HEU includes additional programs to support housing development production and/or affordability throughout the city, some of which require zoning changes. Although these zoning changes are not required to meet the RHNA, they facilitate the goals of the Housing Element. These programs identified in the proposed HEU could modify zoning standards as follows:

- Rezone ROLM and GM zoned properties to increase densities for multi-family residential housing beyond 65 dwelling units per acre, for those properties nearest Bayshore Freeway and generally bounded by East Charleston Road and Loma Verde Avenue. The GM and ROLM zones are shown in Figure 4.
- Extend the Affordable Housing Incentive Program (AHIP) to all housing opportunity sites.
- Modify AHIP development standards to expand housing feasibility and affordability, including allowing more residential floor area, taller building heights, and align the City's parking requirements to be consistent with State Density Bonus law.

Figure 4 GM and ROLM Zones

- Modify the Housing Incentive Program (HIP) to amend development standards including floor area, building height, aligning the City's parking requirements to be consistent with State Density Bonus law; and modifying retail preservation requirements to allow more flexibility in redevelopment outside of essential retail locations (i.e., ground floor (GF) and retail (R) combining districts and strategic locations generally depicted in the draft South El Camino Real Design Guidelines). These revisions will promote greater housing production and affordability.
- Extend the HIP to multi-family residential districts and the ROLM and GM districts in northeast portion of the City nearest the Bayshore Freeway and generally bounded by East Charleston Road to the east and Loma Verde Avenue. The existing and proposed HIP expanded HIP areas are shown in Figure 5.
- Assess the existing Pedestrian and Transit Oriented Development (PTOD) Combining District development standards and the review process to identify modifications needed to support higher density housing production.
- Amend the City's seismic hazards identification program to strengthen regulations and require seismic upgrades of vulnerable housing stock through a combination mandatory provisions and voluntary incentives.
- Explore development incentives to encourage larger units, such as floor area ratio exemptions for three or more bedroom units to encourage a mix of different bedroom units in each development.
- Amend the Palo Alto Municipal Code (PAMC) to reduce commercial floor area allowances or other commercial incentives at strategic locations to shift the economic benefit of redevelopment toward home building.
- Assess the City's Workforce Housing Overlay regulations and consider amendments to better align the target housing population with a housing typology that provides clear reduced rents compared to market rate rents for a comparable unit.
- Adopt incentives to encourage lot consolidation to encourage high density housing with additional incentives for 100 percent affordable housing developments.

The zoning changes resulting from the implementation of these Housing Element programs may stimulate development on housing opportunity sites identified in the Housing Element to meet the RHNA or on other sites not identified in the Housing Element. This CEQA document evaluates implementation of this broader set of zoning tools and housing development on sites beyond the Housing Element sites inventory that may take advantage of these incentives. In this way, the analysis accounts for a scenario in which development occurs at a rate higher than it has historically or that is likely to occur.

Figure 5 Existing and Proposed HIP Sites

Basemap provided by Esri and its licensors © 2023.
Additional data provided by the City of Palo Alto, 2022 & 2023.

HOUSING ELEMENT UPDATE CEQA ASSUMPTIONS

CEQA BUILDOUT ASSUMPTIONS

For the purposes of the California Environmental Quality Act (CEQA) analysis, this document assesses a higher range of development potential, considered the "reasonable maximum development scenario," to fully analyze potential impacts if development occurs at a rate higher than it has historically. This reasonable maximum development scenario assumes that the entire housing sites inventory would develop as housing and does not account for removal of existing development (primarily low-rise commercial uses) that would be demolished to allow for housing. As a result, the impact analysis represents a conservative approach of potential impacts.

The CEQA analysis for the HEU is focused on the resulting physical changes that would take place as a result of the implementation of the required rezonings to meet RHNA as explained in Section 2.3.3 and program implementation as outlined in Section 2.3.4.

As shown on Table 2, there are 289 sites identified to meet RHNA; 123 of those do not require a zone change. Therefore, while they are identified sites for the purpose of meeting RHNA they are not assessed for the purposes of the CEQA analysis because they could be built to the projected Housing Element buildout with or without adoption of the Housing Element.

Further, although Table 2 shows a total 6,807 units associated with the 289 RHNA sites, the CEQA analysis assumes a higher unit yield because of an assumed higher density assigned to these sites. While the assumed yield count is lower for the purposes of demonstrating capacity to meet the RHNA, for the CEQA analysis the assumed yield is higher to allow for a reasonable maximum development scenario to account for potential environmental impacts.

Lastly, because HEU programs 1.1B, 3.4C, and 3.4C involve increased residential density, the CEQA buildout assumptions include an additional 82 sites and 1,116 units.

Table 3 shows the total buildout assumed with implementation of the Housing Element for the purposes of the CEQA analysis, which is 248 sites with a yield of 6,665 units.

Table 3 Total Housing Element Buildout for CEQA Analysis

	Sites	Units
RHNA Sites Inventory + Additional Density Assumption[1]	289	6,936
Sites removed from CEQA review[2]	(123)	(1,387)
Increase in allowable density in ROLM/GM zones (Housing Element Program 1.1B)[3]	13	294
HIP Standards Enhanced Citywide (Housing Element Program 3.4C)[4]	0	294
HIP Expanded to All RM Zones (Housing Element Program 3.4D)[5]	69	528
Total	**248**	**6,665**

( ) denotes subtraction

[1] The CEQA unit yield is higher than the RHNA sites yield because of an assumed higher density development assigned to the sites.

[2] 123 sites do not involve changes in development density; therefore, they have been excluded from the CEQA buildout because the development density is already permitted

[3] Additional sites added due to higher feasibility of development due to proposed upzoning.

[4] HIP allows for greater density and more relaxed development standards thus some developers will take advantage of the incentives.

[5] Extending the HIP to the RM zones will allow property owners to take advantage of the development incentives.

CEQA BASELINE AND COMPARISON TO THE 2017 EIR

The CEQA baseline for this analysis is the maximum allowable development for residential uses under the City's 2030 Comprehensive Plan Environmental Impact Report (EIR). The Comprehensive Plan Supplement to the Draft EIR analyzed six scenarios for development under the 2030 Comprehensive Plan. Scenario 6 of the 2030 Comprehensive Plan Supplement to the Draft EIR assumed a buildout of 6,000 residential units and 14,080 residents, similar to the residential buildout of the HEU. Table 4 compares the potential buildout under the proposed HEU to the buildout contemplated in Scenario 6 of the Comprehensive Plan EIR.

As shown on Table 4, buildout under the proposed HEU would result in 665 more residential units and 2,650 more residents compared to Scenario 6 as studied in the Comprehensive Plan EIR. Additionally, the construction of these units could result in an overall reduction in office uses, but this document utilizes a conservative approach of simply analyzing the additional impacts of the residential units, without assuming a reduction in the commercial buildout that was analyzed for the Comprehensive Plan EIR.

Table 4 Total Development Evaluated in the Comprehensive Plan EIR Compared to the Housing Element Update

	Buildout under Comprehensive Plan EIR	Buildout under Proposed Housing Element Update	Change in Buildout
New Housing Units (# of units)	6,000	6,665	+665
New Population (# of people)	14,080	16,730[1]	+2,650

[1] Based on Palo Alto persons per household of 2.51 (DOF 2022)

PROJECT OBJECTIVES

The purpose of the project is to address the housing and safety needs of the City, to support City programs to increase diversity and housing affordability, and to update the Comprehensive Plan to meet the requirements of current State law. The proposed Housing Element includes the following objectives:

- Accommodating projected housing demand, as mandated by the State;
- Increasing housing production to meet this demand;
- Improving housing affordability;
- Preserving existing affordable housing;
- Improving the safety, quality and condition of existing housing;
- Facilitating the development of housing for all income levels and household types, including special needs population;
- Improving the livability and economic prosperity of all City residents; and
- Promoting fair housing choice and affirmatively furthering fair housing for all.

REQUIRED APPROVALS

With recommendations from the Planning and Transportation Commission, the City Council would need to take the following discretionary actions in conjunction with the proposed HEU:

- Adoption of the 2023-2031 Housing Element of the Comprehensive Plan
- Amendments to the City's Zoning Ordinance
- Amendments to the Comprehensive Plan to ensure internal consistency between the Housing Element and other chapters. This would include changes to land use designations in the Land Use Element and changes to the Safety Element to meet current State law requirements.

CALIFORNIA NATIVE AMERICAN TRIBAL CONSULTATION

On September 29, 2022, the City of Palo Alto contacted California Native American Tribal governments by sending an Assembly Bill (AB) 52 and Senate Bill (SB) 18 notification letter via email to tribes with an affiliation with the project area based on a list provided by the Native American Heritage Commission (NAHC). Under AB 52, Native American tribes have 30 days to respond and request further project information and request formal consultation. Under SB 18, Native American tribes have 90 days to respond and request further project information and request formal consultation. The City did not receive a request for formal consultation under AB 52 or SB 18. Therefore, no California Native American Tribes traditionally or culturally affiliated with the project area have requested consultation pursuant to Public Resources Code Section 21080.3.1.

This page intentionally left blank.

IMPACT ANALYSIS

A comparative analysis has been prepared of the potential impacts associated with the proposed project and the potential impacts of the scenarios analyzed in the 2017 EIR, using the CEQA Guidelines Appendix G checklist as a guide. The checklist considers the full range of environmental issues subject to analysis under CEQA (in rows), and then poses a series of questions (in columns) aimed at identifying the degree to which the issue was analyzed in the EIR. The checklist also includes a column identifying whether the proposed changes to the Comprehensive Plan meet any of the criteria of CEQA Guidelines Section 15162 requiring a subsequent EIR relative to each environmental issue. The questions posed in each column are described below:

Where was impact analyzed? This column provides a cross-reference to the portions of the 2017 EIR where information and analyses may be found relative to the environmental issue listed under each topic. The cross-references identified in this column correspond with page numbers and section numbers of the 2017 EIR.

Could proposed changes involve new or substantially more severe impacts? In accordance with the CEQA Guidelines Section 15162(a)(1), this column indicates whether the proposed project would involve new significant environmental impacts or a substantial increase in the severity of identified significant impacts that, in turn, would require major revisions of the 2017 EIR.

Are there new circumstances resulting in new or substantially more severe impacts? In accordance with CEQA Guidelines Section 15162(a)(2), this column indicates whether changes to the circumstances under which the proposed project is undertaken or implemented have occurred that would involve new significant environmental impacts or a substantial increase in the severity of identified significant impacts that, in turn, would require major revisions of the 2017 EIR.

Is there new information resulting in new or substantially more severe significant impacts? In accordance with CEQA Guidelines Sections 15162(a)(3)(A) and 15162(a)(3)(B), this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the EIR was certified, shows additional or substantially more severe significant impacts not discussed in the 2017 EIR.

Do mitigation measures included in the certified EIR address and/or resolve impacts? In accordance with CEQA Guidelines Sections 15162(a)(3)(C) and 15162(a)(3)(D), this column indicates whether new mitigation measures or alternatives previously found not to be feasible in the 2017 EIR would in fact be feasible and would substantially reduce one or more significant effects of the project, or whether such mitigation measures or alternatives which are considerably different from those analyzed in the 2017 EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

If impacts have been adequately analyzed in the 2017 EIR or would be less than significant, major revisions of the 2017 EIR would not be required and no further environmental review under CEQA would be required.

1 Aesthetics

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Except as provided in Public Resources Code Section 21099, would the project:					
a. Have a substantial adverse effect on a scenic vista?	EIR Page 4.1-5 through 4.1-7	No	No	No	N/A
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	EIR Page 4.1-5 through 4.1-7	No	No	No	N/A
c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	EIR Pages 4.1-2 through 4.1-5	No	No	No	N/A
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	EIR Pages 4.1-7 through 4.1-8	No	No	No	Yes

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENT

Section 4.1, *Aesthetics*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to aesthetics. The 2017 EIR determined that the 2030 Comprehensive Plan would have significant but mitigable impacts related to aesthetics. The 2017 EIR states that the project could potentially substantially degrade the existing visual character or quality of the affected areas of the city and their surroundings since it would introduce housing on sites previously used for non-residential purposes and increase the scale of development on existing housing

sites. Therefore, Mitigation Measure AES-1 would be required and would reduce impacts to a less than significant level.

The 2017 EIR found that the 2030 Comprehensive Plan would not significantly alter public viewsheds, view corridors, or scenic resources, and would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. These impacts were found to be less than significant.

Table 5 lists the mitigation measure from the 2017 EIR related to aesthetics.

Table 5 2017 EIR Mitigation Measures: Aesthetics

Mitigation Measure #	Mitigation Text
Impact AES-1: Implementation of the proposed Plan would have the potential to substantially degrade the existing visual character or quality of the area and its surroundings. (Potentially Significant and Mitigable)	
AES-1	To ensure that increased residential densities would not degrade the visual character or quality of the area, the proposed Plan shall include policies that address the following topics: ▪ High-quality building and site design. ▪ Compatibility with surrounding development and public spaces. ▪ Enhancement of existing commercial centers. ▪ Requirements for landscaping and street trees. ▪ Preservation and creation of a safe and inviting pedestrian environment. ▪ Appropriate building form, massing, and setbacks.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACTS

a. Would the project have a substantial adverse effect on a scenic vista?

An adverse effect would occur if a proposed plan or project would block or otherwise damage the scenic vista upon implementation. The City does not contain designated scenic views or scenic vistas. However, Palo Alto identifies the backdrop of forested hills to the southwest and San Francisco Bay to the northeast as views that are character-defining features of the city, including the East Bay hills and the Santa Cruz Mountains (City of Palo Alto 2016).

The proposed HEU involves policies or programs that could increase allowed height (an estimated additional 10 to 35 feet of height in some zoning districts) and floor area of development in the city. The proposed HEU involves numerous programs and policies to facilitate the development of housing in Palo Alto. However, areas proposed for development were also analyzed for development in the 2017 EIR. Overall, the proposed HEU would result in 665 more residential units compared to what was analyzed in the 2017 EIR. As discussed in the 2017 EIR, future development facilitated by the 2030 Comprehensive Plan would be required to comply with design guidelines such as the El Camino Real Design Guidelines which address site, building, and landscaping design issues; South of Forest Avenue Coordinated Area Plan guidelines which provides planning policies, development regulations, and design guidelines for the South Forest Area; and the Downtown Urban Design Plan which includes conceptual designs for specific locations and offers examples of desirable architectural and landscape

treatments. These guidelines and standards would also generally apply to development under the HEU. Furthermore, future multi-family development would be subject to the City's Architectural Review Board and/or designed in accordance with objective multi-family design standards, to ensure that visual resources in Palo Alto are protected through compliance with applicable development standards. However, consistent with what was analyzed in the 2017 EIR, the proposed HEU would introduce housing on sites previously used for non-residential purposes, such as in ROLM and GM zones, and would increase the scale of development on some existing housing sites, leading to newer and larger structures.

Nonetheless, even with potentially increased allowed height limits, development facilitated under the proposed HEU compared to what is currently allowed would not substantially block views, as most views are already fully or intermittently impeded by urban development, including mature trees and existing buildings, and urbanized areas do not offer near or far field views of scenic vistas. Therefore, an increase in height would not directly or substantially block views. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

While there are no officially designated State scenic highways in Palo Alto, the City identifies several scenic routes, including Sand Hill Road, University Avenue, Embarcadero Road, Page Mill Road, Oregon Expressway, I-280, Arastradero Road (west of Foothill Expressway), Junipero Serra Boulevard/Foothill Expressway, and Skyline Boulevard as having high scenic value (City of Palo Alto 2016). The proposed rezoning that would occur under the proposed HEU would allow for increased residential density in RM-20, RM-30, CN, CC, and CS zones, and would allow for residential uses in non-residential zones such as ROLM and GM zones. Overall, the proposed HEU would result in 665 more units compared to what was analyzed in the 2017 EIR, which could affect scenic views toward scenic routes. However, the housing inventory sites are all located in areas that are already developed, and development would occur on underutilized or non-vacant sites. Furthermore, development within the urbanized areas of the town such as the Downtown area has already been planned to reinforce the existing development pattern. Since there are no State-designated scenic highways in Palo Alto, the HEU would not facilitate development that would substantially damage scenic resources within a state scenic highway. Future multi-family development would be subject to the city's Major Architectural Review, which would help ensure that development complies with the applicable design guidelines and development standards, including protection of scenic resources. Or, if projects qualify for streamlined review, multifamily projects would be subject to objective design standards that aim to create high-quality design and compatibility with surrounding uses and character. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The proposed HEU includes goals, policies, and programs to encourage housing in Palo Alto. The proposed rezoning that would occur under the proposed HEU would allow for increased residential density in RM-20, RM-30, CN, CC, and CS zones, and would allow for residential uses in non-residential zones such as ROLM and GM zones. Overall, the proposed HEU would result in 665 more units compared to what was analyzed in the 2017 EIR. Additional residential development could result on other sites in urbanized areas of the city as a result of new incentives in the HIP. However, future development would be subject to the city's Major Architectural Review which includes a hearing and recommendation by the Architectural Review Board on whether the individual project is consistent with the findings for Architectural Review outlined in PAMC Section 18.76.020. Or, if projects qualify for streamlined review, multifamily projects would be subject to objective design standards that aim to create high-quality design and compatibility with surrounding uses and character. This process aims to promote orderly and harmonious development in the city and promote visual environments that are of high aesthetic quality and variety and which, at the same time, are considerate of each other. Additionally, future development in locations within specific area plans would be required to adhere to development guidelines outlined within the respective area plans. Although the proposed HEU would introduce housing on sites previously used for non-residential purposes and increase the height and scale of development on existing underutilized sites, as with the 2017 EIR, future development would be required to comply with policies L-1.1, L-6.1, L-4.2, and N-2.1 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure AES-1 of the 2017 EIR, which would ensure that increased residential densities would not degrade the visual character or quality of the area. Therefore, this impact would be less than significant with mitigation, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Palo Alto is an urbanized city with commensurate level of light and glare. Development facilitated by the project would, in large part, occur as infill on already developed parcels within existing neighborhoods. New lighting could occur on buildings for safety and in pedestrian walkways, and light could be emitted from interior sources through windows on upper stories of tall buildings. The main source of glare would likely be from the sun shining on reflective or light-colored building materials and glazing.

Development facilitated by the proposed HEU would occur as redevelopment of existing built and underutilized sites. When facilities such as parking lots are replaced with buildings, these replacements may reduce nighttime sources of light, because parking lots are often more

brightly lit during the nighttime than most buildings. Development of underutilized parcels may result in new light sources, but they would likely be congruous with nearby light sources (e.g., lighting from residential windows). Furthermore, as the development facilitated by the project would be residential units, light from windows would be mostly filtered or obscured by window coverings. Light spillover from exterior residential lighting is typically blocked by adjacent structures or trees.

Furthermore, future development would be required to comply with PAMC Section 18.40.250, which outlines guidelines for building exterior lighting and downward illumination; interior lighting; unnecessary continued illumination; and timing devices and dimmers. Additionally, future commercial and multi-family development would be subject to the city's Major Architectural Review which would ensure that all development comply with the applicable design guidelines and development standards, including lighting and glare.

Overall, new residential development would be in existing residential neighborhoods or along commercial corridors where sources of light and glare already exist. Development under the proposed HEU would not create new sources of substantial light or glare that would adversely affect daytime or nighttime views in the area and the impact therefore would be less than significant. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

The project would have less than significant impacts on aesthetic resources, the same as those identified in the 2017 EIR, with compliance with policies adopted in compliance with Mitigation Measure AES-1. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

2 Agriculture and Forestry Resources

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	EIR Pages 7-1 through 7-2	No	No	No	N/A
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	EIR Pages 7-1 through 7-2	No	No	No	N/A
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	EIR Pages 7-1 through 7-2	No	No	No	N/A
d. Result in the loss of forest land or conversion of forest land to non-forest use?	EIR Pages 7-1 through 7-2	No	No	No	N/A
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	EIR Pages 7-1 through 7-2	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

The 2017 EIR addresses agricultural and forestry resources in Chapter 7, CEQA-Mandated Sections. The 2017 EIR found that the implementation of the 2030 Comprehensive Plan would have no impacts related to agricultural and forestry resources.

PROJECT-SPECIFIC IMPACTS

a. Would the project convert Prime Farmland, Unique Farmland, Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Although there are approximately nine acres of Prime Farmland and 11 acres of Unique Farmland within Palo Alto, none of the sites in the Sites Inventory or areas proposed to be rezoned are located on agricultural land. The proposed HEU would facilitate increased housing on non-vacant and underutilized sites that are in urbanized areas. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, and there would be no impact, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

According to the 2017 EIR, there are a total of 24 properties under the Williamson Act Contract. The proposed HEU would facilitate increased housing on non-vacant and underutilized sites that are in urbanized areas and would not involve changes to existing agricultural land or conflict with a Williamson Act Contract. Therefore, there would be no impact, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?

According to the 2017 EIR and the California Department of Forestry and Fire Protection (CAL FIRE), forest lands are primarily located in the southern foothills. CAL FIRE also shows scattered, isolated forestland within urbanized areas of the city. However, these areas are contained within parks, creek corridors, and built-out residential neighborhoods. No forest land, timberland, or timberland zoned Timberland Production are proposed for redevelopment, rezoning, or land use changes by the proposed HEU. The proposed HEU would facilitate increased housing only on non-vacant and underutilized sites that are in urbanized areas. Therefore, there would be no impact, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more

severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

The project would have less than significant impacts on agriculture or forestry resources, the same as those identified in the 2017 EIR. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

3 Air Quality

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Conflict with or obstruct implementation of the applicable air quality plan?	EIR Pages 4.2-2 through 4.2-13	No	No	No	No
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	EIR Pages 4.2-13 through 4.2-21	No	No	No	No
c. Expose sensitive receptors to substantial pollutant concentrations?	EIR Pages 4.2-22 through 4.2-29	No	No	No	No
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	EIR Pages 4.2-29 through 4.2-31	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.2, *Air Quality,* of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to air quality. The 2017 EIR found that implementation of the 2030 Comprehensive Plan could conflict with or obstruct the implementation of the 2010 Bay Area Clean Air Plan. Although Scenario 6 was found to result in a lower vehicle miles traveled (VMT) per capita and a lower VMT per service population than under existing conditions at the time, it could not be verified whether the 2030 Comprehensive Plan would aid or hinder implementation of control measures outlined in the 2010 Bay Area Clean Air Plan. Therefore, Mitigation Measure AIR-1 would be required to reduce impacts to a less than significant level.

The 2017 EIR also found that the 2030 Comprehensive Plan could violate an air quality standard; contribute substantially to an existing or project air quality violation; and/or result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or State ambient air quality standard, resulting in significant and unavoidable impacts. Even with implementation of mitigation measures AIR-2a through 2d, impacts would be significant since future development projects would contribute to increases in concentrations of air pollutants.

The 2017 EIR found that implementation of the 2030 Comprehensive Plan could expose sensitive receptors to substantial concentrations of Toxic Air Contaminants (TACs), and mitigation measures AIR-3a through 3d would be required to reduce impacts to a less than significant level. Additionally, the implementation of the 2030 Comprehensive Plan could expose a substantial number of people to objectionable odors. Therefore, mitigation measure AIR-4 would be required to reduce odor impacts to a less than significant level.

Table 6 lists the mitigation measures from the 2017 EIR related to air quality.

Table 6 2017 EIR Mitigation Measures: Air Quality

Mitigation Measure #	Mitigation Text
Impact AIR-1: Without inclusion of air quality policies, implementation of the proposed Plan could conflict with or obstruct implementation of the applicable air quality plan. (Significant and Mitigable)	
AIR-1	To ensure consistency with the 2010 Bay Area Clean Air Plan, the proposed Plan shall include policies that address the following topics: ▪ Reduction in emissions of particulates from automobiles, manufacturing, construction activity, and other sources (e.g. dry cleaning, wood burning, landscape maintenance). ▪ Support for regional, State, and federal programs that improve air quality. ▪ Support for transit, bicycling, and walking. ▪ Mix of uses (e.g. housing near employment centers) and development types (e.g. infill) to reduce the need to drive.
Impact AIR-2: Implementation of the proposed Plan could violate an air quality standard; contribute substantially to an existing or project air quality violation; and/or result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors). (Significant and Unavoidable)	
AIR-2a	As part of the City's development approval process, the City shall require applicants for future development projects to comply with the current BAAQMD basic control measures for reducing construction emissions of PM10 (Table 8-1, Basic Construction Mitigation Measures Recommended for All Proposed Projects, of the BAAQMD CEQA Guidelines).
AIR-2b	Prior to issuance of construction permits, development project applicants that are subject to CEQA and have the potential to exceed the BAAQMD screening-criteria listed in the BAAQMD CEQA Guidelines shall prepare and submit to the City of Palo Alto a technical assessment evaluating potential project construction-related air quality impacts. The evaluation shall be prepared in conformance with BAAQMD methodology in assessing air quality impacts. If construction related criteria air pollutants are determined to have the potential to exceed the BAAQMD thresholds of significance, as identified in the BAAQMD CEQA Guidelines, the City of Palo Alto shall require that applicants for new development projects incorporate mitigation measures (Table 8-2, Additional Construction Mitigation Measures Recommended for Projects with Construction Emissions Above the Threshold, of the BAAQMD CEQA Guidelines or applicable construction mitigation measures subsequently approved by BAAQMD) to reduce air pollutant emissions during construction activities to below these thresholds. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning and Community Environment Department.
AIR-2c	To ensure that development projects that have the potential to exceed the BAAQMD screening criteria air pollutants listed in the BAAQMD CEQA Guidelines reduce regional air pollutant emissions below the BAAQMD thresholds of significance, the proposed Plan shall include policies that address the following topic: ▪ Require compliance with BAAQMD requirements, including BAAQMD CEQA Guidelines

Mitigation Measure #	Mitigation Text
AIR-2d	Implement Mitigation Measure TRANS-1a. In addition, to reduce long-term air quality impacts by emphasizing walkable neighborhoods and supporting alternative modes of transportation., the proposed Plan shall include policies that address the following topic: ▪ Enhanced pedestrian and bicycle connections between commercial and mixed-use centers.
Impact AIR-3: Implementation of the proposed Plan would expose sensitive receptors to substantial concentrations of air pollution. (Significant and Mitigable)	
AIR-3a	The City of Palo Alto shall update its CEQA Procedures to require that future non-residential projects within the city that: 1) have the potential to generate 100 or more diesel truck trips per day or have 40 or more trucks with operating diesel powered TRUs, and 2) are within 1,000 feet of a sensitive land use (e.g., residential, schools, hospitals, nursing homes), as measured from the property line of a proposed project to the property line of the nearest sensitive use, shall submit a health risk assessment (HRA) to the City of Palo Alto prior to future discretionary Project approval or shall comply with best practices recommended for implementation by the BAAQMD. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment and the Bay Area Air Quality Management District. If the HRA shows that the incremental cancer risk exceeds the BAAQMD significance thresholds, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and noncancer risks to an acceptable level, including appropriate enforcement mechanisms. Mitigation measures and best practices may include but are not limited to: ▪ Restricting idling on-site beyond Air Toxic Control Measures idling restrictions, as feasible. ▪ Electrifying warehousing docks. ▪ Requiring use of newer equipment and/or vehicles. ▪ Restricting off-site truck travel through the creation of truck routes. Mitigation measures identified in the project-specific HRA shall be identified as mitigation measures in the environmental document and/or incorporated into the site development plan as a component of a proposed project.
AIR-3b	To ensure that new industrial and warehousing projects with the potential to generate new stationary and mobile sources of air toxics that exceed the BAAQMD project level and/or cumulative significance thresholds for toxic air contaminants and PM2.5 listed in the BAAQMD CEQA Guidelines reduce emissions below the BAAQMD thresholds of significance, the proposed Plan shall include policies that address the following topic: ▪ Require compliance with BAAQMD requirements, including BAAQMD CEQA Guidelines.
AIR-3c	The City of Palo Alto shall update its CEQA Procedures to require that residential and other sensitive land use projects (e.g., hospitals, nursing homes, and day care centers) that are subject to CEQA and are not classified as exempt within 1,000 feet of a major sources of TACs (e.g., warehouses, industrial areas, freeways, and roadways with traffic volumes over 10,000 vehicle per day), as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, shall submit a health risk assessment (HRA) to the City of Palo Alto prior to future discretionary Project approval or shall comply with best practices recommended by the BAAQMD. The HRA shall be prepared in accordance with policies and procedures of the State Office of Environmental Health Hazard Assessment (OEHHA) and the BAAQMD. The latest OEHHA guidelines shall be used for the analysis, including age sensitivity factors, breathing rates, and body weights appropriate for children age zero to 16 years. If the HRA exceeds the BAAQMD significance thresholds, the applicant will be required to identify and demonstrate that mitigation measures are capable of reducing potential cancer and non-cancer risks to an acceptable level (i.e., below 10 in one million or a hazard index of 1.0), including appropriate enforcement mechanisms. Measures and/or best practices to reduce risk may include but are not limited to: ▪ Air intakes located away from high volume roadways and/or truck loading zones. ▪ Heating, ventilation, and air conditioning systems of the buildings provided with appropriately sized Maximum Efficiency Rating Value (MERV) filters.

Mitigation Measure #	Mitigation Text
	Mitigation measures identified in the HRA and best practices shall be incorporated into the site development plan as a condition of approval. The air intake design and MERV filter requirements shall be noted and/or reflected on all building plans submitted to the City and shall be verified by the City.
AIR-3d	Amend the Palo Alto Municipal Code to require applicants for new ministerial projects, or new discretionary projects that are exempt from CEQA, within 1,000 feet of a major sources of TACs (e.g., warehouses, industrial areas, freeways, and roadways with traffic volumes over 10,000 vehicle per day), as measured from the property line of the project to the property line of the source/edge of the nearest travel lane, to either submit an HRA showing that BAAQMD significance thresholds would not be exceeded, or provide a filtration system capable of filtering out 90 percent of fine inhalable particulates and diesel particulate matter.
Impact AIR-4: Implementation of the proposed Plan could create or expose a substantial number of people to objectionable odors unless policies are integrated into the proposed Plan. (Significant and Mitigable)	
AIR-4	To reduce odor impacts, the proposed Plan shall include policies that address the following topic: ▪ Buffers and other mitigation methods to avoid human health impacts from sources of odor and/or toxic air contaminants.

Source: City of Palo Alto 2016

BAAQMD SIGNIFICANCE THRESHOLDS

This analysis uses the Bay Area Air Quality Management District's (BAAQMD's) May 2017 *CEQA Air Quality Guidelines* to evaluate air quality. The plan-level thresholds specified in the May 2017 BAAQMD *CEQA Air Quality Guidelines* were used to determine whether the proposed HEU's impacts would exceed the thresholds identified in *CEQA Guidelines* Appendix G.

CONSISTENCY WITH AIR QUALITY PLAN

Under BAAQMD's methodology, a determination of consistency with *CEQA Guidelines* thresholds should demonstrate that a project:

1. Supports the primary goals of the 2017 Clean Air Plan
2. Includes applicable control measures from the 2017 Clean Air Plan
3. Does not disrupt or hinder implementation of any 2017 Clean Air Plan control measures

CONSTRUCTION EMISSIONS THRESHOLDS

The BAAQMD's May 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutants emissions. However, they do include project-level screening and emissions thresholds for temporary construction-related emissions of air pollutants. These thresholds represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the San Francisco Bay Area Air Basin's (SFBAAB) existing air quality conditions and are discussed in detail below (BAAQMD 2017a). Construction emissions associated with plan implementation are discussed qualitatively to evaluate potential air quality impacts.

The BAAQMD developed screening criteria in the 2017 *CEQA Air Quality Guidelines* to provide lead agencies and project applicants with a conservative indication of whether a project could

result in potentially significant air quality impacts. The screening criteria for residential land uses are shown in Table 7.

Table 7 BAAQMD Criteria Air Pollutant Screening Levels

Land Use Type	Operational Criteria Pollutant Screening Size (du)	Construction Criteria Pollutant Screening Size (du)
Single-family	325 (NO_X)	114 (ROG)
Apartment, low-rise	451 (ROG)	240 (ROG)
Apartment, mid-rise	494 (ROG)	240 (ROG)
Apartment, high-rise	510 (ROG)	249 (ROG)
Condo/townhouse, general	451 (ROG)	240 (ROG)
Condo/townhouse, high-rise	511 (ROG)	252 (ROG)
Mobile home park	450 (ROG)	114 (ROG)
Retirement community	487 (ROG)	114 (ROG)
Congregate care facility	657 (ROG)	240 (ROG)

du = dwelling unit; NOX = oxides of nitrogen; ROG = reactive organic gases

Source: BAAQMD 2017a

If a project meets the screening criteria, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration (BAAQMD 2017a).

In addition to the screening levels above, several additional factors are outlined in the 2017 *CEQA Air Quality Guidelines* that construction activities must satisfy for a project to meet the construction screening criteria:

- All basic construction measures from the 2017 *CEQA Guidelines* must be included in project design and implemented during construction
- Construction-related activities would not include any of the following:
  - Demolition
  - Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously)
  - Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development)
  - Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity

For projects that do not meet the screening criteria above, the BAAQMD construction significance thresholds for criteria air pollutants, shown in Table 8, are used to evaluate a project's potential air quality impacts.

Table 8 BAAQMD Criteria Air Pollutant Significance Thresholds

Pollutant	Construction Thresholds Average Daily Emissions (lbs/day)	Operational Threshold Average Daily Emissions (lbs/day)	Operational Threshold Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	Not Applicable

lbs = pounds; NO_X = oxides of nitrogen; ROG = reactive organic gases; $PM_{2.5}$ = particulate matter with an aerodynamic diameter equal to or less than 2.5 microns

Source: BAAQMD 2017a

For all projects in the SFBAAB, the BAAQMD 2017 *CEQA Air Quality Guidelines* recommends implementation of the Basic Construction Mitigation Measures listed in Table 8-2 of the Guidelines (BAAQMD 2017a). For projects that exceed the thresholds in Table 8, the BAAQMD 2017 *CEQA Air Quality Guidelines* recommends implementation of the Additional Construction mitigation measures listed in Table 8-3 of the Guidelines (BAAQMD 2017a).

OPERATIONAL EMISSIONS THRESHOLDS

The BAAQMD's 2017 *CEQA Air Quality Guidelines* contain specific operational plan-level significance thresholds for criteria air pollutants. Plans must show the following over the planning period:

- Consistency with current air quality plan control measures, and
- A proposed plan's projected VMT or vehicle trips (either measure may be used) increase is less than or equal to the plan's projected population increase.

The current air quality plan is the 2017 Clean Air Plan. If a plan can demonstrate consistency with both criteria, then impacts would be less than significant.

For project-level thresholds, the screening criteria for operational emissions are shown in Table 7. For projects that do not meet the screening criteria, the BAAQMD operational significance thresholds for criteria air pollutants, shown in Table 8, are used to evaluate a project's potential air quality impacts.

CARBON MONOXIDE HOTSPOTS

BAAQMD provides a preliminary screening methodology to conservatively determine whether a proposed project would exceed carbon monoxide (CO) thresholds. If the following criteria are met, a project would result in a less than significant impact related to local CO concentrations:

1. The project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.

2. Project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
3. Project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. The entire Basin is in conformance with state and federal CO standards (BAAQMD 2017c). There are no current exceedances of CO standards within the BAAQMD jurisdiction and have not had a CO exceedance in the Bay Area since before 1994.[3] For 2019 the Bay Area's reported maximum 1-hour and average daily concentrations of CO were 5.6 ppm and 1.7 ppm respectively (BAAQMD 2019).[4] These are well below the respective 1-hour and 8-hour standards of 20 ppm and 9 ppm. Given the ambient concentrations, which include mobile as well as stationary sources, a project in the Bay Area would need to emit concentrations three times the hourly maximum ambient emissions for all sources before project emissions would exceed the 1-hour standard. Additionally, the project would need to emit seven times the daily average for ambient concentrations to exceed the 8-hour standards. Typical development projects, even plan level growth, would not emit the levels of CO necessary to result in a localized hot spot.

TOXIC AIR CONTAMINANTS

For health risks associated with TAC and $PM_{2.5}$ emissions, the BAAQMD May 2017 CEQA Air Quality Guidelines state a project would result in a significant impact if the any of the following thresholds are exceeded (BAAQMD 2017b):

- Non-compliance with Qualified Community Risk Reduction Plan;
- Increased cancer risk of > 10.0 in a million;
- Increased non-cancer risk of > 1.0 Hazard Index (Chronic or Acute); or
- Ambient $PM_{2.5}$ increase of > 0.3 $\mu g/m^3$ annual average

ODORS

The BAAQMD provides minimum distances for siting of new odor sources shown in Table 9. A significant impact would occur if the project would result in other emissions (such as odors) affecting substantial numbers of people or would site a new odor source as shown in Table 9 within the specified distances of existing receptors.

[3] BAAQMD only has records for annual air quality summaries dating back to 1994.

[4] Data for 2019 was used as the data for 2020 and 2021 are not currently available.

Table 9 BAAQMD Odor Source Thresholds

Odor Source	Minimum Distance for Less than Significant Odor Impacts (in miles)
Wastewater treatment plant	2
Wastewater pumping facilities	1
Sanitary Landfill	2
Transfer Station	1
Composting Facility	1
Petroleum Refinery	2
Asphalt Batch Plant	2
Chemical Manufacturing	2
Fiberglass Manufacturing	1
Painting/Coating Operations	1
Rendering Plant	2

Source: BAAQMD 2017a

METHODOLOGY

CONSTRUCTION EMISSIONS

Construction-related emissions are temporary but may still result in adverse air quality impacts. Construction of development facilitated by the project would generate temporary emissions from three primary sources: the operation of construction vehicles (e.g., scrapers, loaders, dump trucks, etc.); ground disturbance during site preparation and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances.

At this time, there is not sufficient detail to provide analysis of individual construction projects that would be facilitated by the project, and thus it would be speculative to analyze project-level impacts. Rather, consistent with the programmatic nature of the project, construction impacts for the project are discussed qualitatively and emissions are not compared to the project-level thresholds.

OPERATION EMISSIONS

Based on plan-level guidance from the BAAQMD 2017 *CEQA Air Quality Guidelines,* long-term operational emissions associated with implementation of the proposed project are discussed qualitatively by comparing the proposed project to the 2017 Clean Air Plan goals, policies, and control measures. In addition, comparing the rate of increase of plan vehicle trips or VMT and population is recommended by BAAQMD for determining significance of criteria pollutants. If the proposed project does not meet either criterion then impacts would be potentially significant.

PROJECT-SPECIFIC IMPACT ANALYSIS

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The most current clean air plan, *Spare the Air, Cool the Climate: A Blueprint for Clean Air and Climate Protection in the Bay Area* (2017 Clean Air Plan) was adopted by BAAQMD April 2017 (BAAQMD 2017b). The legal impetus for the 2017 Clean Air Plan was to update the previous 2010 Clean Air Plan to comply with State air quality planning requirements as codified in the California Health & Safety Code. The 2017 Clean Air Plan either has updated or replaced the air quality plans that were discussed in the 2017 EIR.

The California Clean Air Act requires that air districts create a Clean Air Plan that describes how the jurisdiction will meet air quality standards. To fulfill State ozone planning requirements, the 2017 Clean Air Plan control strategy includes all feasible measures to reduce emissions of ozone precursors—ROG and NO_X—and reduce transport of ozone and its precursors to neighboring air basins. The Clean Air Plan builds upon and enhances the BAAQMD's efforts to reduce emissions of fine particulate matter and TACs. The 2017 Clean Air Plan does not include control measures that apply directly to individual development projects. Instead, the control strategy includes control measures related to stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-GHG pollutants.

The 2017 Clean Air Plan focuses on two paramount goals, both consistent with the mission of BAAQMD:

- Protect air quality and health at the regional and local scale by attaining all national and state air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TACs; and
- Protect the climate by reducing Bay Area GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050

Under BAAQMD's methodology, a determination of consistency with the 2017 Plan should demonstrate that a project:

- Supports the primary goals of the air quality plan
- Includes applicable control measures from the air quality plan
- Does not disrupt or hinder implementation of any air quality plan control measures

A project that would not support the 2017 Clean Air Plan's goals would not be considered consistent with the 2017 Clean Air Plan. Table 10 shows project consistency with applicable control measures from the 2017 Clean Air Plan.

Table 10 Project Consistency with Applicable 2017 Clean Air Plan Control Measures

Control Measures	Consistency
Transportation	
TR9: Bicycle and Pedestrian Access and Facilities. Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.	**Consistent**: The proposed HEU would facilitate development of increased housing compared to the 2030 Comprehensive Plan within urbanized sites and in areas such as along El Camino Real, the California Avenue area, the Downtown area, near Bayshore Road, and in underutilized commercial areas. These areas are mostly near or adjacent to transportation corridors currently served by Class I, II, and III bicycle lanes such as University Avenue, Bryant Street, California Avenue, and Bayshore Road, which would encourage the use of bicycles and reduce reliance on single-occupancy vehicles. Future residents would also be able to utilize bicycle parking facilities around the city which would encourage residents to bicycle and walk to transit and services (City of Palo Alto 2012).
Energy	
EN2: Decrease Electricity Demand. Work with local governments to adopt additional energy-efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.	**Consistent.** Development facilitated by the project would be required to comply with the PAMC Chapters 16.14 (California Green Building Standards Code) and 16.17 (California Energy Code), which mandates the implementation of the City's sustainability and energy efficiency measures. Newly constructed buildings would be required to comply with the City's All-Electric Mandate which requires an all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). Although the inclusion of all-electric construction would increase electricity demand, electricity would be provided by City of Palo Alto Utilities (CPAU), which has provided 100 percent carbon neutral electricity since 2013 (City of Palo Alto 2022b).
Buildings	
BL1: Green Buildings. Collaborate with partners such as KyotoUSA to identify energy-related improvements and opportunities for on-site renewable energy systems in school districts; investigate funding strategies to implement upgrades. Identify barriers to effective local implementation of the CALGreen (Title 24) statewide building energy code; develop solutions to improve implementation/enforcement. Work with ABAG's BayREN program to make additional funding available for energy-related projects in the buildings sector. Engage with additional partners to target reducing emissions from specific types of buildings.	**Consistent**: Development facilitated by the project would be required to comply with the energy and sustainability standards of Title 24 (including the California Energy Code and CALGreen) and the City's associated amendments that are in effect at that time. For example, the current 2022 CALGreen standards require a minimum of 65 percent diversion of construction and demolition debris while the City's Construction and Demolition Debris Diversion Ordinance (PAMC Section 16.14.260) requires a minimum of 80 percent diversion for projects with a valuation of $25,000 or greater. Future development would be required to comply with the most recent Title 24 standards, which are updated every three years and become increasingly more stringent over time. Future development would also be subject to the Reach Code which would requires all-electric building design for single-family, low-rise multi-family, and non-residential development. Pursuant to Section 16.14.420 of the PAMC, new multi-family residences would be required to provide at least one Electric Vehicle Supply Equipment (EVSE) Ready outlet or EVSE installed for each residential unit in the structure for residential parking, and would be required to provide Conduit Only, EVSE Ready Outlet, or EVSE installed for at least 25 percent of guest parking spaces, among which at least 5 percent shall be EVSE installed. Future development facilitated by the project would be required to comply with the most updated EV requirements in both the City's Reach Code and Title 24 at the time of construction.

Control Measures	Consistency
Water	
WR2: Support Water Conservation. Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.	**Consistent**: Future development that needs new or expanded water service would be required to comply with the San Francisco Public Utilities Commission's (SFPUC) and CALGreen's water efficiency regulations, and the State's Model Water Efficiency Landscape Ordinance to reduce indoor and outdoor water use.

Source: BAAQMD 2017b

As shown in Table 10, the project would be consistent with the applicable measures as development facilitated by the project would be required to comply with the latest Title 24 regulations and would increase density along transportation corridors and in the downtown area, allowing for greater use of alternative modes of transportation. Development facilitated by the project would not contain elements that would disrupt or hinder implementation of a 2017 Clean Air Plan control measures. Therefore, the project would be consistent with the 2017 Clean Air Plan.

PROJECT VEHICLE TRIP AND POPULATION GROWTH

According to the BAAQMD 2017 *CEQA Air Quality Guidelines,* the threshold for criteria air pollutants and precursors includes an assessment of the rate of increase of either the plan VMT or vehicle trips versus population growth. As discussed above under Environmental Setting, to result in a less than significant impact, the analysis must show that either the project's projected VMT or vehicle trip increase would be less than or equal to its projected population increase. As shown in Table 11, vehicle trips associated with project buildout would increase by approximately 16.2 percent over baseline 2015 conditions and would not exceed the rate of increase from the forecast population of approximately 24.1 percent over baseline 2015 conditions. Therefore, the project's vehicle trip increase would not conflict with the BAAQMD's 2017 *CEQA Air Quality Guidelines* operational plan-level significance thresholds for criteria air pollutants and would be consistent with the 2017 Clean Air Plan. Accordingly, impacts would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Although not required, the project's VMT increase was also assessed and, at 24.4 percent, was roughly equal to the rate of increase in population.

Table 11 Increase in Population Compared to Vehicle Trips Under Project

Scenario	Baseline (2015)	2023-2031 Housing Element Update (Proposed Project)	Net Increase	Percent Change
Population	69,537	86,277	16,740	24.1%
Vehicle Trips	96,097	111,636	15,539	16.2%

Source: Data provided by Hexagon Transportation Consultants, Inc. 2023

b. Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

CONSTRUCTION

Development facilitated by the proposed HEU would involve activities that result in air pollutant emissions. Construction activities such as demolition, grading, construction worker travel, delivery and hauling of construction supplies and debris, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The extent of daily emissions, particularly ROGs and NO_X emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of $PM_{2.5}$ and PM_{10} emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts. According to the 2017 BAAQMD *CEQA Air Quality Guidelines,* PM_{10} is the greatest pollutant of concern during construction (BAAQMD 2017a).

As discussed above under BAAQMD Significance Thresholds, BAAQMD's 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutant emissions that would apply to the project. However, the guidelines include project-level thresholds for construction emissions. If an individual project's construction emissions fall below the project-level thresholds, the project's impacts on regional air quality would be individually and cumulatively less than significant. Mitigation Measure AIR-2b of the 2017 EIR would require future development that does not meet the BAAQMD construction screening criteria under Table 7 to conduct individual air quality analysis and compare emissions to BAAQMD significance thresholds as detailed under Table 8, and to implement mitigation measures to reduce emissions.

Construction of development envisioned under the project would temporarily increase air pollutant emissions, possibly creating localized areas of unhealthy air pollution concentrations or air quality nuisances. Therefore, construction air quality impacts would be potentially significant. Furthermore, site preparation and grading during construction activities facilitated by development under the proposed project may cause wind-blown dust that could contribute particulate matter into the local atmosphere. The BAAQMD has not established a quantitative threshold for fugitive dust emissions but rather states that projects that incorporate best management practices (BMPs) for fugitive dust control during construction would have a less-than-significant impact related to fugitive dust emissions. The BAAQMD has identified feasible fugitive dust control measures for construction activities. These Basic Construction Mitigation Measures are recommended for all projects (BAAQMD 2017a). In addition, the BAAQMD and CARB have regulations that address the handling of hazardous air pollutants such as lead and asbestos, which could be aerially disbursed during demolition activities. BAAQMD rules and regulations address both the handling and transport of these contaminants. Mitigation

Measure AIR-2a of the 2017 EIR would require future development to comply with the BAAQMD Basic Construction Mitigation Measures to reduce fugitive dust emissions. However, as discussed in the 2017 EIR, construction impacts would still remain significant and unavoidable due to the programmatic nature of the project, similar to the 2030 Comprehensive Plan as analyzed in the 2017 EIR. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

OPERATION

According to the BAAQMD 2017 *CEQA Air Quality Guidelines,* the threshold for criteria air pollutants and precursors includes an assessment of the rate of increase of plan VMT or vehicle trips versus population growth. As discussed above under Environmental Setting, to result in a less than significant impact, the analysis must show that the project's projected VMT or vehicle trips increase would be less than or equal to its projected population increase. Table 11 under Checklist Question (a) summarizes the net increase in population versus vehicle trips based on modeling performed by Hexagon Transportation Consultants, Inc. Because the vehicle trips associated with project buildout would increase by approximately 16.2 percent over baseline 2015 conditions, it would not exceed the rate of increase from the forecast population growth of approximately 24.1 percent over baseline 2015 conditions. Vehicle trips increase at a lower percentage because the proposed project would concentrate increased residential units in proximity to jobs and services to reduce singular vehicle trips and encourage alternative models of travel. Therefore, impacts concerning criteria pollutants generated from operation of the project would be less than significant and would be generally the same as for the 2030 Comprehensive Plan as analyzed in the 2017 EIR.

Future development would continue to be required to implement policies N-5.1, N-5.5, T-1.9, and L-2.2 of the 2030 Comprehensive Plan, adopted in compliance with mitigation measures AIR-2c and 2d of the 2017 EIR, which would require compliance with BAAQMD requirements and support for alternative modes of transportation. However, as analyzed in the 2017 EIR, Scenario 6 would cumulatively contribute to the nonattainment designations (ozone, PM_{10}, and $PM_{2.5}$) of the Basin and would have a significant and unavoidable impact by contributing to the regional air quality problem. Therefore, since the proposed HEU would increase the number of residential units by 665 units compared to Scenario 6, operational impacts for the proposed HEU would be slightly increased compared to those identified in the 2017 EIR and would remain significant and unavoidable. However, similar to the 2017 EIR, development facilitated by the proposed HEU would place residents in urbanized areas in proximity to services, jobs, and transit, which would reduce VMT by reducing reliance on single-occupancy vehicles. Additionally, the prohibition of natural gas and inclusion of all-electric new construction would reduce the amount of criteria air pollutants, and the required inclusion of EVSE in new multi-family dwelling units would also further reduce emissions due to increased vehicle efficiency. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

CARBON MONOXIDE HOTSPOTS

As discussed above under BAAQMD Significance Thresholds, typical development projects, even plan level growth, would not emit the levels of CO necessary to result in a localized hotspot. Therefore, CO hotspots are not discussed further in this analysis. Impacts to CO hotspots would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

TOXIC AIR CONTAMINANTS

CONSTRUCTION

Construction-related activities would result in short-term emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site preparation (e.g., excavation, grading, and clearing), building construction, and other miscellaneous activities. DPM was identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of DPM, as discussed below, outweighs the potential non-cancer[5] health impacts (CARB 2021).

Generation of DPM from construction typically occurs in a single area for a short period. Construction of development facilitated by the project would occur over approximately a decade, but use of diesel-powered construction equipment in any one area would likely occur for no more than a few years for an individual project and would cease when construction is completed in that area. It is impossible to quantify risk without identified specific project details, timelines, and locations.

Projects developed under the proposed HEU would be required to comply with applicable BAAQMD regulatory requirements and control strategies and the CARB In-Use Off-Road Diesel Vehicle Regulation, which are intended to reduce emissions from construction equipment and activities. Additionally, future development facilitated by the proposed HEU would be required to comply with Mitigation Measure AQ-2a of the 2017 EIR, requiring implementation of construction emission measures that would reduce construction-related TACs. According to the OEHHA, construction of individual projects lasting longer than two months or placed within 1,000 feet of sensitive receptors could potentially expose nearby sensitive receptors to substantial pollutant concentrations and therefore could result in potentially significant risk impacts (OEHHA 2015). These projects could exceed BAAQMD's thresholds of an increased cancer risk of greater than 10.0 in a million and an increased non-cancer risk of greater than 1.0 Hazard Index (Chronic or Acute). Therefore, construction impacts from TAC emissions would be

[5] Non-cancer risks include premature death, hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma, increased respiratory symptoms, and decreased lung function (CARB 2021a).

potentially significant. However, future development would be required to comply with Mitigation Measure AIR-3a of the 2017 EIR, which outlines requirements for the preparation of health risk assessments (HRA) and the inclusion of best practices, as well as Policy N-5.6 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure AIR-3b of the 2017 EIR, which would ensure compliance with BAAQMD requirements. Therefore, this impact would be less than significant with mitigation, and would be generally the same as for the 2030 Comprehensive Plan as analyzed in the 2017 EIR. There would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, and further analysis is not warranted.

OPERATION

In the Bay Area, there are several urban or industrialized communities where the exposure to TACs is relatively high in comparison to others. The City of Palo Alto is not located in an impacted community according to BAAQMD *CEQA Guidelines*. Sources of TACs include, but are not limited to, land uses such as freeways and high-volume roadways, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using perchloroethylene, and gasoline dispensing facilities (BAAQMD 2017a). Operation of development facilitated by the project would not involve these uses, and therefore, would not be considered a source of TACs. In addition, residences do not typically include new stationary sources onsite, such as emergency diesel generators. However, if a residential project did include a new stationary source onsite, it would be subject to BAAQMD Regulation 2, Rule 2 (New Source Review) and require permitting. This process would ensure that the stationary source does not exceed applicable BAAQMD health risk thresholds. Development facilitated by the project would be required to comply with the residential indoor air quality requirements in the Title 24 Building Energy Efficiency Standards, which currently require Minimum Efficiency Reporting Value 13 (or equivalent) filters for heating/cooling systems and ventilation systems in residences (Section 150.0[m])). Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. There would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, and further analysis is not warranted.

PROJECT SITING

Development facilitated by the project would occur under the jurisdiction of BAAQMD. CARB screening methodology for project siting is used in this analysis. In 2005, CARB issued recommendations to avoid siting new residences within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day or close to known stationary TAC sources (CARB 2005). BAAQMD's average daily traffic (ADT) threshold is lower, at 10,000 vehicles per day (BAAQMD 2017a).

Development facilitated by the project could place sensitive receptors living in housing within approximately 500 to 1,000 feet of roadways with more than 10,000 annual average daily traffic (AADT), and highways or freeways. Examples of roadways with over 10,000 vehicles per day include US 101, SR 82/El Camino Real, I-280, Middlefield Road, Alma Street, Foothill Expressway/Junipero Serra Boulevard, University Avenue, Embarcadero Road, Oregon

Expressway/Page Mill Road, Charleston Road/ Arastradero Road, and San Antonio Road. In addition, portions of Lytton Avenue, Manhattan Avenue, Arboretum Road, Quarry Road, Pasteur Drive, California Avenue, Fabian Way, and California Street are also identified as high-volume roadways (City of Palo Alto 2017a). Additionally, development facilitated by the project could also place sensitive receptors living in housing in proximity to stationary sources of TACs such as dry cleaners and gasoline-dispensing facilities. The proposed project would facilitate increased housing compared to the 2017 EIR which could potentially expose an increased number of residents to sources of TACs and $PM_{2.5}$. However, future development would be required to comply with mitigation measures AIR-3c and 3d identified in the 2017 EIR, which would require the preparation of HRAs for residential and sensitive land use projects or new ministerial projects located within 1,000 feet of a major source of TAC. Therefore, this impact would be less than significant with mitigation, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because here would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project expose sensitive receptors to substantial pollutant concentrations?

During construction activities, heavy equipment and vehicles would emit odors associated with vehicle and engine exhaust both during normal use and when idling. However, these odors would be temporary and transitory and would cease upon completion. Therefore, development facilitated by the project would not generate objectionable odors affecting a substantial number of people.

BAAQMD includes odor screening distances for land uses with the potential to generate substantial odor complaints. Those uses include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants. The proposed HEU includes residential uses which do not typically generate odors. The 2017 EIR included mitigation to address impacts associated with placing new residential uses in proximity to odor sources. Although the proposed project would increase the number of residential units compared to the 2017 EIR, future development would be required to comply with Policy N-5.4 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure AIR-4 of the 2017 EIR, which would reduce the potential for residents to be exposed to odors through buffers and other mitigation methods. Therefore, this impact would be less than significant with mitigation and would be generally the same as for the 2030 Comprehensive Plan as analyzed in the 2017 EIR. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2030 Comprehensive Plan, future development would continue to implement Mitigation Measures 2a and 2b, 3a and 3c, as well as policies adopted in compliance with Mitigation Measures AIR-2c and 2d, 3b, and 4, which would reduce air quality impacts to a

less than significant level. However, similar to the 2017 EIR, the proposed project could cumulatively contribute to the nonattainment designations (ozone, PM_{10}, and $PM_{2.5}$) of the Basin and would have a significant and unavoidable impact by contributing to the regional air quality problem. Therefore, the project would not result in new or substantially more severe significant effects not addressed in the prior EIR, and no new mitigation measures are warranted, but impacts would remain significant and unavoidable. This issue **does not require further study in an EIR**.

This page intentionally left blank.

4 Biological Resources

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	EIR Pages 4.3-6 through 4.3-8	No	No	No	Yes
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	EIR Pages 4.3-8 through 4.3-9	No	No	No	N/A
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	EIR Pages 4.3-8 through 4.3-9	No	No	No	N/A
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	EIR Page 4.3-9	No	No	No	Yes

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	EIR Pages 4.3-10 through 4.3-12	No	No	No	Yes
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	EIR Page 4.3-12 through 4.3-13; 4.9-15 through 4.9-16	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.3, *Biological Resources,* of the 2017 EIR found that the 2030 Comprehensive Plan would not have a substantial adverse effect on special-status species; riparian habitats; sensitive natural communities identified in local or regional plans, policies, or regulations; federally protected wetlands; or the movement of any native resident or migratory fish or wildlife species. Additionally, the 2030 Comprehensive Plan would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy, or an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

PROJECT-SPECIFIC IMPACTS

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

The proposed HEU would substantially affect special-status species if it would allow development that would remove their habitat such as wetlands or riparian vegetation along non-channelized creeks. Although the proposed HEU would facilitate 665 more residential units compared to what was analyzed in the 2017 EIR, the proposed HEU would only increase residential density on non-vacant and underutilized sites in urbanized areas of the city generally away from open space preserves and non-channelized creeks and would not directly or indirectly impact the habitat of special-status species. Additionally, implementation of the proposed HEU would involve disturbance in the same areas as analyzed in the 2017 EIR (citywide) and the citywide conditions have not substantially changed since the time of the EIR. Therefore, this impact would be less than significant, and would be generally the same as the

impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted .

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c. Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Similar to what was analyzed in the 2017 EIR, the proposed HEU does not propose development of open space areas, creeks, or wetlands that would result in impacts to these resources. The proposed HEU would only increase density on non-vacant and underutilized sites in urbanized areas of the city. Riparian resources are protected by the City's tree preservation and management regulations, the Urban Forest Master Plan, and California Fish and Game Code. Future projects that affect the bed, bank, or channel of a creek or stream where riparian vegetation is located would require authorization to do so. Wetlands are protected by the federal Clean Water Act, and impacts to wetlands as a result of future development facilitated by the proposed HEU would require a permit from the United States Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB). In addition, implementation of the proposed HEU would involve disturbance in the same areas as analyzed in the 2017 EIR (citywide) and the citywide conditions have not substantially changed since the time of the EIR. Therefore, although the proposed HEU would increase the number of residential units by 665 units compared to what was analyzed in the 2017 EIR, with compliance with existing federal, State, and local regulations, impacts would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive. Because there would be no new or substantially more severe impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Although the proposed HEU would increase the number of residential units by 665 units compared to what was analyzed in the 2017 EIR, it would facilitate development only on non-vacant and underutilized sites in urbanized areas of the city and would not block or remove wildlife corridors or interfere with fish or wildlife migration or rearing sites. The proposed HEU does not envision development in open space areas or within the Baylands area of Palo Alto. Future projects requiring discretionary approval and with the potential to affect wildlife corridors in Palo Alto would be assessed and mitigated during project-specific review under the California Environmental Quality Act (CEQA). In addition, future projects that impact creek bed, bank, or channel would require authorization from federal and State agencies, including the USACE, United States Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA) Fisheries, California Department of Fish and Wildlife (CDFW), and

RWQCB, as applicable (City of Palo Alto 2017a). Implementation of the proposed HEU would also involve disturbance in the same areas as analyzed in the 2017 EIR (citywide) and the citywide conditions have not substantially changed since the time of the EIR. Therefore, this impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or as defined by the City of Palo Alto's Tree Preservation Ordinance (Municipal Code Section 8.10)?

Although the proposed HEU does not explicitly propose the removal of trees, development facilitated under the proposed HEU could result in the removal of existing trees on private or public properties. Although the proposed HEU would increase the number of residential units by 665 units compared to buildout assumed in the 2017 EIR, future development would be required to comply with the City's Urban Forest Master Plan; Street Tree Management Plan; Line Clearing Program; Right Tree, Right Place Program; Tree Protection Ordinance Update adopted on June 6, 2022; and Chapter 8.10 of the PAMC which outlines requirements for tree and landscape preservation and management. Therefore, this impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As discussed in the 2017 EIR, although Palo Alto is not in the Santa Clara Valley Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP), lands in the Baylands area of Palo Alto have been identified in the Santa Clara Valley HCP/NCCP as suitable mitigation lands for impacts to the western burrowing owl caused by development in the Santa Clara Valley HCP/NCCP Plan Area. Additionally, the Stanford HCP identifies four management zones according to habitat value for Covered Species. However, the proposed HEU does not include housing sites within the Baylands area of Palo Alto or within the Stanford HCP limits. The proposed HEU would also facilitate development on non-vacant and underutilized sites in urbanized areas where species are not present. Therefore, the proposed HEU would not conflict with the Santa Clara Valley HCP/NCCP or the Stanford HCP. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would be required to comply with federal, State, and local regulations pertaining to biological resources which would reduce impacts to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

5 Cultural Resources

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	EIR Pages 4.4-2 through 4.4-6	No	No	No	Yes
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	EIR Pages 4.4-7 through 4.4-9	No	No	No	Yes
c. Disturb any human remains, including those interred outside of formal cemeteries?	EIR Pages 4.4-9 through 4.4-10	No	No	No	Yes

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.4, *Cultural Resources,* of the 2017 EIR analyzes the 2030 Comprehensive Plan's impacts related to cultural resources. The 2017 EIR found that the 2030 Comprehensive Plan could adversely affect a historic resource listed or eligible for listing on the National and/or California Register, or listed on the City's Historic Inventory, since the City's historical resource inventory is out of date, and the City's ordinance does not explicitly prohibit demolition of historic resources. Therefore, mitigation measure CULT-1 was required and was found to reduce impacts to a less than significant level.

The 2017 EIR also found that the 2030 Comprehensive Plan could eliminate important examples of major periods of California history or prehistory since it could result in the demolition or modification of an historical resource; permittance of inappropriate new construction adjacent to an historical resource; or result in the demolition, relocation, or alteration of an archaeological or paleontological resource. Therefore, mitigation measure CULT-2 was required and was found to reduce impacts to a less than significant level.

The 2017 EIR also found that buildout in accordance with the 2030 Comprehensive Plan could cause damage to an important archaeological resource as defined in Section 15064.5 of the CEQA Guidelines without mitigation to address unknown resources that could be uncovered. Mitigation Measure CULT-3 was required and was found to reduce impacts to a less than significant level.

The 2017 EIR found that the 2030 Comprehensive Plan would not disturb any human remains, including those interred outside of formal cemeteries.

Table 12 lists the mitigation measures from the 2017 EIR related to cultural resources.

Table 12 2017 EIR Mitigation Measures: Cultural Resources

Mitigation Measure #	Mitigation Text
Impact CULT-1: Implementation of the proposed Plan could adversely affect a historic resource listed or eligible for listing on the National and/or California Register, or listed on the City's Historic Inventory. (Significant and Mitigable)	
CULT-1	To ensure the protection of historic resources listed on the National and/or California Register or the City's Historic Resource Inventory, the proposed Plan shall include policies that address the following topics: ▪ The effectiveness of the Historic Preservation Ordinance in preserving historic resources. Periodic updates to and maintenance of the City's Historic Resource Inventory. ▪ Process for including potential historic resources in the City's Historic Resources Inventory. ▪ Protection of archaeological resources.
Impact CULT-2: Implementation of the proposed Plan could eliminate important examples of major periods of California history or prehistory. (Significant and Mitigable)	
CULT-2	▪ Implement Mitigation Measure CULT-1.
Impact CULT-3: Implementation of the proposed Plan could cause damage to an important archaeological resource as defined in Section 15064.5 of the CEQA Guidelines. (Significant and Mitigable)	
CULT-3	Implement Mitigation Measure CULT-1. In addition, to ensure that future development would not damage archaeological resources, the proposed Plan shall include policies that address the following topics: ▪ Archaeological surveys and mitigation plans for future development projects. ▪ Developer compliance with applicable regulations regarding the identification and protection of archaeological and paleontological deposits. ▪ Adequate tribal consultation and consideration of tribal concerns.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACTS

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

As discussed in the 2017 EIR, there are over 850 structures/sites in Palo Alto that are identified as historical resources, including four districts (Green Gables, Greenmeadow Units 1 and 2, Professorville, and Ramona Street). The proposed HEU includes sites in the Professorville district and the Ramona Street District, as well as along University Avenue, a historic thoroughfare as described in the 2017 EIR. However, disturbance would occur in the same areas as analyzed in the 2017 EIR (citywide) and the citywide conditions have not substantially changed since the time of the EIR. The proposed HEU does not propose any specific development. It envisions development including the proposed rezoning of sites for the potential development of additional housing units to meet the City's RHNA needs on parcels that may contain buildings that meet the age threshold for potential historical resources pursuant to CEQA. Development on these parcels could be proposed by a property owner or project applicant with or without the City's adoption of the HEU; still, development associated with the proposed HEU, similar to development under the 2030 Comprehensive Plan on the same sites, could result in the material impairment of historical resources, which *CEQA Guidelines* Section 15064.5(b)(2)(A) defines as the demolition or alteration in an adverse manner of those characteristics of a historical resource that convey its historical significance

and that justify its inclusion in, or eligibility for inclusion in, the CRHR or a local register. Future development requiring discretionary approval would be subject to separate project-level CEQA review in order to identify potential impacts to a specific historical resource and incorporate mitigation measures as needed, including City Council consideration of the potential benefits of the proposed project and potential significant, unavoidable impacts. Modifications to Inventory resources Downtown and in Professorville historic districts would be subject to PAMC Chapter 16.49. Future development would also be required to implement policies L-7.1 and L-7.15 of the 2030 Comprehensive Plan EIR, adopted in compliance with Mitigation Measure CULT-1 of the 2017 EIR, which would ensure the protection of historic resources listed on the National and/or California Register or the City's Historic Resource Inventory, as well as applicable federal, State, and local laws. Therefore, impacts would be less than significant with mitigation, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, and further analysis is not warranted.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Similar to what was assumed in the 2017 EIR, although development under the proposed HEU would occur on non-vacant and underutilized sites in previously disturbed areas, ground-disturbing activities such as earthmoving and excavation could still potentially damage and/or destroy unrecorded archaeological resources in subsurface soils within the housing sites. Implementation of the proposed HEU would involve disturbance in the same areas as analyzed in the 2017 EIR (citywide) and the citywide conditions have not substantially changed since the time of the EIR. Further, future development requiring discretionary approval would be subject to separate project-level CEQA review in order to identify potential impacts to archaeological resources and incorporate mitigation measures as needed. Future development would also be required to implement policies L-7.16 through 7.18 of the 2030 Comprehensive Plan EIR, adopted in compliance with Mitigation Measure CULT-3 of the 2017 EIR, which would ensure the protection of archaeological, paleontological, and tribal cultural resources. Therefore, impacts would be less than significant with mitigation, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

Similar to what was assumed in the 2017 EIR, although development under the proposed HEU would occur on non-vacant and underutilized sites in previously disturbed areas, ground-disturbing activities such as earthmoving and excavation could still potentially disturb human remains. However, implementation of the proposed HEU would involve disturbance in the same areas as analyzed in the 2017 EIR (citywide) and the citywide conditions have not substantially changed since the time of the EIR. Future development would be subject to federal and State regulations, such as the California Health and Safety Code Section 7050.5,

Public Resources Code Section 5097.98, and the California Code of Regulations Section 15064.5(e) (CEQA), which state the mandated procedures of conduct following the discovery of human remains. Therefore, compliance with the mandatory regulatory procedures would ensure that potential impacts related to the potential discovery or disturbance of any human remains accidentally unearthed during construction activities would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, development would occur in the same areas as those analyzed in the 2017 EIR. Further, future development would be required to comply with federal, State, and local regulations pertaining to cultural resources as well as policies adopted in compliance with Mitigation Measures CULT-1 and CULT-3 from the 2017 EIR, which would reduce impacts to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

6 Energy

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	EIR Pages 4.14-33 through 4.14-38	No	No	No	N/A
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	EIR Pages 4.14-33 through 4.14-38	No	No	No	Yes

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.14, *Utilities and Service Systems*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to energy. At the time the 2017 EIR was prepared, there were no separate adopted thresholds for energy use under CEQA, although Guidelines Section 15126.4 required that an "EIR shall describe feasible mitigation measures which could minimize significant adverse impacts, including where relevant, inefficient and unnecessary consumption of energy," and Appendix F provided criteria for consideration of energy conservation. Checklist questions (a) and (b) in this section are now included in CEQA Guidelines Appendix G. Lead agencies that use Appendix G as a basis for environmental analysis, including the City of Palo Alto, now consider energy impacts more explicitly during the initial study of a project. Changes to the CEQA thresholds subsequent to certification of an EIR do not in themselves constitute a substantial change or new information of substantial importance that requires major revisions to the EIR unless new significant impacts or a substantial increase in the severity of a significant impact would occur.

The 2017 EIR concluded that the 2030 Comprehensive Plan would not substantially increase electrical or natural gas demands to the extent that new local electrical and natural gas supply facilities would be required. Additionally, future development would be required to comply with the California Building Standards Code, Chapters 16.14 and 16.17 of the PAMC, and utilize modern appliances and equipment, in accordance with the 2012 Appliance Efficiency Regulations, which would conserve energy. Nonetheless, mitigation measure UTIL-17 would be required to reduce impacts to a less than significant level.

Table 13 lists the mitigation measures from the 2017 EIR related to energy.

Table 13 2017 EIR Mitigation Measures: Energy

Mitigation Measure #	Mitigation Text
Impact UTIL-17: The proposed Plan would not result in a substantial increase in natural gas and electrical service demands that would require the new construction of energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities. However, without the adoption of policies in support of energy efficiency and conservation, the proposed Plan would result in a potentially significant impact, requiring mitigation. (Potentially Significant and Mitigable)	
UTIL-17	To ensure that future development would maximize energy efficiency and conservation the proposed Plan shall include policies that address the following topics: ▪ Maximized conservation and efficient use of energy. ▪ Continued procurement of carbon-neutral energy. ▪ Investment in cost-effective energy efficiency and energy conservation programs. ▪ Provision of public education programs addressing energy conservation and efficiency. ▪ Use of cost-effective energy conservation measures in City projects and practices. ▪ Adherence to State and federal energy efficiency standards and policies. ▪ Consideration of a transition to a carbon-neutral natural gas supply.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACT ANALYSIS

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Energy consumption is directly related to environmental quality in that the consumption of nonrenewable energy resources releases criteria air pollutant and GHG emissions into the atmosphere. The environmental impacts of air pollutant and GHG emissions associated with the project's energy consumption are discussed in detail in Section 3, *Air Quality*, and Section 8, *Greenhouse Gas Emissions*, respectively.

Palo Alto demonstrates its commitment to energy efficiency and renewable energy via implementation of CALGreen and State-mandated Energy Efficiency Requirements for new development and retrofits. The proposed HEU would facilitate development of projects to encourage housing on non-vacant and underutilized sites in urbanized areas. When proposed, individual projects would be required, pursuant to the requirements of CALGreen, to comply with the zero-net energy requirements, where new development combines energy efficiency and renewable energy generation to consume only as much energy as can be produced on-site through renewable resources over a specified period. However, development under the proposed HEU would consume energy during construction and operation, using petroleum fuel, natural gas, and electricity, as discussed below.

CONSTRUCTION

Energy use during construction associated with future development under the proposed HEU would be in the form of fuel consumption (e.g., gasoline and diesel fuel) to operate heavy equipment, light-duty vehicles, machinery, and generators for lighting. Temporary grid power

may also be provided to construction trailers or electric construction equipment. Energy use during the construction of individual projects would be temporary in nature, and equipment used would be typical of construction projects in the region. Construction contractors would be required to demonstrate compliance with applicable CARB regulations that restrict the idling of heavy-duty diesel motor vehicles and govern the accelerated retrofitting, repowering, or replacement of heavy-duty diesel on- and off-road equipment. Construction activities associated with reasonably foreseeable development under the proposed HEU would be required to utilize fuel-efficient equipment consistent with federal and State regulations and would comply with State measures to reduce the inefficient, wasteful, or unnecessary consumption of energy. In addition, individual projects would be required to comply with construction waste management practices to divert at least 80 percent of construction and demolition debris pursuant to PAMC Section 16.14.260. These practices would result in efficient use of energy during construction of future development under the proposed HEU. Furthermore, in the interest of both environmental awareness and cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, future construction activities associated with development under the proposed HEU would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant.

OPERATIONAL

Long-term operation of future development under the proposed HEU would require permanent grid connections for electricity to power internal and exterior building lighting, and heating and cooling systems. Electricity in Palo Alto is supplied by the City of Palo Alto Utilities (CPAU). As discussed in the 2017 EIR, forecasting and planning by the CPAU will be able to accommodate expected net annual average increase in electrical service demand of less than one percent with the implementation of policies N-7.1 and N-7.4 of the 2030 Comprehensive Plan EIR, adopted in compliance with Mitigation Measure UTIL-17. Although the proposed HEU would facilitate the development of 665 more residential units, CPAU's 10-year electric savings increased from 4.8 percent between 2014 and 2023 to 5.7 percent between 2018 and 2027 showing increased energy efficiency. Additionally, future development would be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). This would increase demand for electricity but would decrease demand for natural gas. Electricity provided by CPAU is 100 percent carbon neutral (City of Palo Alto 2022b).

Development facilitated by the proposed HEU would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6 of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), the California Green Building Standards Code (CALGreen, Title 24, Part 11 of the California Code of Regulations). The California Energy Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. This code applies to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances and provides guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a

variety of building elements, including appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls, and ceilings. The code emphasizes saving energy at peak periods and seasons and improving the quality of installation of energy efficiency measures. Furthermore, future development would be required to comply with the PAMC Chapter 16.17, which mandates the implementation of the Building Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6). Compliance would include complying with the most updated rooftop solar requirements at the time of construction. CALGreen sets targets for energy efficiency, water consumption, dual plumbing systems for potable and recyclable water, diversion of construction waste from landfills, and use of environmentally sensitive materials in construction and design, including ecofriendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. These standards for new buildings are designed for energy efficient performance, using clean electricity, so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy.

The housing inventory sites are located within the city's urbanized and underutilized sites. These areas are near or adjacent to transportation corridors as well as Class I, II, and III bicycle lanes, which would reduce trip distances and encourage the use of alternative modes of transportation such as bicycling and walking, thereby reducing fuel consumption. These factors would minimize the potential of the proposed project to result in the wasteful or unnecessary consumption of vehicle fuels.

Future development would also be required to continue to implement policies N-7.1 and N-7.4 of the 2030 Comprehensive Plan EIR, adopted in compliance with Mitigation Measure UTIL-17 to reduce energy impacts to a less than significant level. As a result, operation of development projects under the proposed HEU would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant with mitigation, and generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Several State plans as well as the City's adopted 2030 Comprehensive Plan include energy conservation and energy efficiency strategies intended to enable the State and the city to achieve GHG reduction and energy conservation goals. A full discussion of the proposed project's consistency with GHG reduction plans is included in Section 8, *Greenhouse Gas Emissions*. As shown in Table 14, the project would be consistent with applicable State renewable energy and energy efficiency plans.

Table 14 Consistency with State Renewable Energy and Energy Efficiency Plans

Renewable Energy or Energy Efficiency Plan	Proposed Project Consistency
Assembly Bill 2076: Reducing Dependence on Petroleum. Pursuant to AB 2076, the CEC and CARB prepared and adopted a joint-agency report, Reducing California's Petroleum Dependence, in 2003. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT. One of the performance-based goals of AB 2076 is to reduce petroleum demand to 15 percent below 2003 demand.	**Consistent.** Many of the proposed housing inventory sites located in areas served by transit, are in proximity to jobs and services, or are near or adjacent to corridors currently served by Class I, II, and III bicycle lanes such as University Avenue, Bryant Street, California Avenue, and Bayshore Road. This which would encourage the use of alternative modes of transportation such as walking, transit, and bicycling, thereby reducing VMT and reducing reliance on single-occupancy vehicles. Further, future development under the proposed HEU would be subject to the requirements of the most recent iteration of CALGreen and locally adopted amendments, which include provisions for electric vehicle charging infrastructure, reducing dependence on gasoline powered vehicles.
2019 Integrated Energy Policy Report. The 2019 report highlights the implementation of California's innovative policies and the role they have played in establishing a clean energy economy, as well as provides more detail on several key energy policies, including decarbonizing buildings, increasing energy efficiency savings, and integrating more renewable energy into the electricity system.	**Consistent.** Development facilitated by the project would be required to comply with PAMC Chapter 16.17, which mandates the implementation of Title 24. Compliance would include complying with the most updated rooftop solar requirements at the time of construction. Future development would also be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). Electricity would be provided by CPAU, which has provided 100 percent carbon neutral electricity since 2013 (City of Palo Alto 2022b).
California Renewable Portfolio Standard. California's RPS obligates investor-owned utilities, energy service providers, and community choice aggregators to procure 33 percent total retail sales of electricity from renewable energy sources by 2020, 60 percent by 2030, and 100 percent by 2045.	**Consistent.** Electricity for future development would be provided by CPAU which has provided 100 percent carbon neutral electricity since 2013 (City of Palo Alto 2022b).
Energy Action Plan. In the October 2005, the CEC and CPUC updated their energy policy vision by adding some important dimensions to the policy areas included in the original EAP, such as the emerging importance of climate change, transportation-related energy issues, and research and development activities. The CEC adopted an update to the EAP II in February 2008 that supplements the earlier EAPs and examines the State's ongoing actions in the context of global climate change. The nine major action areas in the EAP include energy efficiency, demand response, renewable energy, electricity adequacy/reliability/infrastructure, electricity market structure, natural gas supply/demand/infrastructure, transportation fuels supply/demand/infrastructure, research/development/demonstration, and climate change.	**Consistent.** Future development facilitated by the proposed project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Energy Code, and any locally adopted amendments, which include requirements for the use of energy-efficient design and technologies as well as provisions for incorporating renewable energy resources into building design. Electricity for future development would be provided by CPAU which has provided 100 percent carbon neutral electricity since 2013 (City of Palo Alto 2022b). Given these features, the project would facilitate implementation of the nine major action areas in the EAP.

Renewable Energy or Energy Efficiency Plan	Proposed Project Consistency
AB 1007: State Alternative Fuels Plans. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-State production of biofuels without causing a significant degradation of public health and environmental quality. Bioenergy Action Plan, EO S-06-06. The EO establishes the following targets to increase the production and use of bioenergy, including ethanol and biodiesel fuels made from renewable resources: produce a minimum of 20 percent of its biofuels in California by 2010, 40 percent by 2020, and 75 percent by 2050.	**Consistent.** The project would not interfere with or obstruct the production of biofuels in California. Vehicles used by future residents would be fueled by gasoline and diesel fuels blended with ethanol and biodiesel fuels as required by CARB regulations. Pursuant to Section 16.14.420 of the PAMC, new multi-family residences would be required to provide at least one EVSE Ready outlet or EVSE installed for each residential unit in the structure for residential parking, and would be required to provide Conduit Only, EVSE Ready Outlet, or EVSE installed for at least 25 percent of guest parking spaces, among which at least 5 percent shall be EVSE installed. Future development facilitated by the project would be required to comply with the most updated EV requirements in both the City's Reach Code and Title 24 at the time of construction.
Title 24, CCR – Part 6 (Building Energy Efficiency Standards) and Part 11 (CALGreen). The 2019 Building Energy Efficiency Standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar photovoltaic systems for single-family homes and multi-family buildings of three stories and less. The CALGreen Standards establish green building criteria for residential and nonresidential projects. The 2019 Standards include the following: increasing the number of parking spaces that must be prewired for electric vehicle chargers in residential development; requiring all residential development to adhere to the Model Water Efficient Landscape Ordinance; and requiring more appropriate sizing of HVAC ducts.	**Consistent.** Development facilitated by the project would be required to comply with PAMC Chapter 16.17, which mandates the implementation of Title 24.

Furthermore, the City's 2030 Comprehensive Plan and Sustainability and Climate Action Plan (S/CAP) also contains goals and policies related to energy efficiency and renewable energy. As discussed under Table 18 in Section 8, *Greenhouse Gas Emissions*, the proposed project would be consistent with recommended goals, policies, and actions in the City's S/CAP related to energy efficiency and renewable energy. Table 15 summarizes the project's consistency with the applicable 2030 Comprehensive Plan policies. As shown therein, the proposed project would be consistent with the applicable 2030 Comprehensive Plan policies and therefore would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency, and impacts would be less than significant and generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

Table 15 Project Consistency with Applicable 2030 Comprehensive Plan policies

Policies	Project Consistency
Natural Environment Element	
Policy N-7.4: Maximize the conservation and efficient use of energy in new and existing residences and other buildings in Palo Alto.	**Consistent**: Future development facilitated by the proposed HEU would be required to be constructed in accordance with the latest iteration of CALGreen, the California Energy Code, and any locally adopted amendments, which include green building practices. Future development would also be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a).
Policy N-7.5: Encourage energy efficient lighting that protects dark skies and promotes energy conservation by minimizing light and glare from development while ensuring public health and safety	**Consistent**: Future development facilitated by the proposed HEU would be required to incorporate sustainability considerations into project design such as energy efficient lighting pursuant to PAMC Section 18.24.100(a). Future development would also be subject to PAMC Section 18.40.250 which outlines requirements for minimizing light spillover and glare.
Policy N-7.6: Support the maximum economic use of solar electric (photovoltaic) and solar thermal energy, both as renewable supply resources for the Electric Utility Portfolio and as alternative forms of local power generation.	**Consistent**: Development facilitated by the proposed HEU would be required to comply with the PAMC Chapter 16.17, which mandates the implementation of Title 24. Compliance would include complying with the most updated rooftop solar requirements at the time of construction.
Policy N-7.7: Explore a variety of cost-effective ways to reduce natural gas usage in existing and new buildings in Palo Alto in order to reduce associated greenhouse gas emissions.	**Consistent:** Future development facilitated by the proposed HEU would also be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). Electricity would be provided by City of Palo Alto Utilities (CPAU), which has provided 100 percent carbon neutral electricity since 2013 (City of Palo Alto 2022b).
Policy N-7.8: Support opportunities to maximize energy recovery from organic materials such as food scraps, yard trimmings and residual solids from sewage treatment.	**Consistent:** Future development facilitated by the proposed HEU would be required to comply with SB 1383 and recycle organic wastes.

Source: City of Palo Alto 2017b

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would be required to comply with federal, State, and local regulations as well as policies adopted in compliance with Mitigation Measure UTIL-17 pertaining to energy, which would reduce impacts to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

7 Geology and Soils

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	EIR Pages 4.5-4 through 4.5-6	No	No	No	N/A
2. Strong seismic ground shaking?	EIR Pages 4.5-4 through 4.5-6	No	No	No	N/A
3. Seismic-related ground failure, including liquefaction?	EIR Pages 4.5-4 through 4.5-6	No	No	No	N/A
4. Landslides?	EIR Pages 4.5-4 through 4.5-6	No	No	No	N/A
b. Result in substantial soil erosion or the loss of topsoil?	EIR Pages 4.5-8 through 4.5-9	No	No	No	Yes
c. Be located on a geologic unit or soil that is made unstable as a result of the project, and potentially result in on or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse?	EIR Pages 4.5-7 through 4.5-8	No	No	No	N/A
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	EIR Pages 4.5-4 through 4.5-6	No	No	No	Yes

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	N/A	No	No	No	N/A
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	EIR Pages 4.4-7 through 4.4-9	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.5, *Geology, Soils, and Seismicity*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to geology and soils. The 2017 EIR found that implementation of the 2030 Comprehensive Plan would result in less than significant impacts associated with risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), landslides, and expansive soils. The 2017 EIR also found that implementation of the 2030 Comprehensive Plan would not result in development located on a geologic unit or on soil that is unstable, or that would become unstable as a result of the project and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. The 2030 Comprehensive Plan also determined that there would be less than significant impacts related to erosion or siltation.

PROJECT-SPECIFIC IMPACTS

a1. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The Alquist-Priolo Earthquake Fault Zone associated with the San Andreas Fault is located near the crest of the Santa Cruz Mountains and just east of the intersection of Page Mill Road and State Route 35. Similar to what was analyzed in the 2017 EIR, no housing inventory sites are located near the Alquist-Priolo Earthquake Fault Zone associated with the San Andreas Fault (City of Palo Alto 2016). The closest active fault is the San Andreas Fault, located approximately 2.5 miles from the southern portion of the city. As a result, the likelihood of surface rupture occurring from active faulting that would affect future development under the proposed HEU is remote. This impact would be less than significant and would be generally the same as the

impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

a2. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

As with any site in the Bay Area region, development under the proposed HEU is susceptible to strong seismic ground shaking in the event of a major earthquake. Nearby faults include the San Andreas Fault, the Monte Vista Fault, the Hayward Fault and the Calaveras Fault. These faults are capable of producing strong seismic ground shaking in the city.

Although nothing can ensure that residences and infrastructure do not fail under seismic stress, proper engineering can minimize the risk to life and property. Accordingly, building standards have been developed for construction in areas subject to seismic ground-shaking. Development facilitated by the proposed HEU would be required to comply with standards established by PAMC Chapter 16.04 and 16.06, which adopt the California Building Code (CBC) and the California Residential Code, respectively. The requirements of the California Building Code ensure that new habitable structures are engineered to withstand the expected ground acceleration at a given location. Further, CBC Chapter 18 requires that actions recommended in a site-specific soil investigation are incorporated into the construction of each structure. Future development would also be required to comply with PAMC Section 16.28.150, which would require detailed engineering geology reports in areas of suspected geological hazards and implementation of recommendations and mitigations to reduce hazards from ground shaking or rupture. Additionally, the project would promote infill development, which may involve replacing older buildings subject to seismic damage with newer structures built to current seismic standards that could better withstand the adverse effects of strong ground shaking. Although the proposed HEU would facilitate development of 665 more housing units compared to what was analyzed in the 2017 EIR, continued compliance with applicable provisions of the CBC and the PAMC would ensure that potential impacts from ground-shaking would be minimized. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

a3. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

As shown in Map S-3 of the Safety Element of the 2030 Comprehensive Plan, the northern and eastern portion of the city lies within a high-liquefaction zone. Although the proposed HEU would facilitate some development in a high-liquefaction zone adjacent to US 101, future development would be required to comply with requirements of the CBC pursuant to PAMC Chapter 16.04, as well as requirements for soils engineering reports and engineering geology reports pursuant to PAMC Sections 16.28.140 and 16.28.150. Additionally, PAMC Section 18.40.120 imposes requirements in areas that have been identified as having moderate or high

risk due to seismic activity hazards, including liquefaction, and requires the preparation of detailed geologic, soils, and engineering studies prior to development. Such reports typically include recommendations for project design and construction, such as site grading/soil preparation, and foundation design, as well as quantitative evaluations of liquefaction susceptibility. The final grading, drainage, and foundation plans are reviewed before construction to confirm incorporation of the report recommendations. Although the proposed HEU would facilitate development of 665 more housing units compared to what was analyzed in the 2017 EIR, continued compliance with all applicable provisions of the California Building Code and the PAMC would minimize impacts associated with liquefaction to a less than significant level and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

a4. Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Earthquakes can trigger landslides that may cause injuries and structural damage. Landslides are typically a hazard on or near slopes or hillside areas, rather than generally level areas where HEU housing development is anticipated. The 2017 EIR characterizes most of Palo Alto as having low topographic relief where the probability of landslides is very low, with the exception of hilly slopes west of Interstate 280. Similar to what was analyzed in the 2017 EIR, no development would be facilitated in landslide zones within the city. Furthermore, future development would be required to comply with PAMC Sections 16.28.140 and 16.28.150, which outline requirements for soils engineering reports and engineering geology reports, as well as PAMC Section 18.40.120, which imposes requirements in areas that have been identified as having moderate or high risk due to seismic activity hazards. Although the proposed HEU would facilitate development of 665 more housing units compared to what was analyzed in the 2017 EIR, continued compliance with all applicable provisions of the California Building Code and the PAMC would ensure that potential impacts from landslides would be minimized to a less than significant level and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project result in substantial soil erosion or the loss of topsoil?

The proposed HEU would include infill development in non-vacant and underutilized sites in urbanized areas. Demolition and construction activities would be required to comply with CBC, Appendix Section J110, Erosion Control Standards, pursuant to Chapter 16.04 of the PAMC, which ensures appropriate erosion and stormwater pollution control during grading and construction activities.

Construction activities that occur on more than one acre are required to obtain a National Pollutant Discharge Elimination System (NPDES) Construction General Permit. NPDES requires the development of a storm water pollution prevention plan (SWPPP), which includes BMPs to reduce erosion and topsoil loss from stormwater runoff. BMP examples generally include an effective combination of erosion and sediment controls, which include barriers such as silt fences, hay bales, drain inlet protection, or gravel bags.

Future development would also be required to comply with PAMC Chapter 16.28, which outlines requirements for grading and erosion and sediment control. Examples include preparation of an interim and a final erosion and sediment control and SWPPP, as well as soils engineering reports, which would prevent excessive erosion and runoff. Although the proposed HEU would facilitate development of 665 more housing units compared to what was analyzed in the 2017 EIR, continued compliance with all applicable federal, State, and local regulations and the PAMC would ensure that potential impacts from soil erosion would be minimized. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

As discussed in the 2017 EIR, shrink-swell potential in the western and central parts of the city are generally lower than the northeastern parts, where clay-rich soils and “Bay Mud” sediments are widespread (City of Palo Alto 2016). The proposed HEU would facilitate some housing development in the northeastern part of the city, and therefore could potentially locate housing inventory sites on areas with expansive soils. However, future development would be required to comply with PAMC Sections 16.28.140 and 16.28.150, which outline requirements for soils engineering reports and engineering geology reports, as well as PAMC Section 18.40.120, which imposes requirements in areas that have been identified as having moderate or high risk due to seismic activity hazards. The CBC also includes requirements to address soil-related hazards. Typical measures to treat hazardous soil conditions involve removal of soil or fill materials, proper fill selection, and compaction. In cases where soil remediation is not feasible, the CBC requires structural reinforcement of foundations to resist the forces of expansive soils. This would ensure that the potential for projects to occur on expansive soils such that substantial direct or indirect risks to life or property to occur would be reduced.

Although the proposed HEU would facilitate development of 665 more housing units compared to buildout analyzed in the 2017 EIR, continued compliance with all applicable provisions of the California Building Code and the PAMC would ensure that potential impacts from soil erosion would be minimized. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Palo Alto is served by the City's established wastewater system. The proposed HEU would facilitate development on non-vacant and underutilized sites which are and would continue to be served by the City's wastewater system. The project would not include the use of septic tanks or alternative wastewater disposal systems. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As discussed in the Geological Setting above, there are known paleontological resource sites within the city, and the presence of these sites indicates that there are likely undiscovered paleontological resources. Although the proposed HEU would facilitate development on non-vacant and already disturbed sites, similar to what was analyzed in the Comprehensive Plan EIR, development facilitated by the proposed HEU could still potentially impact a unique paleontological resource or site, or unique geologic feature. However, future development would be required to comply with applicable federal and State regulations that protect paleontological resources, as well as implement Mitigation Measure CULT-5 which would reduce impacts on paleontological resources to a less than significant level. Therefore, this impact would be less than significant with mitigation, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would be required to comply with federal, State, and local regulations pertaining to geological resources which would reduce impacts to a less than significant level. Future development would also be required to comply with applicable federal and State regulations that protect paleontological resources, as well as implement Mitigation Measure CULT-5 which would reduce impacts on paleontological resources to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

8 Greenhouse Gas Emissions

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	EIR Pages 4.6-10 through 4.6-16	No	No	No	N/A
b. Conflict with any applicable plan, policy, or regulation adopted for the purposes of reducing the emissions of greenhouse gases?	EIR Pages 4.6-16 through 4.6-21	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.6, *Greenhouse Gas Emissions and Climate Change*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to greenhouse gas emissions. The 2017 EIR concluded that the 2030 Comprehensive Plan would not directly or indirectly generate GHG emissions that may have a significant impact on the environment since Scenario 6 would result in a decrease in emissions from existing conditions and would achieve the 2030 performance criteria that would ensure the City is on a trajectory to achieve the GHG reductions targets of SB 32 for year 2030. Additionally, the 2030 Comprehensive Plan would not conflict with CARB's Scoping Plan or Association of Bay Area Governments (ABAG)/Metropolitan Transportation Commission's (MTC) Plan Bay Area. However, the 2017 EIR found that the 2030 Comprehensive Plan would expose people or structures to the physical effects of climate change, including but not limited to flooding, extreme temperatures, public health, wildfire risk, or other impacts resulting from climate change, and mitigation measure GHG-3 would be required to reduce impacts to a less than significant level.

Table 16 lists the mitigation measures from the 2017 EIR related to greenhouse gas emissions.

Table 16 2017 EIR Mitigation Measures: Greenhouse Gas Emissions

Mitigation Measure #	Mitigation Text
Impact GHG-3: The proposed Plan would expose people or structures to the physical effects of climate change, including but not limited to flooding, extreme temperatures, public health, wildfire risk, or other impacts resulting from climate change, requiring mitigation. (Significant and Mitigable)	
GHG-3	To address the potential impacts associated with exposing additional people or structures to the effects of climate change, the proposed Plan shall include policies that address the following topics: ▪ Flooding risks caused by climate change-related changes to precipitation patterns, groundwater levels, sea level rise, tides, and storm surges. ▪ Cooperative planning with federal, State, regional, and local public agencies on issues related to climate change (including sea level rise and extreme storms). ▪ Preparation of response strategies to address sea level rise, increased flooding, landslides, soil erosion, storm events, and other events related to climate change. ▪ Impacts of sea level rise on Palo Alto's levee system.

Source: City of Palo Alto 2016

THRESHOLDS

In response to climate change, California implemented AB 32, the "California Global Warming Solutions Act of 2006." AB 32 requires the reduction of statewide GHG emissions to 1990 emissions levels (essentially a 15 percent reduction below 2005 emission levels) by 2020 and the adoption of rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emissions reductions. On September 8, 2016, the Governor signed SB 32 into law, extending AB 32 by requiring the State to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On September 10, 2018, the Governor signed Executive Order (EO) B-55-18, which identifies a new goal of carbon neutrality by 2045 and supersedes the goal established by EO S-3-05.[6] CARB adopted the 2022 Scoping Plan on November 16, 2022, which provides a framework for achieving carbon neutrality by 2045 or earlier. The 2022 Scoping Plan extends and expands upon the three earlier versions of scoping plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045.

According to the *CEQA Guidelines*, projects can tier from a qualified GHG reduction plan, which allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (AEP) in their white paper, *Beyond Newhall and 2020*, to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions (AEP 2016). Palo Alto does not currently have a qualified GHG reduction plan and thus this approach is not currently feasible.

[6] Executive Order (EO) S-3-05, signed by Governor Arnold Schwarzenegger in 2005, proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra Nevada snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the EO established total GHG emission targets for the state. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

To evaluate whether a project may generate a quantity of GHG emissions that may have a significant impact on the environment, state agencies have developed a number of operational bright-line significance thresholds. Significance thresholds are numeric mass emissions thresholds that identify the level at which additional analysis of project GHG emissions is necessary. Projects that attain the significance target, with or without mitigation, would result in less than significant GHG emissions. Since the proposed project would tier from the 2017 EIR, the BAAQMD GHG 2030 efficiency target applied in the 2017 EIR would be used to inform the threshold for this analysis. However, to take into account the new State goal of carbon neutrality by 2045 and the project buildout year of 2031, the BAAQMD GHG 2030 efficiency target was interpolated to get an adjusted 2031 threshold of 3.74 $MTCO_2e$ per service population per year.[7] Therefore, the proposed project's GHG emissions would be significant if they would exceed the 2031 interpolated threshold of 3.74 $MTCO_2e$ per service population per year, consistent with EO B-55-18.

PALO ALTO SUSTAINABILITY AND CLIMATE ACTION PLAN

The City of Palo Alto launched its S/CAP in August 2014. In 2020, the city launched an update to the S/CAP to develop strategies needed to meet their goal of reducing GHG emissions 80 percent below 1990 levels by 2030 (the "80 x 30" goal). In October 2022, the Palo Alto City Council approved the updated S/CAP Goals and Key Actions that will serve as the City's roadmap to meeting the "80 x 30" goal and most recent Carbon Neutral by 2030 goal. The S/CAP Goals and Key Actions includes goals and actions in seven areas: Energy, Mobility, Electric Vehicles, Water, Climate Adaptation and Sea Level Rise, Natural Environment, and Zero Waste. The S/CAP is not a qualified CAP under CEQA Guidelines 15183.5(b)(1) since it has not yet been adopted in a public process following environmental review.

METHODOLOGY

OPERATIONAL EMISSIONS

Long-term emissions relate to area sources, energy use, solid waste, water use, and transportation. Operational emissions for the proposed HEU were modeled using the California Emissions Estimator Model (CalEEMod) version 2022.1 and compared to the adjusted BAAQMD efficiency thresholds used in the 2017 EIR. CalEEMod default settings were used to estimate emissions associated with the proposed project to apply a high-level and conservative analysis.

AREA SOURCE EMISSIONS

Emissions associated with area sources, including consumer products, landscape maintenance, and architectural coating were calculated in CalEEMod and utilized default standard emission rates from CARB, U.S. EPA, and emission factor values provided by the local air district (CAPCOA 2017). Architectural coatings were calculated pursuant to BAAQMD Regulation 8 Rule 3.

[7] 4.0 $MTCO_2e$ (2030 Comprehensive Plan EIR threshold) / 15 years (2030 to 2045 for carbon neutrality) = 0.26 $MTCO_2e$. To find the 2031 interpolated threshold, 4.0 $MTCO_2e$ - 0.26 $MTCO_2e$ = 3.74 $MTCO_2e$.

ENERGY USE EMISSIONS

CalEEMod provides operational emissions of CO_2, N_2O, and CH_4. Emissions from energy use include electricity and natural gas use. The emissions factors for natural gas combustion are based on EPA's AP-42 (Compilation of Air Pollutant Emissions Factors) and CCAR. Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2017). Since the City's All-Electric Ordinance requires all-electric construction for future residential uses, it was assumed that the natural gas demand estimated for the project would instead be supplied by electricity to account for increased electricity usage. Total annual consumption for natural gas (kBTU/year) was converted to electricity (kWh/year) and added to the total annual consumption for electricity. CalEEMod incorporates 2019 Title 24 CALGreen Building Standards.

SOLID WASTE EMISSIONS

Emissions from solid waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CAPCOA 2017). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery [CalRecycle] 2019).

WATER AND WASTEWATER USE EMISSIONS

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the California Energy Commission's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California. The Palo Alto RWQCP was assumed to be 100 percent aerobic since it does not contain facultative lagoons or septic tanks.

MOBILE SOURCE EMISSIONS

For mobile sources, CO_2, CH_4, and N_2O emissions were quantified in CalEEMod.

REFRIGERANT EMISSIONS

Refrigerants are substances used in equipment for cooling and heating purposes and are mostly comprised of hydrofluorocarbons (HFC). HFCs are potent GHGs that have high global warming potential (GWP) values. CalEEMod calculates refrigerant emissions according to equipment charge sizes and leak rates that have been determined for relevant land uses and equipment types.

CONSTRUCTION EMISSIONS

Construction of the proposed HEU would generate temporary GHG emissions primarily due to the operation of construction equipment and truck trips. Site preparation and grading typically generate the greatest amount of emissions due to the use of grading equipment and soil hauling. Although construction activity is addressed in this analysis, CAPCOA does not discuss whether any of the suggested threshold approaches adequately address impacts from

temporary construction activity. As stated in the CEQA and Climate Change white paper, "more study is needed to make this assessment or to develop separate thresholds for construction activity" (CAPCOA 2008). Additionally, the BAAQMD does not have specific quantitative thresholds for construction activity. Therefore, although estimated in CalEEMod and provided for informational purposes, construction activity is not included in the total emissions calculations.

PROJECT-SPECIFIC IMPACTS

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Proposed construction activities, energy use, daily operational activities, and mobile sources (traffic) associated with the proposed project would generate GHG emissions. CalEEMod was used to calculate emissions resulting from construction and long-term operation (see Appendix B for model output).

CONSTRUCTION EMISSIONS

Emissions generated from construction of full buildout under the proposed HEU are estimated to be 5,433 MT of CO_2e per year.[8] However, as the BAAQMD does not have a recommended threshold for construction-related GHG emissions, emissions associated with construction are not included in Table 17 and compared to BAAQMD significance thresholds.

OPERATIONAL INDIRECT AND STATIONARY DIRECT EMISSIONS

Long-term emissions relate to area sources, energy use, solid waste, water use, and transportation. Each of the operational sources of emissions is discussed further below.

MOBILE EMISSIONS

As shown in Table 17 below, the additional 665 units facilitated by the proposed project would generate approximately 2,921 $MTCO_2e$ per year.

AREA SOURCE EMISSIONS

CalEEMod was used to calculate direct sources of air emissions associated with the proposed project. These include consumer product use and landscape maintenance equipment. Area emissions are estimated at 42 $MTCO_2e$ per year.

ENERGY USE EMISSIONS

Operation of the proposed project would consume both electricity and natural gas. The generation of electricity through combustion of fossil fuels emits CO_2, and to a smaller extent, N_2O and CH_4. As discussed under the Methodology section, pursuant to the City's All-Electric

[8] Construction emissions were determined assuming the 1,308 units were built as one continuous project using CalEEMod defaults. Construction emissions for future projects would be based on the timing and size of individual projects.

Ordinance, natural gas was converted to electricity to account for increased electricity usage. Since CPAU provides electricity to the city, and has supplied 100 percent carbon neutral electricity since 2013, GHG emissions from energy use are estimated at 0 $MTCO_2e$ per year.

WATER USE EMISSIONS

Based on the amount of electricity generated to supply and convey water for the project, the proposed project would generate an estimated 29 $MTCO_2e$ per year.

SOLID WASTE EMISSIONS

Based on the estimate of GHG emissions from project-generated solid waste as it decomposes, solid waste associated with the proposed project would generate approximately 129 $MTCO_2e$ per year.

REFRIGERANT EMISSIONS

Based on the estimate of GHG emissions from refrigerants used for the project, the proposed project would generate an estimated 1 $MTCO_2e$ per year.

The annual emissions associated with the additional development under the proposed HEU would total approximately 3,122 $MTCO_2e$ per year. As discussed in Section 14, *Population and Housing*, the service population from the project would be 1,670 new residents. Therefore, the $MTCO_2e$ per service population for the proposed HEU would be 1.9. These emissions would not exceed the 2017 EIR's BAAQMD 2030 efficiency target of 3.74. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

Table 17 Operational GHG Emissions

Emissions Source	Annual Emissions (MT of CO2e/year)
Mobile	2,921
Area	42
Energy	0
Water	29
Waste	129
Refrigerants	1
Total	**3,122**
Service Population	1,670
$MTCO_2e$/Service Population	**1.9**
2017 EIR BAAQMD 2030 Efficiency Target (Adjusted for SB 32)	3.74
Exceeds Threshold?	**No**

See Table 2.5 "Operations Emissions by Sector, Unmitigated" emissions. CalEEMod worksheets in Appendix B.

b. Would the project conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The City of Palo Alto has adopted the Sustainability and Climate Action Plan (S/CAP) in 2020 to develop strategies to meet their goal of reducing GHG emissions 80 percent below 1990 levels by 2030. The California Air Resources Board (CARB) also updated its Climate Change Scoping Plan in November 2022. Table 18 shows the proposed project's compliance with the City's S/CAP and CARB Scoping Plan measures.

Table 18 Proposed Project Compliance with Applicable S/CAP Actions

GHG Reduction Goal or Policy	Project Consistency
City of Palo Alto S/CAP	
Action C3: Complete study to identify any additional Energy, EV, or Mobility key actions needed to achieve 80% reduction in greenhouse gas emissions from 1990 levels by 2030, such as electrification of additional multifamily or commercial end uses, greater electrification of vehicles, or other emissions reduction actions not already identified in this Plan.	**Consistent.** Development facilitated by the project would be required to comply with the PAMC Chapter 16.17, which mandates the implementation of Title 24. Compliance would include complying with the most updated rooftop solar requirements at the time of construction. Future development would also be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). Electricity would be provided by CPAU, which has provided 100 percent carbon neutral electricity since 2013 (City of Palo Alto 2022b). Pursuant to Section 16.14.420 of the PAMC, new multi-family residences would be required to provide at least one EVSE Ready outlet or EVSE installed for each residential unit in the structure for residential parking, and would be required to provide Conduit Only, EVSE Ready Outlet, or EVSE installed for at least 25 percent of guest parking spaces, among which at least 5 percent shall be EVSE installed. Future development facilitated by the project would be required to comply with the most updated EV requirements in both the City's Reach Code and Title 24 at the time of construction.
Action E1: Reduce all or nearly all greenhouse gas emissions in single-family appliances and equipment, including water heating, space heating, cooking, clothes drying, and other appliances that use natural gas.	**Consistent.** Future development would be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a).
Action E7: Use codes and ordinances - such as the energy reach code, green building ordinance, zoning code, or other mandates - to facilitate electrification in both existing buildings and new construction projects where feasible.	**Consistent.** Development facilitated by the project would be required to comply with the PAMC Chapter 16.17, which mandates the implementation of Title 24. Compliance would include complying with the most updated rooftop solar requirements at the time of construction. Future development would also be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). Electricity would be provided by CPAU, which has provided 100 percent carbon neutral electricity since 2013 (City of Palo Alto 2022b).

GHG Reduction Goal or Policy	Project Consistency
Action EV6: Expand access to on-site EV charging for multi-family residents.	**Consistent.** Pursuant to Section 16.14.420 of the PAMC, new multi-family residences would be required to provide at least one EVSE Ready outlet or EVSE installed for each residential unit in the structure for residential parking, and would be required to provide Conduit Only, EVSE Ready Outlet, or EVSE installed for at least 25 percent of guest parking spaces, among which at least 5 percent shall be EVSE installed. Future development facilitated by the project would be required to comply with the most updated EV requirements in both the City's Reach Code and Title 24 at the time of construction.
Action M7: Continue to implement the City's Housing Element of the Comprehensive Plan to improve jobs - housing balance and reduce vehicle miles traveled (VMT).	**Consistent.** The proposed project would implement the 2023-2031 Housing Element Update which would facilitate development within the city's urbanized and underutilized sites. These areas are near or adjacent to transportation corridors currently served by transit or Class I, II, and III bicycle lanes such as University Avenue, Bryant Street, California Avenue, and Bayshore Road, which would encourage the use of bicycles and reduce reliance on single-occupancy vehicles and VMT.
Action N2: Ensure No Net Tree Canopy Loss for all projects.	**Consistent.** Future development would be required to comply with the City's Tree Ordinance pursuant to Title 8 of the PAMC, which also ensures no net loss of canopy across all tree removal types.
Action N8: Expand the requirements of the Water Efficient Landscape Ordinance (WELO) to increase native and drought-tolerant species composition.	**Consistent.** Future development would be required to comply with the most updated requirements of WELO pursuant to Section 12.32.040 of the PAMC.
Action N9: Phase out gas-powered lawn and garden equipment, in compliance with California's AB 1346	**Consistent.** Future development would be required to comply with AB 1346 and would be prohibited from using gas-powered lawn and garden equipment.
Action ZW2: Promote residential food waste reduction.	**Consistent:** Future development facilitated by the proposed HEU would be required to comply with SB 1383 and recycle organic wastes.
CARB Scoping Plan Measures	
Consider enhanced energy efficiency (high efficiency air conditioners, light-emitting diode lamps, efficiency improvements in industrial process cooling and refrigeration, efficient street lighting).	**Consistent.** Future development would be required to comply with the latest CALGreen standards and Building Energy Efficiency Standards, which would require implementation of energy-efficient light fixtures and building materials into the project design, and would ensure energy efficient performance for new buildings.

Source: City of Palo Alto 2022c, CARB 2017

As shown in Table 18, the project would be consistent with applicable actions from the City's S/CAP. Therefore, impacts would be less than significant, and would be generally the same as for the 2030 Comprehensive Plan as analyzed in the 2017 EIR. There would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, and further analysis is not warranted.

PROJECT CONSISTENCY WITH 2022 SCOPING PLAN

The principal State plans and policies for reducing GHG emissions are AB 32, SB 32, and AB 1279. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020; the goal of SB 32 is to reduce GHG emissions to 40 percent below 1990 levels by 2030; and the goal of AB 1279 is to achieve net zero greenhouse gas emissions no later than 2045, and reduce GHG emissions by 85 percent below 1990 levels no later than 2045. The 2022 Scoping Plan expands upon earlier plans to include the AB 1279 targets. The 2022 Scoping Plan's strategies that are applicable to the proposed project include reducing fossil fuel use and vehicle miles traveled; decarbonizing the electricity sector, maximizing recycling and diversion from landfills; and increasing water conservation. The project would be consistent with these goals since future development would be required to comply with the latest Title 24 Green Building Code and Building Efficiency Energy Standards, as well as the AB 341 waste diversion goal of 75 percent and recycle organic wastes pursuant to SB 1383. Future development facilitated by the project would also be largely located in areas served by transit, such as along El Camino Real, the California Avenue area, and the Downtown area, and would be near or adjacent to transportation corridors currently served by transit or Class I, II, and III bicycle lanes such as University Avenue, Bryant Street, California Avenue, and Bayshore Road. This would reduce reliance on single-occupancy vehicles and VMT and promote bicycling and walking. Future development would also be required to comply with the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). Additionally, future development would receive electricity from CPAU, which sources 100 percent GHG free electricity. Therefore, the project would not conflict with the 2022 Scoping Plan and this impact would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not result in emissions exceeding the 2031 interpolated thresholds, and would be consistent with the City's S/CAP and CARB Scoping Plan measures, resulting in less than significant GHG impacts. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

9 Hazards and Hazardous Materials

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	EIR Pages 4.7-2 through 4.7-3	No	No	No	N/A
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	EIR Pages 4.7-3 through 4.7-5	No	No	No	Yes
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	EIR Pages 4.7-5 through 4.7-6	No	No	No	Yes
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	EIR Pages 4.7-6 through 4.7-8	No	No	No	N/A
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	EIR Pages 4.7-9 through 4.7-10; 4.7-11	No	No	No	N/A
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	EIR Pages 4.7-10 through 4.7-11	No	No	No	N/A
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	EIR Pages 4.7-8 through 4.7-9	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.7, *Hazards and Hazardous Materials,* of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to hazards and hazardous materials. The 2017 EIR found that the 2030 Comprehensive Plan would not create a significant hazard to the public or environment as a result of the routine transport, use, or disposal of hazardous materials, and would not involve the release of hazardous materials into the environment through upset and accident conditions. The 2017 EIR concluded that with compliance with applicable federal, State, and local regulations regarding the storage, use, and handling of hazardous materials, the 2030 Comprehensive Plan would not result in hazardous emissions or the handling of hazardous wastes within 0.25 mile of an existing or proposed school, and would not expose future occupants to contaminated soil and groundwater. The 2017 EIR also found that the 2030 Comprehensive Plan would not impair implementation or interfere with an adopted emergency response or evacuation plan, or result in a safety hazard from a public airport or private airstrip for people residing or working within the plan area.

PROJECT-SPECIFIC IMPACTS

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed HEU would include 665 more housing units compared to buildout assumed in the 2017 EIR and therefore would potentially transport, use, or dispose of more hazardous materials than what was analyzed. However, hazardous materials would be required to be transported under the United States Department of Transportation (DOT) regulations. Future development facilitated by the proposed HEU would be subject to regulatory programs such as those overseen by the RWQCB and the Department of Toxic Substances Control (DTSC). These agencies require applicants for development of potentially contaminated properties to perform investigation and cleanup if the site is found to be contaminated with hazardous substances. In addition, Santa Clara County has substantial regulations concerning hazardous materials under its Certified Unified Program Agencies (CUPA) jurisdiction and related Unified Programs. This is further enforced by Palo Alto Fire Department Programs.

The proposed HEU is intended to expand housing capacity and would not facilitate the establishment of uses that would sell, use, store, transport, or release substantial quantities of hazardous materials such as industrial, warehouse, auto-service, or manufacturing uses. Residential uses do not typically use hazardous materials other than small amounts for cleaning and landscaping. These materials would not be different from household chemicals and solvents already in wide use throughout Palo Alto. Residents are anticipated to use limited quantities of products routinely for periodic cleaning, repair, and maintenance or for landscape maintenance/pest control that could contain hazardous materials. Those using such products would be required to comply with all applicable regulations regarding the disposal of household waste.

Compliance with all applicable federal, State, and local regulations would reduce impacts from the routine transport, use, or disposal of hazardous materials to a less than significant level. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Development under the proposed HEU would facilitate development on sites that are possibly contaminated and inactive, undergoing evaluation, and/or undergoing corrective action, and grading or excavation may result in the transport, disposal, and release of hazardous materials if they are unearthed and removed from the site. However, the amount and type of soil disturbance would be similar to what was analyzed under the 2017 EIR as development would be facilitated on previously disturbed soils, and future development under the project would be subject to regulatory programs such as those overseen by the RWQCB and the DTSC. These agencies require applicants for development of potentially contaminated properties to perform investigation and cleanup if the properties are contaminated with hazardous substances above the applicable environmental screening levels for the site. Future development would also be required to comply with Chapter 17.16 of the PAMC which requires the preparation of a hazardous materials management plan (HMMP) demonstrating the suitable storage of hazardous materials, as well as Chapter 16.11 which requires the implementation of a SWPPP and stormwater pollution prevention measures. Although the proposed HEU would include 665 more housing units compared to buildout assumed in the 2017 EIR, compliance with all applicable federal, State, and local regulations would reduce impacts from the release of hazardous materials to a less than significant level. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Several housing inventory sites are located within 0.25 mile of a school, such as Palo Verde Elementary School, Fairmeadow Elementary School, Herbert Hoover Elementary School, and Palo Alto High School. The proposed HEU would not involve new industrial or manufacturing uses, or involve the use, storage, disposal, or transportation of significant quantities of hazardous materials. The proposed project is designed to facilitate residential development. Residential uses may involve use and storage of some materials considered hazardous, though primarily these would be limited to solvents, paints, chemicals used for cleaning and building maintenance, and landscaping supplies. These materials would not be different from household chemicals and solvents already in general and wide use throughout the city. Development accommodated under the project therefore would not pose a health risk to nearby schools or

childcare facilities. Additionally, as discussed above under Impacts (a) and (b), future development would be required to comply with existing applicable federal, State, and local regulations which govern the routine use, transport, handling, storage, disposal, and release of hazardous materials. Oversight by the appropriate federal, State, and local agencies and compliance by new development with applicable regulations related to the handling and storage of hazardous materials would minimize the risk of the public's potential exposure to these substances to a less than significant level. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As discussed in the 2017 EIR, a number of hazardous materials sites are listed on databases compiled pursuant to Government Code Section 65962.5. Most of the sites are listed as closed and have been remediated to the satisfaction of the lead responsible agency (i.e., RWQCB, DTSC, Santa Clara County Department of Environmental Health (SCCDEH)) based on land use at the time of closure. Additionally, several groundwater contaminant plumes underlie certain areas of the city, which could potentially expose future residents to contamination of soil and groundwater. The proposed HEU would facilitate 665 more housing units compared to buildout analyzed in the 2017 EIR, and therefore could potentially facilitate more development on sites containing hazardous materials in underlying groundwater or soils. However, the amount and type of soil disturbance would be similar to what was analyzed under the 2017 EIR as development would be facilitated on previously disturbed soils and on underutilized and non-vacant sites. Future development would be required to adhere to all applicable federal, State, and local regulations regarding cleanup and reuse of a site with hazardous materials, as well as policies within the Safety Element of the 2030 Comprehensive Plan, which would reduce impacts to a less than significant level. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

As discussed in the 2017 EIR, the Comprehensive Land Use Plan (CLUP) for the Palo Alto Airport was adopted in November 2008 by the Santa Clara County Airport Land Use Commission (ALUC) and the city amended the Comprehensive Plan in 2009 to incorporate the CLUP (Santa Clara County Airport Land Use Commission 2016). The CLUP includes policies intended to safeguard the general welfare of the inhabitants within the vicinity of the airport and ensure that new surrounding uses do not affect the airport's continued safe operation (City of Palo Alto 2017a). Unlike Scenario 6 of the 2017 EIR, the proposed HEU would allow residential uses in the ROLM

zone south of US 101. This area is within the Palo Alto Airport's Airport Influence Area (AIA); however, this area is not located in the airport's inner or outer safety zone and is outside of the aircraft noise contours. Future development in the height restricted areas surrounding the airport would be subject to Federal Aviation Regulations (FAR) Part 77, *Objects Affecting Navigable Airspace*, which establishes imaginary surfaces for airports and runways as a means to identify objects that are obstructions to air navigation. Any penetrations of the FAR Part 77 surface are subject to review on a case-by-case basis. If a safety problem is found to exist, the Federal Aviation Administration (FAA) may issue a determination of a hazard to air navigation (Santa Clara County Airport Land Use Commission 2016). The City of Palo Alto establishes and enforces height restrictions in these areas.

Therefore, with compliance with existing regulations, the proposed HEU would not interfere with an airport land use plan or create an airport-related safety hazard, and impacts would be less than significant. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As discussed in the 2017 EIR, the Palo Alto Office of Emergency Services (OES) is responsible for coordinating agency response to disaster or other large-scale emergencies in Palo Alto with assistance from the Santa Clara County Operational Area in accordance with the State of California Standardized Emergency Management System. The Palo Alto Emergency Operations Plan (EOP) establishes policy direction for emergency planning, mitigation, response, and recovery activities within the city. The Palo Alto EOP addresses interagency coordination, procedures to maintain communication with County and State emergency response teams, and methods to assess the extent of damage and management of volunteers. With participation from the City of Palo Alto and other local agencies, ABAG created an umbrella Hazard Mitigation Plan entitled "Taming Natural Disasters." In addition, the city participated in development of and has since adopted the Regional Catastrophic Earthquake Mass Transportation Plan, which is an annex to the San Francisco Bay Area Regional Emergency Coordination Plan and addresses mass transportation/evacuation issues in response to a major earthquake (City of Palo Alto 2017a). As discussed in Section 4.13, *Public Services and Recreation*, future development in Palo Alto would be required to conform to the latest fire code requirements, including provisions for emergency access. With adherence to existing Comprehensive Plan policies and other regulations, implementation of the proposed HEU would not impair or interfere with an emergency response or evacuation plan. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

As shown in Map S-8 of the 2017 EIR, much of the area surrounding Palo Alto west of I-280 is considered to have a moderate and high risk of wildland fire, whereas all of the urbanized areas do not have any wildland fire hazards. Since the proposed HEU would facilitate development in non-vacant and underutilized sites in urbanized areas, wildfire risk to future residents would be low. Future development would be subject to the CAL FIRE Strategic Plan and the California Fire Code (CFC), pursuant to Chapter 15.04 of the PAMC. The CFC requires the clearance of debris and vegetation within a prescribed distance from structures in wildlife hazard areas. Additionally, future development would be located in proximity to Palo Alto Fire Stations 1, 2, 3, and 4. Cooperative fire service agreements with the Central County Fire Department (CCFD), City of Menlo Park, City of Mountain View, Woodside Fire Protection District, and Stanford University would further assist the city in protecting people and structures from potential wildland fires. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would be required to comply with federal, State, and local regulations pertaining to hazards and hazardous materials which would reduce impacts to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

10 Hydrology and Water Quality

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	EIR Pages 4.8-11 through 4.8-13	No	No	No	Yes
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	EIR Page 4.8-13 through 4.8-16; 4.8-20 through 4.8-22	No	No	No	N/A
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:					
(i) Result in substantial erosion or siltation on- or off-site;	EIR Pages 4.8-16 through 4.8-17	No	No	No	Yes
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	EIR Pages 4.8-19 through 4.8-20	No	No	No	Yes
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	EIR Pages 4.8-19 through 4.8-20	No	No	No	Yes
(iv) Impede or redirect flood flows?	EIR Pages 4.8-22 through 4.8-23	No	No	No	Yes

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
d. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	EIR Pages 4.8-23 through 4.8-26	No	No	No	N/A
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	N/A	No	No	No	Yes

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.8 of the 2017 EIR analyzes impacts to hydrology and water quality. The 2017 EIR determined that the 2030 Comprehensive Plan could substantially degrade or deplete groundwater resources or interfere substantially with groundwater recharge since there is a potential for localized lowering of the shallow aquifer during construction dewatering activities. However, implementation of mitigation measure HYD-2 would reduce impacts to a less than significant level. The 2017 EIR found that the 2030 Comprehensive Plan would not violate any water quality standards or waste discharge requirements with compliance with the NPDES General Construction Permit (GCP), SWPPP requiring incorporation of BMPs, and Low Impact Development (LID) treatment measures. The 2017 EIR also states that the 2030 Comprehensive Plan would not increase the rate of stormwater runoff or alter the existing drainage pattern; result in stream bank instability; result in new or increased flooding on-or off-site or exceed the capacity of stormwater drainage systems in local streams; or provide substantial additional sources of pollutants associated with urban runoff or otherwise substantially degrade surface or ground water quality. The 2017 EIR determined that the 2030 Comprehensive Plan would not substantially impede or redirect flood flows through placement of structures within the 100-year flood hazard area with compliance with the National Flood Insurance Program (NFIP) and Flood Hazard Regulations in the PAMC. Additionally, the 2030 Comprehensive Plan would not expose people or structures to a significant risk or loss, injury or death involving flooding by placing housing or other development within a 100-year flood hazard area or a levee or dam failure inundation area and would not result in impacts from inundation by seiche, tsunami, or mudflow.

Table 19 lists the mitigation measures from the 2017 EIR related to Hydrology and Water Quality.

Table 19 2017 EIR Mitigation Measures: Hydrology and Water Quality

Mitigation Measure #	Mitigation Text
Impact HYD-2: The proposed Plan could substantially degrade or deplete ground water resources or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (Significant and Mitigable)	
HYD-2	To reduce potential impacts associated with construction dewatering the proposed Plan shall include policies that address the following topics: ▪ Impacts of basement construction for single-family homes on adjacent properties, public resources, and the natural environment. ▪ Conservation of subsurface water resources. ▪ Reduced residential basement dewatering and other excavation activities. ▪ Construction techniques and recharge strategies to reduce subsurface and surface water impacts. ▪ Monitoring of dewatering and excavation projects. ▪ Cooperation with other jurisdictions and regional agencies to protect groundwater. ▪ Protection of groundwater from the adverse impacts of urban use.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACTS

a. Would the project violate any water quality standards or waste discharge requirements?

Similar to what was assumed in the 2017 EIR, although development under the proposed HEU would occur on non-vacant and underutilized sites in previously disturbed areas, ground-disturbing activities would still have the potential to cause soil erosion from exposed soil, an accidental release of hazardous materials used for equipment such as vehicle fuels and lubricant, or temporary siltation from storm water runoff. If uncontrolled during construction, soil erosion and water pollutants could have adverse offsite effects on water quality. However, future development that would disturb one or more acre of land would be required to comply with the NPDES GCP as well as prepare a SWPPP that requires the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. Additionally, projects that apply for a grading permit must also comply with the City of Palo Alto's grading and erosion and sediment control requirements pursuant to PAMC Chapter 16.28, which require project applicants to submit an erosion and sediment control plan for review by the City prior to the issuance of grading permits. Pursuant to Chapter 16.11 of the PAMC, permanent stormwater pollution prevention measures must also be incorporated into future projects. These may include but are not limited to minimization of impervious surfaces; construction of sidewalks, walkways, and/or patios with permeable surfaces; and minimization of disturbances to natural drainages. Furthermore, all new and redevelopment projects that create or replace 10,000 square feet or more of impervious surface must incorporate site design, source control, and Low Impact Development (LID) treatment measures to the maximum extent practicable. Also, all development or redevelopment projects that create or replace one acre or more of impervious surface and are located in a hydromodification area must implement hydromodification management measures (i.e., post-project runoff rates shall not exceed estimated pre-project rates and durations) (City of Palo Alto 2017a).

If groundwater is encountered, future development would be required to comply with the City's *Construction Dewatering System Policy and Plan Preparation Guidelines,* which require excavation activities that may encounter groundwater to submit a Construction Dewatering Plan to the City's Public Works Department (City of Palo Alto 2020). The Public Works Department would review and permit the dewatering plan prior to commencement of dewatering as part of the Street Work Permit process. The Construction Dewatering Plan must comply with the City's Guidelines that require that water be tested for contaminants prior to initial discharge and at intervals during dewatering. In the dewatering plan, the applicant must include provisions for keeping sediment and contaminated groundwater out of the storm drain system (City of Palo Alto 2017a).

Therefore, with compliance with the NPDES GCP, the Municipal Regional Permit (MRP), preparation of a SWPPP, and implementation of site design, source control, and LID treatment control measures for new development would reduce impacts to a less than significant level. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The proposed HEU would substantially degrade or deplete groundwater resources or interfere substantially with groundwater recharge if future development would use significant amounts of groundwater for water supply or would significantly increase impervious surfaces or construction dewatering. Since the City receives 100 percent of its potable water from the San Francisco Public Utilities Commission (SFPUC), which obtains its supply from surface water sources, the proposed HEU would not substantially degrade or deplete groundwater resources. Implementation of LID measures, which prioritize the use of on-site infiltration, would also result in some level of groundwater recharge. Although the proposed HEU could potentially increase impervious surfaces within the city more than what was analyzed under the 2017 EIR, future development would be facilitated on non-vacant and underutilized sites that are already built-out. Additionally, future development would be required to comply with Section 18.40.130(f) of the PAMC which lists guidelines for landscaping and pervious paving to accommodate filtration of stormwater runoff from impervious areas.

As shown in the Palo Alto groundwater dewatering map, construction dewatering sites in 2020 to 2022 were located primarily along the west of Oregon Expressway and Evergreen Park (City of Palo Alto 2022d). Under the proposed HEU, a few housing sites would be located east of Oregon Expressway and near the Evergreen Park area. Therefore, impacts would be potentially significant. However, with compliance with the City's *Construction Dewatering System Policy and Plan Preparation Guidelines* and implementation of policies L-3.5 and N-4.8 of the 2030 Comprehensive Plan EIR, adopted in compliance with Mitigation Measure HYD-2 outlined in the 2017 EIR, impacts associated with construction dewatering would be less than significant.

Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c.(i) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

c.(ii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

c.(iii) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

c.(iv) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Similar to Scenario 6 of the 2017 EIR, the proposed HEU would not convert open space areas, creeks, or wetlands to impervious surfaces or require the alteration of the course of an existing stream or river. The proposed HEU would facilitate development on non-vacant and underutilized sites in urbanized areas. Future development would be required to implement construction phase BMPs as well as post-construction site design measures, source control measures, and stormwater LID treatment measures. Additionally, future development that disturbs one or more acre of land would be required to prepare and submit a SWPPP to the State Water Resources Control Board (SWRCB) that describes the measures to control discharges from construction sites. Pursuant to PAMC Chapter 16.28, projects that apply for a grading permit must also comply with the City of Palo Alto's grading and erosion and sediment control requirements, which require project applicants to submit an erosion and sediment control plan for review by the city prior to the issuance of grading permits. Furthermore, pursuant to Chapter 16.11 of the PAMC, permanent stormwater pollution prevention measures must also be incorporated into future projects.

MRP-regulated projects would be required to treat 80 percent or more of the volume of annual runoff for volume-based treatment measures. Projects that create or replace 2,500 square feet or more, but less than 10,000 square feet, of impervious surface must implement site design measures to reduce stormwater runoff. All future development that satisfies Provision C.3 of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) would be required to implement post-construction stormwater controls into the design of the project. New on-site storm drain systems in the city must be designed to convey the stormwater runoff

from a 10-year storm and project applicants must demonstrate that the runoff discharged from the site to the City's storm drain system will not exceed its carrying capacity. In addition, the City's Department of Public Works requires new development to provide storm drain flow and detention calculations that compare pre- and post-project flow rates and volumes. The calculations must be signed and stamped by a registered civil engineer. On-site stormwater detention may also be required to lessen the project's impact on the City's storm drain system. A final grading and drainage plan must be prepared by a licensed professional that shows the existing and proposed on-site drainage layout, locations, and elevations and shows the conveyance of stormwater to the nearest City storm drain system. Existing drainage patterns, including the accommodation of off-site runoff, must be maintained (City of Palo Alto 2017a).

Therefore, facilitation of development on already built-out sites and compliance with existing State and local regulations related to stormwater would reduce impacts to a less than significant level. Therefore, this impact would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

As discussed in the 2017 EIR, only the Baylands area of Palo Alto is within a tsunami inundation zone and this is a large area of undisturbed marshlands open for recreational access. None of the housing inventory sites facilitated by the proposed HEU would be located in the Baylands area. Additionally, mud and debris flows can occur in the southern, mountainous area of Palo Alto. These areas are maintained as open space and none of the housing inventory sites are located within areas susceptible to mud or debris flows. The proposed HEU would facilitate development on flat and urbanized sites away from crests and steep ridges. Therefore, impacts would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed under Impact (a), the proposed HEU would not violate water quality or degrade water quality during construction or operation.

The City of Palo Alto is under the jurisdiction of the San Francisco Bay RWQCB. The San Francisco Bay RWQCB provides permits for projects that may affect surface waters and groundwater locally and is responsible for preparing the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan designates beneficial uses of water in the region and establishes narrative and numerical water quality objectives. The Basin Plan serves as the basis for the San Francisco Bay RWQCB's regulatory programs and incorporates an implementation plan for achieving water quality objectives (California Water Board 2017). The

proposed project would not interfere with the objectives and goals in the Basin Plan. This impact would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would be required to comply with federal, State, and local regulations as well as policies adopted in compliance with Mitigation Measure HYD-2 pertaining to hydrology and water quality which would reduce impacts to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

11 Land Use and Planning

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Physically divide an established community?	EIR Page 4.9-13 through 4.9-15	No	No	No	N/A
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	EIR Pages 4.9-3 through 4.9-13	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.9, *Land Use and Planning,* of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to land use. The 2017 EIR found that the 2030 Comprehensive Plan could adversely change the type or intensity of existing or planned land use patterns in the area, and therefore mitigation measure LAND-1 would be required to guide the change in density and character in order to avoid or minimize potential impacts to a less than significant level. Additionally, the 2030 Comprehensive Plan would allow development that could be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height. Therefore, implementation of mitigation measures LAND-2 would be required to ensure development is compatible with adjacent land uses and that the general character in Palo Alto is maintained. The 2030 Comprehensive Plan states that the 2030 Comprehensive Plan would not allow development that could conflict with established residential, recreational, educational, religious, or scientific uses of an area; would not allow new development that could conflict with any applicable City land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect; and would not conflict with an applicable habitat conservation plan or natural community plan. However, Scenario 6 of the 2030 Comprehensive Plan would include transportation improvements at existing roadways and rail corridors that could potentially physically divide existing communities. As a result, Mitigation Measure LAND-5 would be required to promote connectivity and context-sensitive design of infrastructure improvements and to reduce impacts to a less than significant level.

Table 20 lists mitigation measures related to land use and planning in the 2017 EIR.

Table 20 2017 EIR Mitigation Measures: Land Use and Planning

Mitigation Measure #	Mitigation Text
Impact LAND-1: The proposed Plan could adversely change the type or intensity of existing or planned land use patterns in the area. (Potentially Significant and Mitigable)	
LAND-1	To ensure that the intensity of future development would not adversely change the land use patterns or affect the livability of Palo Alto neighborhoods, the proposed Plan shall include policies that address the following topics: ▪ Strengthening of residential neighborhoods. ▪ Vitality of commercial areas and public facilities. ▪ High-quality building and site design. ▪ Architectural compatibility of new development. ▪ Promotion of appropriate infill development. ▪ Gradual transitions in the scale of development where residential districts abut more intense uses.
Impact LAND-2: The proposed Plan would allow development that could be incompatible with adjacent land uses or with the general character of the surrounding area, including density and building height. (Potentially Significant and Mitigable)	
LAND-2	Implement Mitigation Measure LAND-1. In addition, to further reduce potential impacts to visual character and ensure compatibility with adjacent land uses, the proposed Plan shall include policies that address the following topic: ▪ Architectural standards that address land use transitions.
Impact LAND-5: The proposed Plan could physically divide an established community. (Potentially Significant and Mitigable)	
LAND-5	To avoid potential impacts from physically dividing an established community, the proposed Plan shall include policies that address the following topics: ▪ Enhanced connections to and from parks, schools, and community facilities for all users. ▪ Safe and convenient pedestrian, bicycle, and transit connections between residential areas and commercial centers. ▪ Cooperation with other agencies to improve circulation connections. ▪ Grade separation of rail crossings.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACTS

a. Would the project physically divide an established community?

The proposed HEU would not divide a community; rather, it is designed to meet the City's RHNA and includes implementation programs that would promote the development of existing non-vacant, underdeveloped, or underutilized sites, thereby locating people closer to existing employment, goods and services within an established community. Unlike Scenario 6 of the 2017 EIR, which included changes to transportation infrastructure, the proposed HEU would not involve the construction of barriers, such as new roads or other linear development or infrastructure, that would divide the existing communities or neighborhoods. Existing roadways would not be permanently blocked, and temporary construction would not limit access to a community or restrict movement within a community. Nonetheless, future development would continue to implement policies T-1.17 and T-1.19 of the 2030 Comprehensive Plan EIR, adopted in compliance with Mitigation Measure LAND-5 from the 2017 EIR, which would further reduce

impacts to a less than significant level. Therefore, this impact would be less than significant with mitigation, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed HEU would provide a framework for introducing new housing at all levels of affordability that is within access to transit, jobs, services, and open spaces. Through its identification of sites for future development and implementation of housing programs, the project would encourage development of up to 6,695 new residential units, which would address the City's fair share housing needs as quantified in the RHNA plus buffer. As shown in Table 2, with entitled and proposed development, ADUs, underutilized sites with no rezoning required, and rezoning to meet the RHNA, a total of 6,807 units can be accommodated, which is more than the RHNA plus 10 percent buffer of 6,695 units.

The proposed HEU would also include zoning ordinance and zoning map amendments to increase permitted density, floor area, and height in the RM-20, RM-30, CN, CC, and CS zones, and permit residential development in the ROLM and GM zones. Although the proposed HEU would allow residential development in the ROLM and GM zones, the corresponding Research/Office Park Comprehensive Plan land use designations for these zones already permit multi-family residential uses and mixed use.

The following analysis discusses the project's consistency with relevant and applicable plans and regulations, including Plan Bay Area 2050 and the 2030 Comprehensive Plan. Consistency with Plan Bay Area is presented in Table 21, and consistency with the Comprehensive Plan is presented in Table 22. The project is determined to be either "consistent" or "inconsistent" with the identified goals and policies.

PLAN BAY AREA 2050

As shown in Table 21, the project would be consistent with the key goals and strategies of Plan Bay Area 2050. Therefore, the project would not conflict with Plan Bay Area 2050 and impacts would be less than significant.

Table 21 Project Consistency with Plan Bay Area 2050

Measure	Proposed HEU Project Consistency
Housing. Spur Housing Production for Residents of all Income Levels	
H1. Further strengthen renter protections beyond state law. Building upon recent tenant protection laws, limit annual rent increases to the rate of inflation, while exempting units less than 10 years old.	**Consistent.** The HEU analyzes housing needs for present and future residents. The City's Regional Housing Needs Assessment (RHNA) allocation is 6,086 units, which are distributed across over four income levels. The units would be distributed as is over the four income levels: 1,556 extremely low and very low units, 896 low units, 1,013 moderate units, and 2,621 above moderate units. The allocation described would be protected and not altered. Furthermore, Policy 4.3 of the proposed HEU encourages new high-quality rental housing and Program 6.6 ensures fair housing by instituting tenant protections to prevent anti-displacement and requiring a 90-day notice for rent increases of 6 percent instead of the State's 10 percent threshold for noticing.
H2. Preserve existing affordable housing. Acquire homes currently affordable to low and middle-income residents for preservation as permanently deed-restricted affordable housing. **H4. Build adequate affordable housing to ensure homes for all**. Construct enough deed-restricted affordable homes to fill the existing gap in housing for the unhoused community and to meet the needs of low-income households.	**Consistent**. As described above, the Housing Element Update is required to provide 1,556 extremely low and very low units, 896 low units, and 1,013 moderate units. Affordable housing would be preserved for these income levels. HEU Goal 2.0 Affordable Housing and policies and programs under this goal would ensure housing affordability in Palo Alto especially for people at the lowest income levels.
H3. Allow a greater mix of housing densities and types in Growth Geographies. Allow a variety of housing types at a range of densities to be built in Priority Development Areas, select Transit-Rich Areas and Select High-Resource Areas.	**Consistent.** As shown in Figure 2-3 of the Project Description (Housing Element Update Sites Inventory Locations), many of the housing inventory sites are generally located in areas near major transportation corridors such as along El Camino Real or in transit-accessible Priority Development Areas (PDAs) such as the California Avenue area and the Downtown area, as well as near existing residential and commercial development. HEU Policies 3.1, 3.3, and 4.4 also aim to promote transit-oriented new construction and encourage construction of new high-density housing on major transit corridors in proximity to transit stations.
H5. Integrate affordable housing into all major housing projects. Require a baseline of 10-20% of new market-rate housing developments of five units or more to be affordable to low-income households.	**Consistent**. Pursuant to the City's Below Market Rate (BMR) Housing Purchase Program, the city requires that developers for new development with three or more residential units to contribute at least 15 percent of those units at below market rates, and projects with seven or more units are required to provide one or more BMR units within the development (City of Palo Alto 2023). Additionally, HEU Goal 2.0 Affordable Housing aims to ensure Palo Alto residents have access to quality housing at a range of housing options and prices.
EN4. Maintain urban growth boundaries. Using urban growth boundaries and other existing environmental protections, focus new development within the existing urban footprint or areas otherwise suitable for growth, as established by local jurisdictions.	**Consistent.** The proposed HEU would facilitate development of housing on underutilized sites in urbanized areas of the city, which would reduce pressure to develop open space areas. By placing residents close to jobs, commercial services, and alternative methods of transportation, the project would reduce greenhouse gas emissions and other criteria pollutants associated with vehicle use to help communities stay healthy and safe.

Source: ABAG 2021

CITY OF PALO ALTO 2030 COMPREHENSIVE PLAN

As shown in Table 22, the project would be consistent with the goals, policies, and actions within the 2030 Comprehensive Plan. As noted under Government Code Section 65589.5(a), the Legislature has concluded that "the lack of housing, including emergency shelters, is a critical problem that threatens the economic, environmental, and social quality of life in California." More specifically, the Legislature's stated intent is "to assure that counties and cities recognize their responsibilities in contributing to the attainment of the state housing goal…to assure that counties and cities will prepare and implement housing elements which…will move toward attainment of the state housing goal" (Government Code Section 65581). The project would help meet the city's RHNA allocation, as well as efficiently utilize non-vacant, underutilized, and underdeveloped lots within the city to increase the supply of housing. The project would encourage development of housing, which is supportive of the city's goal and policies.

Table 22 Project Consistency with Relevant 2030 Comprehensive Plan Goals and Policies

Comprehensive Plan Policy	Proposed HEU Project Consistency
Land Use Element	
Policy L-1.2: Limit future urban development to currently developed lands within the urban service area. The boundary of the urban service area is otherwise known as the urban growth boundary. Retain undeveloped land west of Foothill Expressway and Junipero Serra as open space, with allowances made for very low-intensity development consistent with the open space character of the area. Retain undeveloped land northeast of Highway 101 as open space.	**Consistent.** Most of the housing inventory sites are located in areas near major transportation and commercial corridors such as along El Camino Real or in transit-accessible PDAs such as the California Avenue area and the Downtown area, or are located in commercial areas such as GM/ROLM zones. None of the housing inventory sites are located in areas designated as open space.
Policy L-2.4: Use a variety of strategies to stimulate housing, near retail, employment, and transit, in a way that connects to and enhances existing neighborhoods.	**Consistent.** As shown in Figure 3of the Project Description (Housing Element Update Sites Inventory Locations), most of the housing inventory sites are located in areas near major transportation and commercial corridors such as along El Camino Real or in transit-accessible PDAs such the California Avenue area and the Downtown area, as well as near existing residential and commercial development. The proposed HEU would also encourage residential uses in areas shown on Figure 4 and Figure 5. These areas are located near existing services. The addition of housing in the GM/ROLM zones shown on Figure 4 would place housing near services (including those in Mountain View) and on underutilized commercial parcels. Overall, the proposed HEU would create walkable neighborhoods and increase transit ridership.
Policy L-2.8: When considering infill redevelopment, work to minimize displacement of existing residents.	**Consistent.** The proposed HEU would facilitate development on non-vacant and underutilized sites. Program 6.6 of the HEU ensures tenant protections and prevents anti-displacement.
Policy L-2.9: Facilitate reuse of existing buildings.	**Consistent.** The proposed HEU would not hinder reuse of existing buildings by facilitating development on non-vacant and underutilized sites in urbanized areas.

Comprehensive Plan Policy	Proposed HEU Project Consistency
Policy L-1.3: Infill development in the urban service area should be compatible with its surroundings and the overall scale and character of the city to ensure a compact, efficient development pattern. **Policy L-3.1:** Ensure that new or remodeled structures are compatible with the neighborhood and adjacent structures. **Policy L-6.1:** Promote high-quality design and site planning that is compatible with surrounding development and public spaces. **Policy L-6.2:** Use the Zoning Ordinance, design review process, design guidelines and Coordinated Area Plans to ensure high quality residential and commercial design and architectural compatibility.	**Consistent.** Development facilitated by the proposed HEU would be subject to the City's Major Architectural Review which includes a hearing and recommendation by the Architectural Review Board on whether the individual project is consistent with the findings for Architectural Review outlined in PAMC Section 18.76.020. This process aims to promote orderly and harmonious development in the city and promote visual environments that are of high aesthetic quality and variety and which, at the same time, are considerate of each other. Additionally, future development in locations within specific area plans would be required to adhere to development guidelines outlined within the respective coordinated area plans, such as the North Ventura Coordinated Area Plan following its adoption. If projects qualify for streamlined review, multifamily projects would be subject to objective design standards that aim to create high-quality design and compatibility with surrounding uses and character.
Transportation Element	
Policy T-1.3: Reduce GHG and pollutant emissions associated with transportation by reducing VMT and per-mile emissions through increasing transit options, supporting biking and walking, and the use of zero-emission vehicle technologies to meet City and State goals for GHG reductions by 2030.	**Consistent.** As shown in Figure 3 (Housing Element Update Sites Inventory Locations), most of the housing inventory sites are located in areas near major transportation corridors such as along El Camino Real, or in transit-accessible PDAs such as the California Avenue area and the Downtown area, as well as near existing residential and commercial development. HEU Policies 3.1, 3.3, and 4.4 also aim to promote transit-oriented new construction and encourage construction of new high-density housing on major transit corridors in proximity to transit stations. The addition of housing in the GM/ROLM zones shown on Figure 4 would place housing near services (including those in Mountain View) and on underutilized commercial parcels. Pursuant to Section 16.14.420 of the PAMC, new multi-family residences would be required to provide at least one EVSE Ready outlet or EVSE installed for each residential unit in the structure for residential parking, and would be required to provide Conduit Only, EVSE Ready Outlet, or EVSE installed for at least 25 percent of guest parking spaces, among which at least 5 percent shall be EVSE installed. Future development facilitated by the project would be required to comply with the most updated EV requirements in both the City's Reach Code and Title 24 at the time of construction.

Source: City of Palo Alto 2017b

As shown in Table 21 and Table 22, the proposed HEU would not conflict with applicable goals and policies in Plan Bay Area 2050 or the 2030 Comprehensive Plan. Therefore, impacts would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not physically divide an established community or conflict with any applicable land use plan, policy, or regulation, and

impacts would be less than significant with mitigation. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

12 Mineral Resources

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	EIR Pages 7-2 through 7-3	No	No	No	N/A
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	EIR Pages 7-2 through 7-3	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

The City's Comprehensive Plan EIR analyzes mineral resources in Chapter 7, *CEQA-Mandated Sections*, and found that no impacts related to mineral resources would occur.

PROJECT-SPECIFIC IMPACTS

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

According to the 2017 EIR, most of the city is classified as MRZ-1[9], MRZ-3[10], or MRZ-4[11], meaning that no significant mineral deposits are present or data does not exist to identify the significance of mineral deposits (City of Palo Alto 2017a). Therefore, there would be no impacts regarding mineral resources, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because here would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

[9] MRZ-1: Adequate information indicates that no significant mineral deposits are present or likely to be present.

[10] MRZ-3: The significance of mineral deposits cannot be determined from the available data.

[11] MRZ-4: There is insufficient data to assign any other MRZ designation.

CONCLUSION

As with what was analyzed under the 2017 EIR, there would be no impacts related to mineral resources. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

13 Noise

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project result in:					
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	EIR Pages 4.10-2 through 4.10-18; 4.10-21 through 4.10-26	No	No	No	Yes
b. Generation of excessive ground-borne vibration or groundborne noise levels?	EIR Pages 4.10-18 through 4.10-21	No	No	No	N/A
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	EIR Pages 4.10-26 through 4.10-28	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.10, *Noise*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to on-site operational noise, traffic noise, and construction noise. The 2017 EIR found that impacts related to long-term non-transportation, operational noise would be potentially significant due to zoning changes for commercial and residential uses, and mitigation measure NOISE-1a would be required to reduce impacts to a less than significant level. The 2017 EIR also found that transportation noise impacts related to aircraft and railway noise sources would be potentially significant due to encroachment of land uses near aircraft facilities, along with unknown future operations patterns, which could potentially result in unacceptable aircraft-related noise environments from one or both of these Palo Alto-based facilities (Stanford University Hospital helipad and the Palo Alto Airport). Therefore, mitigation measures NOISE-1b and NOISE-1c would be required to reduce impacts to a less than significant level. Additionally, the 2030 Comprehensive Plan would have the potential to result in noise level increases such that L_{dn} would increase by three dB, causing the L_{dn} in existing residential areas to exceed 60 dBA. Implementation of mitigation measures NOISE-2 and NOISE-3 would be required to reduce

impacts from long-term operational noise as well as transportation noise related to aircraft and railway noise to a less than significant level.

The 2017 EIR determined that the 2030 Comprehensive Plan would have the potential to result in indoor noise levels for residential development to exceed 45 dB L_{dn}, and mitigation measures NOISE-4a and NOISE-4b would be required to reduce indoor noise impacts to a less than significant level. Furthermore, the 2030 Comprehensive Plan would have the potential to expose persons to or generate excessive ground-borne vibration or ground-borne noise levels, and therefore impacts related to temporary construction-related vibration, long-term operational vibration, and railway-related vibration could be potentially significant, requiring implementation of mitigation measures NOISE-5a and NOISE-5b to reduce vibration impacts to a less than significant level. The 2017 EIR also concluded that the 2030 Comprehensive Plan would have the potential to expose people to noise levels in excess of established State standards and standards established in the local General Plan or noise ordinance since previous Comprehensive Plan policies do not require acoustical analyses to demonstrate compliance with applicable interior or exterior noise compatibility standards. Therefore, implementation of mitigation measures NOISE-6 and NOISE-7 would be required to ensure that pertinent exterior and interior noise environments would comply with City guidelines and State standards. Additionally, the 2030 Comprehensive Plan could result in a potentially substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project since certain construction activities may lead to substantial temporary or periodic increases to ambient noise levels. Mitigation measure NOISE-8 would be required to reduce impacts to a less than significant level.

The 2017 EIR found that the 2030 Comprehensive Plan would not expose people residing or working within an airport land use plan or within two miles of a public airport to excessive noise levels since all areas of Palo Alto are miles outside of the pertinent 65 dBA CNEL noise contour of medium or large airports including the Moffett Federal Airfield (KNUQ), San Carlos Airport (KSQL), San Jose International Airport (SJC), San Francisco International Airport (SFO), and Oakland International Airport (OAK). Additionally, since only airport property and the golf course – neither of which are noise-sensitive land uses – are within the Palo Alto Airport's 60 dBA CNEL noise contours, within-city public airport noise impacts would also be less than significant.

Table 23 lists mitigation measures related to noise in the 2017 EIR.

Table 23 2017 EIR Mitigation Measures: Noise

Mitigation Measure #	Mitigation Text
Impact NOISE-1: Implementation of the proposed Plan would have the potential to cause the average 24-hour noise level (Ldn) to increase by 5.0 decibels (dB) or more in an existing residential area, even if the Ldn would remain below 60 dB. (Potentially Significant and Mitigable)	
NOISE-1a	To ensure that average 24-hour noise levels associated with long term operational noise would not increase by 5.0 decibels (dB) or more in an existing residential area, the proposed Plan shall include policies that address the following topics: ▪ Location of land uses in areas with compatible noise environments. ▪ Use of the guidelines in the "Land Use Compatibility for Community Noise Environment" table to evaluate the compatibility of proposed land uses with existing noise environments. ▪ Clear guidelines for maximum outdoor noise levels in residential areas. ▪ Adherence to the interior noise requirements of the State of California Building Standards Code (Title 24) and the Noise Insulation Standards (Title 25). ▪ Inclusion of a noise contour map in the proposed Plan. ▪ Reduction of noise impacts of development on adjacent properties. ▪ Updating for clarity the Noise Ordinance to make enforcement easier.
NOISE-1b	To ensure that aircraft noise would not increase average 24-hour noise levels by 5.0 decibels (dB) or more in an existing residential area, the proposed Plan shall include policies that address the following topics: ▪ Compliance with the airport-related land use compatibility standards for community noise environments. ▪ Prohibition of incompatible land use development within the 60 dBA CNEL noise contours of the Palo Alto airport, as established in the adopted County of Santa Clara Airport Land Use Commission Comprehensive Land Use Plan (CLUP) for the Palo Alto Airport.
NOISE-1c	To ensure that railway noise would not increase average 24-hour noise levels by 5.0 decibels (dB) or more in an existing residential area, the proposed Plan shall include policies that address the following topics: ▪ Noise spillover from rail-related activities into adjacent noise-sensitive areas. ▪ Reduction of impacts from noise and ground borne vibrations associated with rail operations. ▪ Guidelines for interior noise levels. ▪ Requirements for vibration impact analysis for future development projects.
Impact NOISE-2: Implementation of the proposed Plan would not cause the Ldn to increase by three dB or more in an existing residential area, thereby causing the Ldn in the area to exceed 60 dB. (Significant and Mitigable)	
NOISE-2	Implement Mitigation Measures NOISE-1a, NOISE-1b, and NOISE-1c.
Impact NOISE-3: Implementation of the proposed Plan would have the potential to cause an increase of three dB or more in an existing residential area where the Ldn currently exceeds 60 dB. (Potentially Significant and Mitigable)	
NOISE-3	Implement Mitigation Measures NOISE-1a, NOISE-1b, and NOISE-1c.
Impact NOISE-4: Implementation of the proposed Plan would have the potential to result in indoor noise levels for residential development to exceed an Ldn of 45 dB. (Potentially Significant and Mitigable)	
NOISE- 4a	Implement Mitigation Measure NOISE-1a.
NOISE-4b	The Land Use Noise Compatibility Guidelines established in the current Comprehensive Plan shall be maintained under all six scenarios.

Mitigation Measure #	Mitigation Text
Impact NOISE-5: Implementation of the proposed Plan would have the potential to expose persons to or generate excessive ground-borne vibration or ground-borne noise levels.(Potentially Significant and Mitigable)	
NOISE-5a	To ensure that future development would not result in significant construction-related vibration impacts, the proposed Plan shall include policies that address the following topics: ▪ Requirements for construction and operations vibration impact analysis, to be prepared by a qualified acoustical consultant for development projects. ▪ Requirements for vibration mitigation plans to ensure compliance with the pertinent industry standards and City guidelines for projects that would experience vibration impacts during construction or operations. ▪ Limits for construction and operations vibration around vibration-sensitive receptors.
NOISE-5b	Implement Mitigation Measure NOISE-1c.
Impact NOISE-6: Implementation of the proposed Plan would have the potential to expose people to noise levels in excess of established State standards. (Potentially Significant and Mitigable)	
NOISE-6	Implement Mitigation Measures NOISE-4a and NOISE-4b
Impact NOISE-7: Implementation of the proposed Plan would have the potential to result in the exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies. (Potentially Significant and Mitigable)	
NOISE-7	Implement Mitigation Measures NOISE-1a, NOISE-1b, NOISE-1c, NOISE-4a, and NOISE-4b.
Impact NOISE-8: Implementation of the proposed Plan could result in a potentially substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (Potentially Significant and Mitigable)	
NOISE-8	To ensure that future development would not result in significant impacts to sensitive receptors from construction noise, the proposed Plan shall include policies that address the following topics: ▪ Construction noise limits around sensitive receptors. ▪ Monitoring and reporting plans for construction noise levels of larger development projects. ▪ Noise control measures to ensure compliance with the noise ordinance.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACTS

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Standards for interior noise in Palo Alto are currently determined primarily through the Land Use Noise Compatibility Guidelines and interior noise standards set by Title 24 of the State Building Code, while standards for exterior noise are currently determined primarily through the City's Noise Ordinance, or PAMC Chapter 9.10, and PAMC Section 18.42.190 which outlines requirements for noise and vibration. Although the proposed HEU would include 665 more residential units compared to buildout analyzed in the 2017 EIR and could therefore result in an increased amount of noise in excess of established standards, future development requiring discretionary approval would be required to conduct project-level acoustical analysis pursuant to Section 18.42.190 of the PAMC to demonstrate consistency with applicable land use compatibility requirements and noise standards.

CONSTRUCTION NOISE IMPACTS

Noise from increased construction could also temporarily or periodically increase ambient noise levels within the city. Engine noise reduction technology, including silencers, continues to improve, but heavy construction equipment still generates noise exceeding ambient levels that could cause intermittent annoyance to nearby receivers. Even with adherence to the city's allowed construction hours of 8 a.m. through 6 p.m. on Monday to Friday and 9 a.m. through 6 p.m. on Saturday, as well as maximum construction noise levels of 110 dBA at a distance of 25 feet pursuant to PAMC Section 9.10.060, it is likely that in certain cases these and other available methods to reduce noise would be inadequate to prevent a significant impact. Therefore, future development would also be required to comply with Policy N-6.11 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure NOISE-8 of the 2017 EIR which would reduce noise impacts to a less than significant level. Therefore, this impact would be less than significant with mitigation, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

TRANSPORTATION-RELATED NOISE IMPACTS

AIRPORT/HELIPORT NOISE

As discussed in the 2017 EIR, because Palo Alto has only one heliport at Stanford University Hospital, and one airport, the Palo Alto Airport, notable increases in ambient noise levels from air traffic are not anticipated. However, encroachment of land uses near these aircraft facilities, along with unknown future operations patterns, could potentially result in unacceptable aircraft-related noise environments from one or both of these Palo Alto-based facilities. Aircraft operations may cause the L_{dn} to increase by five DB or more in an existing residential area. The proposed HEU does not envision housing inventory sites in proximity to the Stanford University Hospital helipad, and the closest housing inventory site from the Palo Alto Airport would be located approximately three miles southeast. As with the 2017 EIR, future development would be required to comply with policies L-10.3 and N-6.12 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure NOISE-1b, which would reduce impacts from airport or heliport noise to a less than significant level, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

RAILWAY NOISE

As discussed in the 2017 EIR, with only one single railway alignment through the city, railway operations (primarily Caltrain pass-bys) are not anticipated to notably increase community noise levels, except in the immediate vicinity of the rail lines. However, the 2017 EIR determined that since a definitive assessment of operations increases cannot be determined, future railway operations could potentially cause the L_{dn} to increase by five dB or more in an existing residential area. Since the proposed HEU would facilitate an increased number of units

along Alma Street where Caltrain runs parallel, impacts could potentially be significant. However, future development would be required to comply with policies N-6.11 and N-6.14 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure NOISE-1c, which would reduce impacts from railway noise to a less than significant level, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

OPERATIONAL NOISE IMPACTS

As discussed in the 2017 EIR, development would have the potential to receive noise from both highways and major arterials, and certain areas would require special noise-insulating features or construction techniques. Project-level acoustical analyses, at a minimum, would need to examine portions of individual housing sites nearest to major transportation corridors to measure current, 24-hour ambient noise levels and determine appropriate site design and/or construction techniques for noise attenuation. Future development facilitated by the proposed HEU would be required to conduct project-level acoustical analysis pursuant to Section 18.42.190 of the PAMC, and would be required to comply with policies N-6.1, 6.2, and 6.6 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure NOISE-1a of the 2017 EIR, which would reduce impacts on interior noise to a less than significant level, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan.

The project allows for higher density/intensity land uses in some areas of Palo Alto than currently permitted, leading to additional vehicle trips on area roadways. Under full buildout of the project, an estimated 665 new units compared to buildout in the 2030 Comprehensive Plan would be added to Palo Alto. By generating new vehicle trips, new development would incrementally increase the exposure of land uses along roadways to traffic noise. Development facilitated by the project would increase vehicle trips in Palo Alto, depending on the location and intensity of individual projects. As discussed under Section 3, *Air Quality*, the proposed HEU would increase residential vehicle trips from 2015 conditions by 16.2 percent. It is unlikely that a vehicle trip growth of 16.2 percent would result in a 100 percent increase in traffic volumes on a given roadway segment. When analyzing roadway vehicle trips, a three dBA increase in noise is considered noticeable. A 40 percent increase in trips equates to a noise increase of less than 1.5 decibels. A 1.5 dBA increase in noise would not be perceptible, and the increase in traffic volumes on any given roadway segment is expected to be below 40 percent. A doubling of traffic volumes would be required to reach the threshold of noticeability (a 3-dba increase in noise levels). A doubling of traffic volumes on a roadway (i.e., a 100 percent increase) is not anticipated under the project, considering trips are only anticipated to increase by 16.2 percent. Traffic volumes on streets would not increase by 40 percent on average, and therefore increases in traffic noise would be less than perceptible. Increases in roadway noise would be less than significant generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

LONG-TERM OPERATIONAL NOISE IMPACTS

As discussed in the 2017 EIR, zoning changes could result in noise level increases such that L_{dn} would increase by three dB, causing the L_{dn} in a residential area to exceed 60 dBA L_{dn}. The proposed rezoning that would occur under the proposed HEU would allow for increased residential density in RM-20, RM-30, CN, CC, and CS zones, and would allow for residential uses in non-residential zones such as ROLM and GM zones. Therefore, as with the 2017 EIR, impacts would be potentially significant. However, future development would be required to comply with policies N-6.1, 6.2, and 6.6 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measures NOISE-2 and NOISE-3 of the 2017 EIR, which would reduce impacts from long-term operational noise to a less than significant level, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

As discussed in the 2017 EIR, groundborne vibration can be related to short-term impacts from construction activities, on-going impacts related to operation, or on-going impacts related to rail pass-bys.

CONSTRUCTION VIBRATION IMPACTS

Since the proposed HEU would include 665 more residential units compared to Scenario 6 of the 2017 EIR, vibration resulting from construction activities could occur more frequently; however, the intensity of vibration would be similar as analyzed previously as the type of equipment anticipated would be similar. Overall, vibration impacts related to construction would be short-term, temporary, and generally restricted to the areas in the immediate vicinity of active construction equipment. Methods to reduce vibration during construction would include the use of smaller equipment, use of well-maintained equipment, use of static rollers instead of vibratory rollers, and drilling of piles as opposed to pile driving. Methods to reduce human impacts of vibration from construction include limitations on construction hours and/or guidelines for the positioning of vibration-generating construction equipment. Construction would be localized and would occur intermittently for varying periods of time. Because specific, project-level information is not available at this time, it is not possible to quantify construction-related vibration impacts at specific sensitive receptors. Future development requiring discretionary approval would be required to undergo individual review to ensure construction vibration impacts are reduced. Nonetheless, vibration impacts could be potentially significant and construction of future development would be required to comply with policies N-6.3, 6.11, and 6.14 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measures NOISE-5a and NOISE-5b of the 2017 EIR, which would reduce construction-related vibration impacts to a less than significant level, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

OPERATIONAL VIBRATION IMPACTS

Future development would have a significant environmental effect involving operational vibration if it would increase the risk of harm to surrounding properties from such vibrational hazards. Since operation of residential housing development would not involve activities that would result in substantial vibration levels, such as use of heavy equipment or machinery, the project would not have any known environmental impact involving operational vibration. Additionally, future development would be required to comply with Section 18.42.190 of the PAMC which contains restrictions regarding the generation of vibration that is perceptible without instruments at the lot line of the receiving property. Therefore, impacts would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

RAILWAY PASS-BY VIBRATION IMPACTS

CEQA is concerned with the impacts of a project on the environment, and not the impacts of the environment on a project. A project would not have a significant environmental effect involving railway pass-by vibration, unless the project would increase the risk of harm to surrounding properties from such vibrational hazards. Therefore, the project would not have any known environmental impact involving railway pass-by vibration.

Even if CEQA were concerned with impacts of the environment on projects, the impact would be less than significant. The 2017 EIR states that Scenario 6 may result in long-term vibration impacts if sensitive land uses were allowed to be developed in proximity to existing railways. Since the proposed HEU would include 665 more residential units compared to Scenario 6 of the 2017 EIR, it would place more sensitive receptors in proximity to existing railways. These additional receptors would be exposed to similar vibration levels as considered in the 2017 EIR. While vibration impacts related to rail pass-bys would be short-term, temporary, and generally restricted to the areas in the immediate vicinity of a railway, vibration effects from on-going rail pass-bys could be objectionable. These vibration effects can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels. Vibration from rail pass-bys rarely reaches the levels that can damage structures, but groundborne vibration and groundborne noise can reach perceptible and audible levels in buildings that are close to railways. As such, appropriate setbacks, buffers, and/or other measures can largely eliminate these impacts since these basic techniques are particularly effective approaches to avoid vibration impacts. However, individual project review would still be needed to ensure appropriately reduced vibration impacts arising from rail pass-bys. Future development would also be required to comply with policies N-6.3, 6.11, and 6.14 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measures NOISE-5a and NOISE-5b of the 2017 EIR, which would reduce railway pass-by vibration impacts to a less than significant level, generally the same as the impact for the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

As discussed in the 2017 EIR, the City of Palo Alto owns and operates the Palo Alto Airport (KPAO), a relatively small public air facility which primarily serves single-engine, general aviation (GA) aircraft. At the nearest points within city limits, Palo Alto is located approximately 2.6 miles to the west of Moffett Federal Airfield (KNUQ), 6 miles to the southeast of San Carlos Airport (KSQL), 10 miles to the northwest of the San Jose International Airport (SJC), 15 miles to the southeast of San Francisco International Airport (SFO), and 17 miles to the south of Oakland International Airport (OAK) (City of Palo Alto 2017a). As shown in Figure 5 of the Palo Alto Airport CLUP, none of the housing inventory sites are located within the airport's 55 to 70 CNEL noise contours, and therefore would not exceed the "Normally Acceptable" noise levels for compatibility for those land uses. Nonetheless, as with the 2017 EIR, future development would be required to comply with policies L-10.3 and N-6.12 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure NOISE-1b, which would reduce impacts from airport or heliport noise to a less than significant level. Therefore, impacts would be less than significant with mitigation, and would be generally the same as the impact for the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would result in less than significant impacts regarding noise and vibration with implementation of policies adopted in compliance with Mitigation Measures NOISE-1a through NOISE-1c, NOISE-2, NOISE-3, NOISE-4a and NOISE-4b, and 5a and 5b of the 2017 EIR. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

14 Population and Housing

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	EIR Pages 4.11-5 through 4.11-10	No	No	No	Yes
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	EIR Pages 4.11-10 through 4.11-13	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.11, *Population and Housing*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to population and housing growth. The 2017 EIR found that Scenario 6 of the 2030 Comprehensive Plan could increase the total population from 65,685 persons in 2014 to 79,765 persons in 2030, resulting in an addition of 2,665 persons or a 3.34 percent increase from ABAG projections. However, the 2017 EIR concluded that the exceedance of ABAG projections is intended to help to lower the jobs-to employed-resident ratio by providing more local housing opportunities, thereby helping to alleviate the need for workers to commute to Palo Alto from other areas of the region. Therefore, the 2030 Comprehensive Plan would not directly or indirectly induce substantial population growth and impacts would be less than significant.

The 2017 EIR determined that the 2030 Comprehensive Plan would not displace a substantial number of existing housing or people or necessitate the construction of replacement housing elsewhere since the 2015-2023 Housing Element included policies and programs that protect existing residents, neighborhoods, and housing. Additionally, the 2030 Comprehensive Plan would not create a substantial imbalance between employed residents and jobs, and impacts would be less than significant.

PROJECT-SPECIFIC IMPACTS

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

For the purposes of this analysis, buildout under the proposed HEU would add up to 6,665 new residential units in the city by the year 2031, or approximately 665 residential units more than what was analyzed under Scenario 6 of the Comprehensive Plan EIR. Based on the estimated number of 2.51 residents per household, the additional 665 units compared to Scenario 6 would lead to an increase of approximately 1,670 new residents during the housing element cycle 2023 to 2031 assuming all of the estimated 665 units are built (DOF 2022).

Although the proposed HEU would increase residential units compared to Scenario 6, the State requires that all local governments adequately plan to meet the housing needs of their communities. Given that the State is currently in an ongoing housing crisis due to an insufficient housing supply, the additional units under the proposed project would further assist in addressing the existing crisis and meeting the housing needs of the City's communities. Furthermore, the proposed HEU would first be submitted to the HCD for review and approval to ensure that it would adequately address the housing needs and demands of the city. Approval by the HCD would ensure that population and housing growth under the proposed HEU would not be substantial or unplanned.

Additionally, growth under the proposed HEU would be concentrated in locations where such development is encouraged by adopted plans due to their proximity to transit and transportation corridors as well as located near commercial uses and services and on underutilized sites. The proposed HEU would facilitate infill growth, promote housing in close proximity to employment opportunities, and support regional planning efforts.

Lastly, this analysis is conservative because it assumes a maximum buildout scenario. The project's actual contribution to population growth may be less than estimated. In addition, the project would not involve the extension of roads or other infrastructure that could indirectly lead to population growth. The city is mostly developed and is supported by existing public services and infrastructure which are sufficient to serve the additional housing units. Therefore, the project would not result in substantial unplanned population growth, either directly or indirectly, and impacts would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

"Substantial" displacement would occur if the proposed project would displace more residences than would be accommodated through growth facilitated by the project. The goal of the proposed project is to accommodate and encourage new residential development in Palo

Alto. A portion of the housing units would be developed at a density range that could accommodate low and very low-income housing as required to meet the 6th Cycle RHNA. Development under the proposed HEU would result in 665 more residential units compared to Scenario 6 of the 2017 EIR. The proposed buildout, in addition to existing and planned housing projects, would result in an overall increase in available housing which exceeds the City's RHNA requirements. Therefore, overall, the proposed HEU would add to the City's housing stock to meet housing goals.

On an individual site basis, it is possible that some redevelopment projects could result in displacement of current residents. However, the proposed HEU includes policies and programs to reduce displacement impacts. For example, Program 2.2 addresses the potential loss of rental housing and displacement of lower- and moderate-income households due to new development and ensures the retainment of a stock of affordable housing through a Below Market Rate (BMR) Program, while Program 6.6 of the proposed HEU aims to provide fair housing and Implementing Objective 6 serves to institute tenant protections to prevent anti-displacement.

Therefore, although the proposed HEU would provide additional housing in excess of RHNA requirements and Scenario 6, there are policies and programs in place to reduce displacement resulting from the proposed project, and impacts would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not induce substantial unplanned population growth or displace substantial numbers of existing people and housing, and impacts would be less than significant. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page left intentionally blank.

15 Public Services

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
a. Fire protection?	EIR Page 4.12-9 through 4.12-11	No	No	No	N/A
b. Police protection?	EIR Page 4.12-13 through 4.12-14	No	No	No	N/A
c. Schools?	EIR Page 4.12-2 through 4.12-7	No	No	No	N/A
d. Parks?	EIR Pages 4.12-17 through 4.12-20	No	No	No	N/A
e. Other public facilities?	EIR Pages 4.12-22 through 4.12-24	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.12, *Public Services and Recreation*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to public services. The 2017 EIR states that the 2030 Comprehensive Plan would not result in an adverse physical impact associated with the construction of additional school facilities, fire protection facilities, police facilities, and libraries. Impacts would be less than significant. However, the 2017 EIR found that the 2030 Comprehensive Plan could result in an adverse physical impact from the construction of additional parks and recreation facilities since Scenario 6 would require new parkland to accommodate new development and meet the City's parkland standard. Therefore, implementation of mitigation measure PS-7 would be required to reduce impacts to a less than significant level.

Table 24 lists mitigation measures related to public services and recreation in the 2017 EIR.

Table 24 2017 EIR Mitigation Measures: Public Services and Recreation

Mitigation Measure #	Mitigation Text
Impact PS-7: Implementation of the proposed Plan would result in an adverse physical impact from the construction of additional parks and recreation facilities in order to maintain acceptable performance standards. (Significant and Mitigable)	
PS-7	To address the potential physical impacts of park construction/improvement, the Comprehensive Plan Update and/or the Parks, Trails, Natural Open Space and Recreation Master Plan shall incorporate policies addressing the following topic: ▪ Evaluation and mitigation of construction impacts associated with park and recreational facility creation and expansion.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACTS

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

To meet increased demand under the 2030 Comprehensive Plan, the 2017 EIR found that the City of Palo Alto Fire Department (PAFD) would likely increase staffing for EMS delivery and new apparatus and fire station improvements or expansions, but would not anticipate the need to construct a new station, as development would be located in existing urbanized areas already served by existing PAFD stations. Furthermore, the city's approved infrastructure plan includes the replacement of two fire stations (City of Palo Alto 2017a). Fire Station 3 was replaced in March 2020 to meet the most current California Building Codes (CBC), Essential Services Building Seismic Safety Act, American with Disabilities Act (ADA), National Fire Protection Association (NFPA), and OSHA standards, and Fire Station 4 is currently underway and will be completed in December 31, 2025 (City of Palo Alto 2022e).

Although the proposed HEU would increase the number of residential units by 665 compared to Scenario 6 of the 2017 EIR, future development would be facilitated on non-vacant and underutilized sites in urbanized areas such as along El Camino Real, the California Avenue area, the Downtown area, and in the GM/ROLM zones which are already served by existing fire stations. Future remodeling or expansion of PAFD facilities to accommodate new equipment would not be needed to specifically to serve the additional residential units, which would be added incrementally in various locations in the city and served by more than one fire station. Therefore, impacts would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Police protection in the city is provided by the Palo Alto Police Department (PAPD). As discussed under Impact (a), although the proposed HEU would increase the number of residential units by 665 compared to Scenario 6 of the 2017 EIR, future development would be facilitated on non-vacant and underutilized sites in urbanized areas such as El Camino Real, the California Avenue area, the Downtown area, and in the GM/ROLM zones, which are already served by an existing police station. The PAPD has already indicated that the existing police station is inadequate to accommodate current and future needs, and the city is currently constructing a new Public Safety Building (PSB) at 250 Sherman Avenue which will serve as the new headquarters of the Police Department, the Fire Department and the Office of Emergency Services and house the city's dispatch operation. Future construction or expansion of the PAPD facility would not be a result specifically of the additional residential units and would be subject to separate project-level CEQA review in order to identify potential environmental impacts and mitigation measures as needed. As such, with the new police station, police services would be adequate to accommodate current and future needs of the city. Although additional units would result in varying amounts of housing, population, and employees, the HEU identifies sizes for rezoning and directs new housing construction to sites and areas of Palo Alto that are already urbanized, all of which are currently served by the PAPD and within the city limit of Palo Alto. Therefore, impacts would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Palo Alto is served by the Palo Alto Unified School District (PAUSD), which consists of 12 primary schools, three middle schools, two high schools, and an adult school. In general, kindergarten enrollment has been increasing within PAUSD, however, projections forecast a decline in enrollment district-wide across a 10-year period based upon historical enrollment trends and projected new development (DecisionInsite 2021).

As discussed in the 2017 EIR, Scenario 6 would result in enrollment that would exceed the capacity of existing PAUSD elementary schools, middle schools, and high schools. Since the proposed HEU would include 665 more units compared to Scenario 6, the proposed HEU would also result in enrollment that would exceed the capacity of existing PAUSD schools. Although the increased enrollment would add stress to schools in PAUSD, this growth would occur over a period of approximately 8 years from 2023 to 2031, resulting in a gradual increase in demand for school service in PAUSD. Additionally, in order to offset a project's potential impact to

schools, school impact fees would be charged to new residential and commercial development that occurs under the proposed project consistent with State law. Government Code 65995 (b) establishes the base amount of allowable developer fees a school district can collect from development projects located within its boundaries. The fees obtained by school districts that serve Palo Alto are used for construction or reconstruction of school facilities. Future development facilitated by the proposed project would be required to pay school impact fees which, pursuant to Section 65995 (3) (h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998), are "deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization."

Facility expansions in the PAUSD would require project-specific environmental analysis under CEQA to address site-specific environmental concerns. Therefore, existing laws and regulations that require funding for the provision or expansion of new school facilities would offset impacts from new residential development, and impacts would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Refer to Section 16, *Recreation.*

e. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The 2017 EIR states that while an overall increase in residents is expected, the growth would occur incrementally throughout the 15-year time horizon; therefore, potential impacts from increased demand from library services would not occur in the immediate future. Similarly, growth induced from the proposed HEU would occur incrementally over eight years from 2023 to 2031. Pursuant to Chapter 16.58 of the PAMC, future development would be required to contribute impact fees to offset potential impacts from increased demand in library facilities and to ensure library facilities remain adequate. Therefore, impacts would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not result in the construction of new or physically altered public facilities, and impacts would be less than significant. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

16 Recreation

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	EIR Page 4.12-17 through 4.12-20	No	No	No	Yes
b. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	EIR Page 4.12-17 through 4.12-20	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

The 2017 EIR analyzes recreation in Section 4.12, *Public Services and Recreation*, and impacts are summarized above under Section 14, *Public Services.* The Comprehensive Plan EIR concludes that impacts regarding public services would be significant but mitigable with incorporation of mitigation measure PS-7, which would include new policies and programs addressing funding, community input, and environmental review for property acquisition and park construction/improvement.

PROJECT-SPECIFIC IMPACTS

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The City of Palo Alto has adopted a policy of 4 acres of neighborhood and district parkland for every 1,000 residents and a parkland dedication standard of 5 acres of parkland (including open space) for every 1,000 residents. Based on the existing 2022 population of 67,473 and the adopted parkland standard, Palo Alto should currently provide 269.9 acres of neighborhood

and district parkland.[12] There is an existing total of 173.4 acres of neighborhood and district parkland, 96.5 acres below the adopted policy.

The proposed HEU would increase the number of residential units by 665 compared to Scenario 6 of the 2017 EIR, and would therefore increase the demand for parks and recreational facilities and would require more acres of new parkland to meet the city's requirement that new residential development provide 5 acres of parkland per 1,000 residents. As noted above, the city currently provides less parkland than required to meet its adopted policy for neighborhood and district parkland. Nonetheless, future development would be required to comply with Chapter 21.50 of the PAMC which outlines requirements for parkland dedication or in lieu fees payment, and the ongoing master planning effort for the parks, trails, and open space system would develop strategies for the addition and improvement of park land. Because the exact locations of future residential or parkland development are not known at this time, it would be speculative to assess the physical environmental impacts associated with the construction of future park facilities. However, given the need to new parkland under the proposed HEU, construction or expansion of new parks or recreation facilities would be expected and the impact would be potentially significant. However, future development would be required to comply with Policy N-1.13 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure PS-7 of the 2017 EIR, which would address the potential physical impacts of park construction and improvement and reduce impacts to a less than significant level, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not result in the substantial deterioration of existing neighborhood and regional parks. The proposed HEU could result in the construction or expansion of new parks or recreational facilities and this impact could be potentially significant. However, Policy N-1.13 adopted in compliance with Mitigation Measure PS-7 would reduce impacts to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

[12] 67,473 (existing population) / 1,000 = 67.473 x 4 (number of acres per 1,000 residents of parkland) = 269.89

17 Transportation

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	EIR Pages 4.13-38 through 4.13-48	No	No	No	No
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	EIR Pages 4.13-18 through 4.13-30	No	No	No	No
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	EIR Pages 4.13-49 through 4.13-51	No	No	No	No
d. Result in inadequate emergency access?	EIR Pages 4.13-51 through 4.13-52	No	No	No	No

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.13, *Transportation and Traffic*, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to traffic and the circulation system. The 2017 EIR analyzes transportation impacts using the level of service (LOS) methodology and found that impacts would be significant and unavoidable since there would be six intersections with a substandard LOS and there would be a significant impact during at least one of the peak hours. Although implementation of mitigation measures TRANS-1a through 1e would mitigate the projected impact to a less than significant level, Scenario 6 would still result in some impacted intersections, both because of growth in Palo Alto and regional growth. Therefore, the mitigation measures would reduce, but not eliminate, impacts at five of the six study intersections analyzed in the 2017 EIR. Additionally, the 2030 Comprehensive Plan was found to cause a freeway segment or ramp to drop below its level of service standard, or deteriorate operations that already operate at a substandard level of service since mitigation measures TRANS-1a and TRANS-3b would reduce but not eliminate the impact under Scenario 6 on four freeway segments. Although mitigation measures TRANS-3a and 3b would be required, impacts would remain significant and unavoidable. The 2017 EIR found that the 2030 Comprehensive Plan would not cause a roadway segment to drop below its level of service standard or deteriorate operations that already operate at a substandard level of service.

The 2017 EIR concluded that the 2030 Comprehensive Plan would not impede the function of planned bicycle or pedestrian facilities since compliance with existing City regulations and procedures would maintain existing and may improve the function of planned bicycle and pedestrian facilities. Furthermore, the 2030 Comprehensive Plan would not increase demand for pedestrian and bicycle facilities as well as transit services that cannot be met by existing or planned facilities or services. The 2030 Comprehensive Plan would also not result in inadequate emergency access and impacts would be less than significant.

The 2017 EIR determined that the 2030 Comprehensive Plan would create the potential demand for through traffic to use local residential streets and would create an operational safety hazard since growth under Scenario 6 could result in increased congestion, increasing the potential for drivers to divert onto local streets and therefore causing a potential for increase in accidents onto local streets. Therefore, mitigation measures TRANS-8 and TRANS-9 would be required to reduce impacts to a less than significant level.

Table 25 lists the 2017 EIR's mitigation measures related to transportation. Pursuant to Public Resource Code, Section 21099 (b)(2), traffic congestion, while potentially an inconvenience to drivers, is not itself an environmental impact. Therefore, issues related solely to traffic congestion are outside the scope of CEQA analysis.

Table 25 2017 EIR Mitigation Measures: Transportation and Traffic

Mitigation Measure #	Mitigation Measure Text
Impact TRANS-1: Implementation of the project would cause an intersection to drop below its motor vehicle level of service standard, or deteriorate operations at representative intersections that already operate at a substandard level of service. (Significant and Unavoidable*)*	
TRANS-1a	Adopt a programmatic approach to reducing traffic with the goal of achieving no net increase in peak period motor vehicle trips from new development, with an exception for uses that directly contribute to the neighborhood character and diversity of Palo Alto (such as ground floor retail and below market rate housing). The program should, at a minimum: ▪ Require new development projects to prepare and implement a Transportation Demand Management (TDM) Plan to achieve the following reduction in peak period motor vehicle trips from the rates included in the Institute of Transportation Engineers' Trip Generation Manual for the appropriate land use category. These reductions are deemed aggressive, yet feasible, for the districts indicated. ▫ 45 percent reduction in the Downtown district ▫ 35 percent reduction in the California Avenue area ▫ 30 percent reduction in the Stanford Research Park ▫ 30 percent reduction in the El Camino Real Corridor ▫ 20 percent reduction in other areas of the city. TDM Plans must be approved by the City and monitored by the property owner on an annual basis. The Plans must contain enforcement mechanisms or penalties that accrue if targets are not met. ▪ Require new development projects to pay a Transportation Impact Fee which will be partially used to reduce peak period motor vehicle trips citywide.
TRANS-1b	Study the feasibility of unbundled parking for office, commercial and multi-family residential development (including senior housing developments) that are well-served by transit and demonstrated walking and biking connections, including senior housing developments.

Mitigation Measure #	Mitigation Measure Text
TRANS-1c	Include policies in the Comprehensive Plan to ensure collaboration with regional agencies and neighboring jurisdictions, and identification and pursuit of funding for rail corridor improvements and grade separation. Policies shall support grade separation of rail crossings along the rail corridor as a City priority and encourage studies and outreach necessary to advance grade separation of Caltrain to become a "shovel ready" project.
TRANS-1d	Engage in regional transportation planning and advocate for specific transit improvements and investments, such as Caltrain service enhancements and grade separations, Dumbarton Express service, enhanced bus service on El Camino Real with queue jumping and curbside platforms, and additional VTA bus service.
TRANS-1e	Encourage the PAUSD to analyze decisions regarding school assignments to reduce peak period motor vehicle trips to and from school sites.
Impact TRANS-3: Implementation of the project would cause a freeway segment or ramp to drop below its level of service standard, or deteriorate operations that already operate at a substandard level of service. (Significant and Unavoidable)	
TRANS-3a	The City shall require new development projects to prepare and implement TDM programs, as described in TRANS-1a. TDM programs for worksites may include measures such as private bus services and free shuttle services to transit stations geared towards commuters.
TRANS-3b	Include policies in the Comprehensive Plan that advocate for efforts by Caltrans and the Valley Transportation Authority to reduce congestion and improve traffic flow on existing area freeway facilities consistent with Statewide GHG emissions reduction initiatives. Policies shall support the application of emerging freeway information, monitoring, and control systems that provide non-intrusive driver assistance and reduce congestion. Policies shall support, where appropriate, the conversion of existing traffic lanes to exclusive bus and high-occupancy vehicle (HOV) lanes on freeways and expressways, including the Dumbarton Bridge, and the continuation of an HOV lane from Redwood City to San Francisco.
Impact TRANS-8: Implementation of the project would create the potential demand for through traffic to use local residential streets. (Significant and Mitigable)	
TRANS-8	Include policies in the Comprehensive Plan to identify specific improvements that can be used to discourage non-local drivers from using local, neighborhood streets to bypass traffic congestion on arterials.
Impact TRANS-9: Implementation of the project would create an operational safety hazard. (Significant and Mitigable)	
TRANS-9	Implement Mitigation Measure TRANS-8.

Source: City of Palo Alto 2016

REGULATORY SETTING

SENATE BILL 743 AND VEHICLE MILES TRAVELED

Senate Bill (SB) 743 was signed into law by Governor Brown in 2013 and directed the State Office of Planning and Research (OPR) to establish new criteria for determining the significance of transportation impacts under the California Environmental Quality Act (CEQA). SB 743 requires the new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." It also states that alternative measures of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

In January 2018, OPR transmitted its proposed CEQA Guidelines implementing SB 743 to the California Natural Resources Agency for adoption, and in January 2019 the Natural Resources

Agency finalized SB 743 updates to the CEQA Guidelines. SB 743 changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (Public Resource Code, § 21099 (b)(2)). In addition to new exemptions for projects consistent with specific plans, the CEQA Guidelines replaced congestion-based metrics, such as auto delay and level of service (LOS), with VMT as the basis for determining significant impacts, unless the Guidelines provide specific exceptions.

The 2017 EIR examined program-level transportation impacts using the level of service (LOS) methodology and found that all such impacts would be significant and unavoidable. Although the 2017 EIR analyzes VMT, VMT was not the basis for a standard of significance used and no impact finding regarding VMT was made. Nonetheless, Scenario 6 was found to result in the lowest VMT per capita (including employment and residential VMT) of 30.8 compared to other scenarios.

PROJECT-SPECIFIC IMPACTS

This analysis is based upon the VMT Analysis prepared for the HEU by Hexagon Transportation Consultants, Inc. (Hexagon) in January 2023 (Appendix A).

IMPACT ANALYSIS

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The 2017 EIR used level of service (LOS) as its performance criteria while analyzing the city's roadway system. However, to implement SB 743, the CEQA Guidelines have been updated to change the criteria for determining what constitutes a significant traffic related environmental impact to rely upon quantification of VMT instead of LOS. The proposed HEU would be consistent with the Transportation Element of the 2030 Comprehensive Plan since it would place housing near transit, services, and jobs, which would reduce the usage of single-occupancy vehicles and encourage walking, bicycling, and using alternative modes of transportation.

Bicycling would be encouraged through the Bicycle and Pedestrian Transportation Plan which aims to improve bicycling and pedestrian conditions and increase bicycling and walking rates within Palo Alto (City of Palo Alto 2012). Future residents would be able to benefit from goals, policies, and improvements associated with the Bicycle and Pedestrian Transportation Plan which would reduce VMT and reliance on single-occupancy vehicles.

Future development proposals for individual projects would be subject to adopted development guidelines, including standards that govern VMT, transportation, GHG, and associated issues. Impacts identified for development facilitated by the plan would be addressed through the project approval process, including Planning and Transportation Commission (PTC) review as well as design review specific to potential impacts of that project. Because the proposed HEU does not include modifications to the existing transportation

network and individual future developments must be designed consistent with applicable bicycle and pedestrian facility requirements, the proposed HEU would not conflict with the City's existing circulation, bicycle, or pedestrian plans. Impacts to transit, roadway, bicycle, and pedestrian facilities would be less than significant, and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3(b) requires specific consideration of a plan or project's transportation impacts based on VMT. This implements SB 743, which eliminates level of service as a basis for determining significant transportation impacts under CEQA and requires a different performance metric: VMT. With this change, the State shifted the focus from measuring a plan or project's impact upon drivers (LOS) to measuring the impact of driving (VMT) on achieving its goals of reducing GHG emissions, encouraging infill development, and improving public health through active transportation.

Hexagon Transportation Consultants, Inc. prepared a VMT Analysis (Appendix A) for the proposed HEU to determine whether it would generate a significant VMT impact. The City adopted a VMT threshold for residential projects on June 15, 2020. A residential project that exceeds a level of 15 percent below existing (baseline) County home-based VMT per resident may indicate a significant transportation impact.

The City of Palo Alto Travel Forecasting Model (PA model) was used to estimate VMT for the proposed project. According to the PA model, the countywide average VMT per resident for residential development is 12.90 miles. Based on the Palo Alto VMT Criteria, a project generating a VMT that is 15 percent or more below this value, or 10.97 daily vehicle miles per resident, would have a less-than-significant VMT impact. Based on the results of the PA model, as shown in Table 26, the project would have a projected VMT rate of 9.28 miles per resident, lower than the significance threshold of 10.97 miles, since the proposed project would concentrate new residential units in urbanized areas in proximity to transit, jobs, and services compared to other parts of the County. Therefore, this impact would be less than significant, and further analysis is not warranted.

Table 26 Vehicle Miles Traveled Analysis Summary

VMT Metric	Baseline VMT Rate	Significance Threshold	Project VMT Rate	Resulting Significance
VMT per resident (Countywide baseline)	12.90	10.97	9.28	Less than significant

Sources: Hexagon Transportation Consultants, Inc 2023; Appendix A

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

In the absence of specific project applications to review, analyzing impacts based on project design features would be wholly speculative. CEQA does not require public agencies to speculate. Adoption of the proposed HEU analyzes the amount of new housing units the City will accommodate during the 2023-2031 planning period and sets goals and policies for how this housing is implemented. It does not grant entitlements for any specific project or future development. Thus, the plan for new housing and the goals and policies needed to achieve that housing do not have a specific transportation safety impact or hazard. The proposed project would not include hazardous geometric design features or incompatible uses. Each housing application would be evaluated at the project specific level and undergo design review which would ensure design features would be in accordance with all applicable City standards to minimize design hazards. Furthermore, future projects facilitated would be infill projects or would include increasing density and height of existing sites, and therefore would not involve the creation of new roadways or intersections or incompatible uses within Palo Alto**.** While new intersections of existing local streets with proposed new streets internal to these sites may be created if these sites would be developed, they would be subject to the project-level review processes described above to ensure hazards from design features or incompatible uses are not created. Therefore, impacts from hazardous design features or incompatible uses would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan as analyzed in the 2017 EIR. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project result in inadequate emergency access?

Similar to Scenario 6 as discussed in the 2017 EIR, traffic increases would contribute to congestion on freeway segments, which could contribute to cumulative traffic conditions that have the potential to impede emergency vehicle access on US 101. However, isolated instances of emergency vehicles being impeded vary on a case-by-case basis and more information would be needed to determine the precise problem causing a particular event. It would be speculative to try to determine how future traffic associated with development in Palo Alto would cumulatively contribute to such events. In addition, approximately 15 percent of the traffic signals maintained by the City of Palo Alto are equipped with emergency vehicle preemption devices. The city will continue to install traffic signal preemption devices where appropriate.

Emergency vehicles have the right to use lights and sirens to allow them to bypass congestion, and all other vehicles are required by State law to pull over to allow emergency vehicles to pass. Additionally, future development would be required to comply with comply with basic building designs and standards for residential buildings as mandated by the Palo Alto Fire Code pursuant to PAMC Chapter 15.04. Future projects would be required to incorporate all applicable design and safety requirements as set forth in the most current adopted building codes and fire and life safety standards. Additionally, as discussed under Section 9, *Hazards and Hazardous Materials*, the proposed HEU would not impair implementation of or physically

interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, impacts would be less than significant and would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan as analyzed in the 2017 EIR. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not conflict with a program, plan, ordinance or policy addressing the circulation system; result in a significant VMT impact; substantially increase hazards due to a geometric design feature or incompatible use; or result in inadequate emergency access. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

18 Tribal Cultural Resources

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	EIR Pages 4.4-2 through 4.4-5	No	No	No	Yes
b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?	EIR Pages 4.4-7 through 4.4-9	No	No	No	Yes

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

The 2017 EIR does not specifically discuss impacts to tribal cultural resources or compliance with Assembly Bill 52 (AB 52), which was signed into law in 2014. AB 52 expanded CEQA by defining a new resource category, "tribal cultural resources," and requires lead agencies to complete consultation with California Native American Tribes regarding proposed projects, because it became effective after the issuance of the Notice of Preparation for 2017 EIR. However, as described in Section 5, *Cultural Resources*, of this Addendum, the 2017 EIR incorporated required mitigation measures CULT-1 and CULT-3 for procedures in the event archaeological resources, tribal resources, and human remains are discovered during construction.

ASSEMBLY BILL 52 OF 2014

AB 52 establishes that "A project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (PRC Section 21084.2). It further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3).

PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources as "sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe" and are:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying these criteria, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. Under AB 52, lead agencies are required to "begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the process are those that have requested notice of projects proposed within the jurisdiction of the lead agency.

The requirements of AB 52 do not apply to the proposed project because it falls under a previously certified EIR. Nonetheless, the City of Palo Alto conducted tribal consultation in accordance with AB 52 as well as in accordance with Senate Bill 18. The City sent out letters via certified mail on September 29, 2022, to the following eight Native American Tribes that that were identified by the NAHC as being traditionally and culturally affiliated with the geographic area:

- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- Northern Valley Yokuts Tribe
- The Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band
- Tamien Nation

Under AB 52, Native American tribes typically have 30 days to respond and request further project information and formal consultation. Under SB 18, Native American tribes have 90 days to respond and request further project information and request formal consultation. To date, the City of Palo Alto has not received responses requesting consultation under AB 52 or SB 18 from the Tribes. AB 52 and SB 18 correspondence is included in Appendix C.

IMPACT ANALYSIS

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

b. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?

No specific tribal cultural resources were identified in the City of Palo Alto as a result of consultation with the Tribes. Similar to what was assumed in the 2017 EIR, although development under the proposed HEU would occur on non-vacant and underutilized sites in previously disturbed areas, ground-disturbing activities such as earthmoving and excavation could still potentially damage and/or destroy unrecorded tribal cultural resources in subsurface soils within the housing sites. Adherence to the requirements of AB 52 would require Tribal consultation with local California Native American Tribes prior to implementation of project activities subject to CEQA. AB 168 would require Tribal consultation with local California Native American Tribes prior to implementation of project activities subject to SB 35. In compliance with AB 52, a determination of whether project-specific substantial adverse effects on tribal cultural resources would occur along with identification of appropriate project-specific avoidance, minimization, or mitigation measures would be required. Due to the programmatic nature of the proposed HEU it is not possible to fully determine impacts of specific projects on specific sites; however, no tribal cultural resources were identified during consultation. Future projects subject to CEQA and SB 35 would require project-specific tribal cultural resource identification and consultation, and the appropriate avoidance, minimization, or mitigation would be incorporated. Project-specific tribal cultural resource consultation will occur when specific projects are implemented, and consultation conducted pursuant to the requirements of AB 52. Future development would also be required to comply with policies L-7.16 through 7.18 of the 2030 Comprehensive Plan, adopted in compliance with Mitigation Measure CULT-3 of the 2017 EIR, which would reduce impacts on tribal cultural resources to a less than significant level. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, development would occur in the same areas as those analyzed in the 2017 EIR. Further, future development would be required to comply with federal, State, and local regulations pertaining to tribal cultural resources as well as policies adopted in compliance with Mitigation Measure CULT-3 from the 2017 EIR, which would reduce impacts to a less than significant level. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

19 Utilities and Service Systems

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
Would the project:					
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	EIR Pages 4.14-2 through 4.14-7; 4.14-14 through 4.14-15; 4.14-18 through 4.14-19; 4.14-25 through 4.14-28; 4.14-33 through 4.14-38	No	No	No	N/A
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	EIR Pages 4.14-2 through 4.14-4	No	No	No	N/A
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	EIR Pages 4.14-10 through 4.14-16	No	No	No	N/A
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	EIR Pages 4.14-25 through 4.14-28	No	No	No	N/A
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	EIR Pages 4.14-28 through 4.14-30	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

Section 4.14, *Utilities and Service System*s, of the 2017 EIR analyzed the 2030 Comprehensive Plan's impacts related to utilities and service systems. The 2017 EIR found that sufficient water supplies from existing entitlements would be available to serve Scenario 6 and the increased demand in water would not result in the substantial physical deterioration of a water utility facility. Additionally, the 2030 Comprehensive Plan would not prompt a need to expand treatment facilities or regional water system conveyance and storage facilities in order to meet its demand. New or expanded local water distribution facilities would require permitting and review in accordance with CEQA, which would ensure environmental impacts are disclosed and mitigated. Therefore, impacts would be less than significant.

The 2017 EIR determined that the 2030 Comprehensive Plan would not exceed wastewater treatment requirements of the RWQCB or wastewater treatment capacity of the Regional Water Quality Control Plant (RWQCP). Furthermore, the 2030 Comprehensive Plan would not result in substantial physical deterioration of the RWQCP or adverse physical impacts from new or expanded wastewater utility facilities since the existing RWQCP would provide adequate capacity to meet dry weather and maximum month flows through at least 2035 and beyond. Therefore, impacts would be less than significant.

The 2017 EIR found that the 2030 Comprehensive Plan would not require or result in the construction of new stormwater facilities or expansion of existing facilities since development would be required to comply with Provision C.3 of the MRP, as well as the City's post-construction site design measures, source control measures, and stormwater treatment measures. The 2030 Comprehensive Plan would not result in a substantial physical deterioration of stormwater facilities with compliance with existing State, regional, and local regulations. Therefore, impacts would be less than significant.

The 2017 EIR determined that the 2030 Comprehensive Plan would be served by 17 different landfills with sufficient permitted capacity to accommodate the increased waste disposal needs. However, the 2017 EIR found that the 2030 Comprehensive Plan could potentially fall out of compliance with federal, State, and local statutes and regulations related to solid waste, and mitigation measure UTIL-15 would be required to reduce impacts to a less than significant level.

The 2017 EIR also analyzes impacts to energy supply and efficiency which is discussed in Section 6, *Energy*, of this document.

Table 27 lists the mitigation measures from the 2017 EIR related to utilities and service systems.

Table 27 2017 EIR Mitigation Measures: Utilities and Service Systems

Mitigation Measure #	Mitigation Text
Impact UTIL-15: Without the adoption of policies to promote recycling and conservation, the proposed Plan could potentially fall out of compliance with federal, State, and local statutes and regulations related to solid waste. (Potentially Significant and Mitigable)	
UTIL-15	To ensure that future development under Scenarios 2, 3, and 4 would comply with applicable solid waste regulations, the proposed Plan shall include policies that address the following topics: ▪ Substantial landfill diversion by 2030, and ultimately zero waste. ▪ Reduced solid waste generation. ▪ Use of reusable, returnable, recyclable, and repairable goods. ▪ Enhanced recycling and composting programs for all waste generators.

Source: City of Palo Alto 2016

PROJECT-SPECIFIC IMPACTS

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

WATER

As discussed under Threshold Question (b) below, water supply and demand for the proposed HEU would be similar to that of Scenario 6 of the 2017 EIR. The City receives 100 percent of its potable water from the SFPUC. The City does not own or operate a water treatment plant (WTP). The water purchased from the SFPUC may be treated at one or more WTPs operated by SFPUC. SFPUC treats water to meet all applicable drinking water standards. SFPUC periodically makes improvements to its WTPs in order to improve system reliability and accommodate projected growth in its regional service areas. For example, the Water System Improvement Program (WSIP) includes capacity expansion and other improvements in order to upgrade SFPUC's regional and local water systems. The WSIP also includes many projects to improve the Regional Water System distribution lines and storage reservoirs (City of Palo Alto 2017a).

Although existing local distribution lines within the city could potentially be undersized for future projects and improvements under the proposed HEU could require replacement with larger diameter pipes, potential environmental impacts that could result from pipeline improvements would be project specific. New or expanded local water distribution facilities would require permitting and review in accordance with CEQA, which would ensure environmental impacts are disclosed and addressed in the environmental analysis. Therefore, similar to Scenario 6, the proposed HEU would not result in the expansion or construction of new treatment facilities or regional water system conveyance and storage facilities in order to meet its demand and this impact would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

WASTEWATER

As discussed under Threshold Question (c), the existing RWQCP facilities would provide adequate capacity to meet dry weather and maximum month flows through at least 2035 and beyond, and that new or expanded facilities would not be needed as a result of the proposed HEU. Some aging facilities will need to be replaced, based on the treatment processes design criteria and historical performance. However, these facility upgrades and replacements are anticipated based on existing planning documents and would not be necessitated as a result of the proposed HEU. In addition, the LRFP anticipates that the existing RWQCP facilities will provide adequate capacity to meet dry weather and maximum month flows through at least 2035, assuming the same level of treatment is required. Therefore, similar to Scenario 6, the proposed HEU would not result in the expansion or construction of new wastewater facilities and this impact would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

STORMWATER

Although the proposed HEU would increase the number of residential units by 665 compared to Scenario 6 of the 2017 EIR, new future development would be required to comply with the C.3 provisions of the MRP and implement BMPs and LID features to minimize stormwater runoff impacts. In particular, during construction, future projects would be required to implement flow control BMPs to minimize potential impacts. Similar to Scenario 6, the proposed HEU does not propose the conversion of open space areas, creeks, or wetlands to impervious surfaces and would not alter the course of a stream or river. The City's Department of Public Works requires all new development projects to provide storm drain flow and detention calculations, including pre-project and post-project conditions and flow rates. On-site stormwater detention is also required as per the C.3 provisions of the MRP. In addition, per section C.3.j, future applicants would be required to complete and implement a Green Infrastructure Plan for the inclusion of low impact development drainage design into storm drain infrastructure on public and private lands, including streets, roads, storm drains, parking lots, building roofs, and other storm drain infrastructure elements (City of Palo Alto 2017a). Compliance with State and local stormwater regulations would reduce impacts to a less than significant level, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

TELECOMMUNICATIONS

The proposed HEU would require connections to existing adjacent utility infrastructure to meet the needs of future residents. Similar to Scenario 6 of the 2017 EIR, the proposed HEU would only facilitate development on non-vacant and underutilized sites in urbanized areas. Based on the availability of existing telecommunications infrastructure, construction of new telephone and cable lines would not be required, and all future development would be able to connect to

existing infrastructure. Development facilitated by the project would be required to adhere to applicable laws and regulations related to the connection to existing telecommunication infrastructure. Therefore, there would be adequate telecommunications facilities to serve the development facilitated by the project, and impacts would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

ELECTRICITY AND NATURAL GAS

As discussed in the 2017 EIR, Scenario 6 would result in a long-term increase in electrical service energy demand ranging from 10 percent to 11 percent over 2014 baseline levels within the CPAU's service territory for electrical service. This average incremental increase in electrical service demand would be less than a one percent increase per year. Although the proposed HEU would increase the number of residential units by 665 compared to Scenario 6 of the 2017 EIR, it would not include non-residential uses and therefore electricity demand would be similar to that of Scenario 6 and would result in less than a one percent increase per year. Since the proposed HEU would also facilitate development in non-vacant and underutilized sites with existing infrastructure, it is not anticipated that the construction of new electrical transmission and distribution lines would be required. Therefore, the proposed HEU would not result in the relocation or construction of new or expanded electrical facilities and impacts would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

Similarly, for the same reasons described above, the proposed HEU would not substantially increase natural gas demand compared to Scenario 6 and future development would also be subject to the City's most updated Reach Code and All-Electric Mandate which requires all-electric building design for single-family, low-rise multi-family, and non-residential development (City of Palo Alto 2022a). Therefore, the proposed HEU would not result in the relocation or construction of new or expanded natural gas facilities and impacts would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

As discussed in the 2017 EIR, the increased water demand for Scenario 6 would be approximately 13,767 acre-feet per year (AFY), and the city's Individual Supply Guarantee through 2035 is 19,118 AFY. As shown on Table 28, the additional 665 units facilitated by the proposed HEU compared to the 2017 EIR would increase water demand by approximately 43,225 gallons per day (gpd) or 48.4 acre-feet per year (AFY) in 2031 assuming full buildout. According to the city's 2020 Urban Water Management Plan (UWMP), by 2030, the city would have a water demand of 11,394 AFY and an Individual Supply Guarantee of 18,579 AFY.

Therefore, the proposed project would increase Palo Alto's estimated 2030 normal-year water demand by approximately 0.4 percent.

Table 28 Estimated Water Use for the Proposed HEU

Potential Buildout Development/Land Use	Water Generation Factor (gpd/unit) [1]	Projected Number of Housing Units	Projected Water Demand in 2031 (gpd)	Projected Water Demand in 2031 (AFY)
Multi-family residential	65	665	**43,225**	**48.4**

[1] Per unit water demand factors from Palo Alto are not available, therefore, this analysis is based water use factors provided by the East Bay Municipal Utilities District, 65 gpd/unit for a low-rise apartment.

gpd =gallons per day. AFY = acre-feet per year

According to the city's 2020 UWMP, the City of Palo Alto analyzed three different hydrological conditions to determine the reliability of water supplies for the City: average/normal water year, single dry water year, and multiple dry water year period. In each of the three hydrological conditions, the projected water demand was calculated taking into account growth in billing data, water conservation efforts, and demographics. The UWMP states that the City of Palo Alto can reliably meet the projected water demand in normal years. However, there would be a potable water supply shortfall for single dry year and multiple dry years. Under these conditions, residents would be required to reduce water usage by 30 to 50 percent depending on the length of the dry year. The San Francisco Public Utilities Commission (SFPUC) and Bay Area Water Supply and Conservation Agency (BAWSCA) are also evaluating alternative water supplies during and seeking water supplies and solutions for drought years. In addition, the City of Palo Alto has formed partnerships such as the one with Valley Water and is embarking on a One Water plan which will have dry year water supply reliability as a central tenet (City of Palo Alto 2021). The City of Palo Alto also offers many resources to help residents use water wisely, including free water surveys, conservation devices, educational programs, and rebates for appliance or landscape upgrades (City of Palo Alto 2017a). The City presents drought updates to the Utilities Advisory Commission monthly and has held numerous public meetings to update the community on the drought, responses by the State and the City, and available resources. Therefore, sufficient water supplies would be available to serve the proposed HEU during normal, single- and multiple-dry years, and impacts would be less than significant, generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

As discussed in the 2017 EIR, Scenario 6 would increase wastewater generation by 631,032 gallons per day (GPD) and this estimated worst-case increase in water flow would represent less than four percent of the existing excess dry flow capacity of 18 million gallons per day (MGD) available at the RWQCP. The Long Range Facilities Plan (LRFP) also further estimates that the RWQCP would have at least 5 MGD of excess capacity in 2062. Assuming that wastewater

generation is 80 percent of water use, the proposed HEU would increase wastewater generation by approximately 34,580 gpd.[13] This would constitute approximately 0.2 percent of the RWQCP's excess dry flow capacity and therefore the RWQCP would have sufficient capacity to accommodate the 665 additional units proposed under the HEU. Although some aging facilities will need to be replaced, based on the treatment processes design criteria and historical performance, the LRFP anticipates that the existing RWQCP facilities would l provide adequate capacity to meet dry weather and maximum month flows through at least 2035, assuming the same level of treatment is required. Projected dry weather flows are anticipated to be between 28 and 34 MGD in the year 2062, which is below the dry weather flow design capacity of the plant (39 MGD). Therefore, the RWQCP's existing capacity would be sufficient to accommodate the anticipated residential development under the proposed HEU. Development facilitated by the proposed project would not result in the need to expand the capacity of the RWQCP. This impact would be less than significant and generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

As discussed in the 2017 EIR, Scenario 6 would generate an approximate increase of 15,315 tons per year of solid waste over baseline at buildout. Additionally, the city's disposal rate per resident in 2014 was 3.6 pounds per day (PPD), which was below the CalRecycle target of 7.1 PPD per resident. The city's disposal rates for both residents and employees have been below target rates since 2007 (City of Palo Alto 2017a).

CalRecycle estimates that multi-family residential uses generate an average of four pounds of solid waste per unit per day (CalRecycle 2023). As shown in Table 29, prior to implementation of State-mandated diversion requirements, development associated with the proposed HEU would generate an estimated 2,660 pounds per day of solid waste, which equates to 1.3 tons or 11.8 cubic yards per day. In accordance with California's Integrated Waste Management Act of 1989 (AB 939), cities and counties are required to divert 50 percent of all solid wastes from landfills. Additionally, pursuant to AB 341 adopted in 2012, all businesses that generate four cubic yards or more of commercial solid waste per week including multi-family dwelling that consists of five units or more would be required to divert 75 percent of all solid wastes. The City of Palo Alto has achieved a diversion rate of 82 percent, which substantially exceeds AB 939 State requirement (City of Palo Alto 2018). Assuming that this diversion rate continues to apply to new development on the project sites, implementation of the project would generate approximately 0.2 tons or 2.1 cubic yards per day of solid waste for disposal at landfills.

[13] 43,225 gpd times 0.8 = 34,580 gpd

Table 29 Estimated Solid Waste Generation

Potential Buildout Development/ Land Use	Quantity	Units	Generation Rate[1]	Solid Waste (pounds per day)	Solid Waste (tons per day)	Solid Waste (cubic yards per day)[2]
Residential	665	dwelling units	4 pounds/unit/day	2,660	1.3	11.8
Total Assuming 82% Diversion Rate				**479**	**0.2**	**2.1**

[1] CalRecycle 2023

[2] RecycleMania/USEPA 2022, assumes 225 pounds per cubic yard of residential waste

In 2019, CalRecycle reported that the overall total of 47,023 tons of solid waste from Palo Alto was disposed at 17 different landfills. The majority (42,252 tons) were disposed at three landfills: Kirby Canyon Landfill, Corinda Los Trancos Landfill (Ox Mountain), and Monterey Peninsula Landfill (CalRecycle 2022). The Kirby Canyon Landfill has a closure year of 2059 and a remaining capacity of 16,191,600 cubic yards (CalRecycle 2022b); the Ox Mountain Landfill has a closure year of 2034 and a remaining capacity of 22,180,000 cy (CalRecycle 2022c); and the Monterey Peninsula Landfill has a closure year of 2107 and a remaining capacity of 48,560,000 (CalRecycle 2022d). With development facilitated by the proposed HEU, it is estimated that the 665 units would generate approximately 2.1 cubic yards of solid waste per day, or 767 cubic yards of solid waste per year for disposal at landfills. This represents 0.00004 percent of the current total remaining landfill capacity at the Kirby Canyon Landfill. The projected closure years and remaining capacities of these three main landfills currently accepting solid waste from the city would be able to accommodate the projected increase in solid waste under Scenario 6 and the proposed HEU. There are also 14 more landfills that received waste from Palo Alto in 2019. If one or more of these landfills were unavailable in the future, it is likely Palo Alto's solid waste volume could be increased at one or more of the other landfills that already serve Palo Alto. Moreover, the city has ongoing and planned measures to divert increasing amounts of Palo Alto's solid waste away from landfills. Future development would be required to comply with PAMC Section 16.14.260 which requires an 80 percent diversion of construction and demolition debris, and preparation of a Waste Management Plan for on-site sorting of construction debris, which is submitted to the City for approval, in order to ensure that the covered project meets the diversion requirement for reused or recycled construction and demolition debris. Development facilitated by the proposed HEU would also be required to comply with applicable federal, State, and local statutes and regulations related to solid waste such as AB 939, which requires the City to divert 50 percent of solid waste from landfills, as well as SB 1838, which would require mandatory organic waste recycling for future residents.

Furthermore, future development would be required to comply with policies S-3.8, 3.9, and 3.11 of the 2030 Comprehensive EIR, adopted in compliance with Mitigation Measure UTIL-15 of the 2017 EIR, which would ensure waste diversion and increased recycling. Therefore, the existing landfills would be able to accommodate development under the proposed HEU, and the proposed HEU would comply with federal, State, and local regulations related to solid wastes. Impacts would be less than significant with mitigation and generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no

new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not result in the construction or expansion of utilities facilities, and existing infrastructure would be sufficient to accommodate the increased residential units. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

20 Wildfire

	Where was Impact Analyzed in the EIR?	Could Proposed Changes Involve New or Substantially More Severe Impacts?	Do New Circumstances Result in New or Substantially More Severe Impacts?	Does New Information Result in New or Substantially More Severe Significant Impacts?	Do 2017 EIR Mitigation Measures Address and/or Resolve Impacts?
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	N/A	No	No	No	N/A
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	EIR Pages 4.7-8 through 4.7-9	No	No	No	N/A
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	N/A	No	No	No	N/A
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	EIR Pages 4.7-8 through 4.7-9	No	No	No	N/A

ANALYSIS IN PREVIOUS ENVIRONMENTAL DOCUMENTS

The 2017 EIR does not directly address the issue area of wildfire, but discusses wildfire impacts in Section 4.7, *Hazards and Hazardous Materials*, of the 2017 EIR. As discussed in the 2017 EIR, much of the area surrounding Palo Alto west of I-280 is considered to have a moderate and high risk of wildland fire, whereas all of the urbanized areas of Palo Alto do not have any wildland fire hazards. The 2017 EIR found that there would be less than significant impacts related to wildfire.

IMPACT ANALYSIS

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

As shown in the CAL FIRE Fire Hazard Severity Zone Map, only the area west of I-280 is located in a High Fire Hazard Severity Zone (HFHSZ) while the rest of the city east of I-280 is located in an area with low wildfire risk. Similar to what was analyzed in the 2017 EIR, the proposed HEU would facilitate development in non-vacant and underutilized sites in urbanized areas of the city, and would not facilitate development in locations near the HFHSZ. New development would also be located in proximity to Fire Stations 1, 2, 3, and 4 which would protect future residents from wildfire hazards. Additionally, future development would be required to comply with the CAL FIRE Strategic Plan and the CFC pursuant to PAMC Chapter 15.04. The CFC requires the clearance of debris and vegetation within a prescribed distance from structures in wildlife hazard areas. The proposed HEU would facilitate residential development primarily on infill sites in urbanized areas, and would not require the construction of additional roads, power lines, or other utilities that would exacerbate existing fire risk. Housing sites that require utility connections would likely install underground connections, and development within underground utility districts would be required to install new utility connections underground. Therefore, the project would not impair an adopted emergency response or evacuation plan related to wildfire; exacerbate wildfire risks; or expose people to post-fire risks related to runoff, flooding, or landslides. Impacts would be less than significant and generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

CONCLUSION

Although the proposed HEU would facilitate the development of 665 more residential units than analyzed under the 2017 EIR, future development would not impair an adopted emergency response or evacuation plan related to wildfire; exacerbate wildfire risks; or expose people to post-fire risks related to runoff, flooding, or landslides. Therefore, the project would not result in new significant effects not addressed in the prior EIR, and no new mitigation measures are warranted. This issue **does not require further study in an EIR**.

This page intentionally left blank.

21 Cumulative Impacts

CEQA defines "cumulative impacts" as two or more individual impacts that, when considered together, are substantial or will compound other environmental impacts. Cumulative impacts are the combined changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, noise impacts of two nearby projects may be less than significant when analyzed separately but could have a significant impact when analyzed together. Cumulative impact analysis provides a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

This analysis is cumulative in nature in that it analyzes future development under the proposed HEU throughout Palo Alto and takes into consideration the effects associated with development of multiple projects in the housing element cycle through 2031. For analyses that may have more localized or neighborhood implications (aesthetics, agriculture, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, public services, recreation, utilities, tribal cultural resources, wildfire), the geographic scope for cumulative impacts includes the city of Palo Alto. For these issue areas, generally, impacts are site specific and cumulative impacts would not be significant. Therefore, the proposed project would not result in a cumulatively considerable contribution to the above-mentioned issue areas. Future development projects would be reviewed by the City pursuant to CEQA to identify potential impacts to on a project-by-project basis. While there is the potential for significant cumulative impacts, it is anticipated that potential impacts associated with individual development projects would be addressed on a case-by-case basis and would be subject to the mitigation measures outlined in this Addendum, City policies, and State and local regulations regarding the protection of such resources. With compliance with the existing policies and regulations, and mitigation measures, future development would be required to avoid or mitigate impacts. Therefore, the proposed project's incremental contribution to cumulative impacts associated with aesthetics, agriculture, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, public services, recreation, utilities, tribal cultural resources, and wildfire would not be cumulatively considerable, and cumulative impacts would be less than significant.

Some analyses including air quality, energy, greenhouse gas emissions, transportation, and population and housing, rely on much larger geographic areas such as the Bay Area region. For issues that may have regional cumulative implications, the cumulative impact analysis is based on Plan Bay Area 2050, the Bay Area's most recent Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

As discussed in Section 3, *Air Quality*, the project would be consistent with the 2017 Clean Air Plan control measures as development facilitated by the project would comply with the latest Title 24 regulations and would increase density in urban areas in proximity to transit, allowing for greater use of alternative modes of transportation. Additionally, the increase in VMT would not exceed the projected population increase per the BAAQMD *CEQA Air Quality Guidelines* for

operational emissions from plans. Discussion of these impacts considers the cumulative nature of criteria pollutants in the region. Therefore, the project would not result in a cumulatively considerable contribution to an air quality impact.

As discussed in Section 6, *Energy,* development facilitated by the project would not result in a wasteful, inefficient, or unnecessary consumption of energy, and operation of the new residential structures would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy. Development facilitated by the project would be consistent with the energy-related goals, policies, and actions of the Statewide plans and the City's 2030 Comprehensive Plan; therefore, the project would not make a cumulatively considerable contribution to a significant cumulative impact with respect to consistency with renewable energy and energy efficiency plans. Projects throughout the Bay Area are required to adhere to applicable renewable energy and energy efficiency laws, programs, and policies such as California's RPS, AB 2076, and Title 24 standards to avoid the wasteful, inefficient, or unnecessary consumption of energy.

As discussed in Section 8, *Greenhouse Gas Emissions,* the impact of GHG emissions generated by development facilitated by the proposed HEU is inherently cumulative. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from any project must be considered in the context of their contribution to cumulative global emissions, which is the basis for determining a significant cumulative impact. This is determined through the project's consistency with applicable GHG emission thresholds and applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs. GHG emissions from development facilitated by the project would not exceed the BAAQMD interpolated 2031 plan-level threshold. In addition, development facilitated by the project would be consistent with the 2022 Scoping Plan, Plan Bay Area 2050, 2030 Comprehensive Plan, and the City's S/CAP. Therefore, the project would not result in a significant cumulative impact related to GHG emissions.

As discussed in Section 14, *Population and Housing,* the proposed HEU would result in an increase of 665 more housing units compared to Scenario 6 of the 2017 EIR. However, the proposed project would be consistent with State requirements for the RHNA and would further assist in addressing the existing housing crisis and meeting the housing needs of the City's communities. Therefore, the project would not result in a cumulatively considerable contribution to a population and housing impact.

As discussed in Section 17, *Transportation*, the proposed HEU would not result in a significant cumulative VMT impact. Therefore, the project would not result in a cumulatively considerable contribution to a transportation impact.

Therefore, with continued implementation of mitigation measures from the 2017 EIR, impacts of the proposed HEU would not be cumulatively considerable. Impacts would be generally the same as the impact analyzed in the 2017 EIR for the 2030 Comprehensive Plan. Because there would be no new or substantially more severe significant impacts than what was analyzed in the 2017 EIR, further analysis is not warranted.

22 Other CEQA Required Discussions

The proposed HEU would not substantially change the discussion and findings presented for the 2030 Comprehensive Plan in Section 7, *CEQA-Mandated Sections*, of the 2017 EIR. These other required discussions include impacts found not to be significant, growth-inducing impacts, and irreversible changes. As with the 2017 EIR, the proposed HEU would not directly induce growth because it would not extend services to an undeveloped area. The proposed HEU would direct growth to specific areas that are already urbanized and underutilized and would improve mobility while not making new areas within or outside of Palo Alto easier to develop. Although employment growth that occurs during the life of the proposed HEU could indirectly induce additional growth by contributing to an increased demand for housing, similar to the 2017 EIR, future development would be required to comply with policies within the 2030 Comprehensive Plan to ensure growth occurs in a sustainable manner. All potential impacts associated with population and housing growth would be mitigated to less than significant levels. Given that the State is currently in an ongoing housing crisis due to an insufficient housing supply, the additional units under the proposed project would further assist in addressing the existing crisis and meeting the housing needs of the City's communities, and would allow the city to satisfy its fair share of RHNA.

The proposed HEU would allow land uses largely consistent with current land uses and redevelopment would occur in areas that are already urbanized, which would not result in irreversible land use changes. Additionally, as discussed in Section 9, *Hazards and Hazardous Materials*, of this Addendum, compliance with federal, State, and local hazardous materials regulations and local emergency plans would ensure that irreversible changes to the physical environment from the accidental release of hazardous materials are less than significant. As with the 2017 EIR, the proposed HEU would irretrievably commit non-renewable resources for the construction and maintenance of buildings and infrastructure. These non-renewable resources include mined materials such as sand, gravel, steel, lead, copper, and other metals. Buildout of the proposed HEU would also result in a long-term commitment to the consumption of fossil fuels, natural gas, and gasoline. Increased energy demands would be used for construction, lighting, heating, and cooling of residences, and transportation of people within, to, and from the housing inventory sites. However, the proposed project would place residents in proximity to transit, services, and jobs, which would reduce consumption of fossil fuels through the reduced reliance on single-occupancy vehicles and promote bicycling and walking. Additionally, future development would be required to include an all-electric design pursuant to the City's Reach Code and would utilize 100 percent carbon neutral electricity supplied by CPAU. Therefore, by facilitating residential development that would maximize conservation, energy efficiency, and solar energy generation, impacts would be less than significant.

As described above in Sections 1 through 20, the proposed project would not result in new or substantially more severe significant direct, indirect, or cumulative impacts beyond those identified in the 2017 EIR for the 2030 Comprehensive Plan. Therefore, the proposed project would also result in no new or substantially more severe significant impacts found not to be

significant, growth-inducing impacts, and irreversible changes beyond those previously discussed in the 2017 EIR.

CONCLUSION

As demonstrated in the discussions above regarding the potential effects of the proposed HEU, substantial changes are not proposed to the 2030 Comprehensive Plan nor have substantial changes in circumstances occurred that would require major revisions to the 2017 EIR prepared for the 2030 Comprehensive Plan. Significant impacts beyond those identified and analyzed in the 2017 EIR would not be expected to occur as a result of the proposed project. Overall, the proposed HEU would result in no new information of substantial importance that would have new, more severe impacts, or new mitigation measures from what was identified in the 2017 EIR. As such, the proposed project would not result in conditions identified in *State CEQA Guidelines* Section 15162, and a Subsequent or Supplemental EIR is not required for the proposed project. Again, it should be noted that the proposed project would be subject to all previously required mitigation measures from the 2017 EIR, as applicable. The MMRP adopted for the 2030 Comprehensive Plan would continue to be applicable to the proposed project. Based on the above analysis, this Addendum to the 2017 EIR for the 2030 Comprehensive Plan has been prepared in accordance with Section 15164 of the *State CEQA Guidelines*.

This page intentionally left blank.

REFERENCES

BIBLIOGRAPHY

Association of Bay Area Governments (ABAG). 202. Plan Bay Area 2050. https://www.planbayarea.org/sites/default/files/documents/Plan_Bay_Area_2050_October_2021.pdf

BAAQMD. 2017a. California Environmental Quality Act: Air Quality Guidelines. San Francisco, CA. May 2017. http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en

_____. 2017b. Final 2017 Clean Air Plan. April 19, 2017. https://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en

California Air Resources Board (CARB). 2005. Air Quality and Land Use handbook: A Community Health Perspective. https://sfmohcd.org/sites/default/files/20%20-%20CARB%2C%20Air%20Quality%20and%20Land%20Use%20Handbook%202005.pdf

_____. 2017. 2017 Climate Change Scoping Plan. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf

_____. 2021. Overview: Diesel Exhaust & Health. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health

California Department of Conservation (DOC). 2002. California Geomorphic Provinces. https://www.conservation.ca.gov/cgs/Documents/Publications/CGS-Notes/CGS-Note-36.pdf

CalRecycle. 2022a. Jurisdiction Disposal and Alternative Daily Cover (ADC) Tons by Facility. https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility

_____. 2022b. Kirby Canyon Landfill. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1370?siteID=3393

_____. 2022c. Corinda Los Trancos Landfill (Ox Mountain). https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1561?siteID=3223

_____. 2022d. Monterey Peninsula Landfill. https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2642?siteID=1976

_____. 2023. Estimated Solid Waste Generation Rates. https://www2.calrecycle.ca.gov/wastecharacterization/general/rates

DecisionInsite. 2021. Annual Enrollment Projection Report Palo Alto Unified School District. https://go.boarddocs.com/ca/pausd/Board.nsf/files/C29PNR646AA6/$file/20210420Attachment4DecisionInsiteEnrollmentProjectionReport.pdf

Department of Finance (DOF). 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State 2020-2022. https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2022/

IPCC. 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf

Office of Emergency Services. 2017. Santa Clara County Operational Area Hazard Mitigation Plan. https://emergencymanagement.sccgov.org/sites/g/files/exjcpb261/files/For%20Partners/Local-Hazard-Mitigation-Plan-LHMP-Vol-1.pdf

Palo Alto, City of. 2005. Palo Alto Single-Family Individual Review Guidelines. Adopted June 10, 2005. https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/file-migration/current-planning/forms-and-guidelines/individual-review-ir-guidelines.pdf

_____. 2012. City of Palo Alto Bicycle and Pedestrian Transportation Plan. https://www.cityofpaloalto.org/files/assets/public/transportation/projects/bicycle-pedestrian-transportation-plan_adopted-july-2012.pdf

_____. 2016. City of Palo Alto Comprehensive Plan Draft EIR Volume 1. Adopted February 5, 2016. https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/3.-comprehensive-plan/comprehensive-plan/paloaltocompplandeir_vol1_web-1.pdf

_____. 2017a. City of Palo Alto Comprehensive Plan Update Supplement to the Draft EIR. https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/3.-comprehensive-plan/comprehensive-plan/paloalto_compplanupdate_suppeir_feb2017.pdf

_____. 2017b. City of Palo Alto Comprehensive Plan. Adopted November 13, 2017. https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/3.-comprehensive-plan/comprehensive-plan/full-comp-plan-2030_with-june21-amendments.pdf

_____. 2018. City of Palo Alto Zero Waste Plan. Adopted August 2018. https://www.cityofpaloalto.org/files/assets/public/zero-waste/zero-waste-website-files/2018-zero-waste-plan.pdf

_____. 2020. Regulations for Groundwater Dewatering during Construction of Below Ground Structures. https://www.cityofpaloalto.org/files/assets/public/public-works/engineering-services/webpages/forms-and-permits/regulations-for-groundwater-dewatering-during-construction-of-below-ground-structures-2021.pdf

_____. 2021. 2020 Urban Water Management Plan and Water Shortage Contingency Plan. https://www.cityofpaloalto.org/files/assets/public/utilities/uwmp/2020-uwmp_final-submission-to-dwr.pdf

_____. 2022a. Green Building Code Requirements. https://www.cityofpaloalto.org/City-Hall/Sustainability/Green-Building-Code-Requirements

_____. 2022b. Carbon Neutral Electricity and Natural Gas. https://www.cityofpaloalto.org/Departments/Utilities/Sustainability/Carbon-Neutral-Electricity-and-Natural-Gas

_____. 2022c. 2022 Sustainability and Climate Action Plan Goal and Key Actions. Adopted October 3, 2022. https://www.cityofpaloalto.org/files/assets/public/sustainability/policies-and-plans/2022-scap-goals-and-key-actions.pdf

_____. 2022d. Dewatering Sites. https://www.google.com/maps/d/viewer?mid=14ztztkt6te1yanSaxzUhuJONY-E&ll=37.43630527807649%2C-122.13162251821232&z=14

_____. 2022e. Fire Station No. 4 Replacement Project. https://www.cityofpaloalto.org/Departments/Public-Works/Engineering-Services/Engineering-Projects/Fire-Station-No.-4-Replacement-Project

_____. 2023. Below Market Rate Housing. https://www.cityofpaloalto.org/Departments/Planning-Development-Services/Long-Range-Planning/Housing-Policies-and-Programs/Below-Market-Rate-Housing

Santa Clara County Airport Land Use Commission. 2016. Comprehensive Land Use Plan Santa Clara County Palo Alto Airport. Amended November 16, 2016. https://www.cityofpaloalto.org/files/assets/public/planning-amp-development-services/3.-comprehensive-plan/aluc_pao_clup_2017.pdf

United States Environmental Protection Agency (US EPA). 2021. Overview of Greenhouse Gases. https://www.epa.gov/ghgemissions/overview-greenhouse-gases

LIST OF PREPARERS

Rincon Consultants, Inc. prepared this Addendum under contract to the City of Palo Alto. Persons involved in data gathering analysis, project management, and quality control include the following:

RINCON CONSULTANTS, INC.

Abe Leider, AICP CEP, Principal in Charge
Karly Kaufman, MESM, Project Manager
Heather Dubois, Senior Air Quality Specialist
Bill Vosti, Program Manager – Air Quality, GHG Emissions, and Noise
Nichole Yee, Environmental Planner
Gina Gerlich, GIS Analyst
Debra Jane Seltzer, Publishing Specialist
Yaritza Ramirez, Publishing Specialist

This page intentionally left blank.

Appendix A

Vehicle Miles Traveled Analysis

Hexagon Transportation Consultants, Inc.

Technical Memorandum

Date: April 10, 2023
To: Karly Kaufman
From: At van den Hout
Subject: VMT Analysis for the Palo Alto Housing Element Update (HEU)

Hexagon Transportation Consultants, Inc. has conducted a CEQA transportation VMT analysis for the proposed residential developments under the Palo Alto Housing Element. This memorandum presents a summary of the vehicle miles traveled (VMT) methodology and analysis findings.

Project Description

The proposed Housing Element would amend the City of Palo Alto's 2030 Comprehensive Plan by replacing the current Housing Element with the proposed 2023-2031 Housing Element. The proposed Housing Element identifies 289 sites that could provide 6,668 additional housing units within the City of Palo Alto. Most sites are located throughout Palo Alto's Downtown and South of the Forest Area in districts that allow for a mix of residential and commercial uses near transit and services.

Senate Bill 743

Based on revisions in State law to implement Senate Bill (SB) 743, public agencies in California are mandated to use vehicle miles traveled (VMT) as the metric for CEQA transportation analyses starting July 1, 2020. The CEQA Guidelines now identify VMT as the most appropriate metric for evaluating a project's transportation impacts. With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines, automobile delay, and congestion, as measured by level of service (LOS) and other similar metrics, no longer constitutes a significant environmental effect under CEQA. However, LOS is used outside the CEQA document to evaluate other non-CEQA transportation impacts of development projects, such as congestion, circulation, and safety issues and concerns.

Palo Alto Vehicle Miles Traveled Policy

On June 15, 2020, Palo Alto City Council established a VMT policy by adopting a resolution updating the City's transportation analysis methodology under CEQA to comply with California Senate Bill 743. In addition, City Council adopted a local transportation impact analysis policy to evaluate level of service and other local roadway impacts. The VMT policy contains screening criteria to identify projects that can be presumed to have a less than significant transportation impact. The Governor's Office of Planning and Research (OPR) recommends that agencies use screening criteria to identify projects known to reduce VMT or be low VMT generators and that are thus expected to have a less than significant VMT impact. These projects would then be exempt from performing a quantitative VMT analysis. The use of screening criteria streamlines analysis for projects already presumed to have a less than significant impact on VMT. Palo Alto's Comprehensive Plan policies encourage housing developments to protect local-serving retail, and to reduce traffic on the roadway network. Therefore, projects aligned with City policies do not have to procure costly and redundant transportation analyses that will show they are low-VMT generators under CEQA. If a project meets the screening criteria, a quantitative VMT analysis

would not be required; however, the CEQA analysis would still include a qualitative assessment of VMT, discussing the site(s) and location characteristics.

The City of Palo Alto has established the following VMT screening criteria to determine land use development projects that may be exempt from additional VMT analysis under the City's VMT guidelines:

- **Small Projects**: Projects that generate fewer than 110 trips per day. This may equate to non-residential projects of 10,000 sq. ft. or less and residential projects of 20 units or less.
- **Projects in Low VMT Areas**: Residential and office projects located in low-VMT areas[1] with similar features (i.e., density, a mix of uses, transit accessibility) as existing developments in these areas.
- **Projects in Proximity to Major Transit Stops**: Projects that are located within a half mile of an existing or planned high-quality transit corridor or major transit stations and meet the following additional criteria:
  (1) is high density (minimum floor area ratio of 0.75),
  (2) does not exceed parking requirements,
  (3) is consistent with Plan Bay Area, and
  (4) does not replace affordable units with smaller numbers of moderate- or above moderate-income units.
- **Affordable Housing**: 100% affordable housing projects in infill locations.
- **Local Serving Retail**: Retail projects of 50,000 sq. ft. or less.

Thresholds of Significance

Land use projects not screened out will require quantitative VMT analyses, and their VMTs must be below pre-determined thresholds to be considered as having a less-than-significant impact. Consistent with State CEQA Guidelines Section 15064.3, the City of Palo Alto has adopted the thresholds of significance for residential projects. A residential project that exceeds a level of 15% below existing (baseline) County home-based VMT per resident may indicate a significant transportation impact.

VMT Analysis Methodology and Findings

When applying the above thresholds for residential projects, VMT is compared to a threshold based on the countywide (2015) baseline VMT value, which is the home-based VMT per resident. Home-based VMT per resident is defined as the number of all home-based automobile vehicle trips traced back to the residence multiplied by the vehicle distance. This home-based VMT is then divided by the population to calculate home-based VMT per resident.

[1] Residential projects located in areas where baseline VMT is 15% below the existing county average per resident, and office projects located in areas where baseline VMT is 15% below the existing regional average per employee could be considered to be in low-VMT areas and presumed to have a less than significant VMT impact.

Travel Forecasting Model

The VMT calculations are done with the recently completed Palo Alto Travel Forecasting Model (PA model). The PA model is a refinement of Santa Clara Valley Transportation Authority's (VTA's) Bi-County Travel Forecasting Model (VTA model)[2]. The PA model is the best available tool to simulate travel in Palo Alto and serves as the primary forecasting tool for the City. The model is a mathematical representation of travel in the nine Bay Area counties and Santa Cruz, San Benito, Monterey, and San Juaquin counties, focusing on travel within the City of Palo Alto. The model has four main components: 1) trip generation, 2) trip distribution, 3) mode choice, and 4) trip assignment. The model uses socioeconomic inputs (i.e., population, income, employment) aggregated into geographic areas, called transportation analysis zones (TAZs), to estimate travel within the modeled area. There are 110 TAZs within the model that represent the City of Palo Alto, and the 289 Housing Element sites are spread out over 44 TAZs.

Scenarios Analyzed

In addition to evaluating VMT for the Housing Element, VMT associated with Scenario 6 of the City's Comprehensive Plan was also analyzed. The PA model's land use assumptions and transportation networks were updated to reflect the year 2031 conditions. The year 2031 land use data outside Palo Alto was interpolated between VTA's 2015 and 2040 land use assumptions. Palo Alto's two future land use scenarios reflect the increases in households and employment proposed for the Comprehensive Plan and the Housing Element, respectively. The following scenarios are addressed in the VMT analysis.

- *Baseline (2015) Conditions:* The baseline (2015) PA model is used to determine the baseline home-based VMT per resident for the TAZs in Palo Alto and the countywide average VMT per resident, and the 85 percentile of the countywide average VMT per resident.
- *Comprehensive Plan (2031) Conditions:* This scenario includes the proposed land uses assumed for Scenario 6 of Palo Alto's Comprehensive Plan. Scenario 6 contains 6,000 additional housing units and 8,868 jobs.
- *Housing Element (2031) Conditions:* This scenario includes the proposed land uses assumed in the Housing Element. The Housing Element has 6,668 additional housing units and 8,868 jobs.

Figures 1 and 2 present the growth in housing units for the TAZs assumed for the Comprehensive Plan and the Housing Element Plan, respectively. The increase in jobs, which is assumed to be the same for both the Comprehensive Plan and the Housing Element Plan, is shown on Figure 3.

[2] Documentation of the Palo Alto Travel Forecasting Model Update is summarized in a Technical Memorandum: *Palo Alto Model Update and Validation Results, March 20, 2023.*

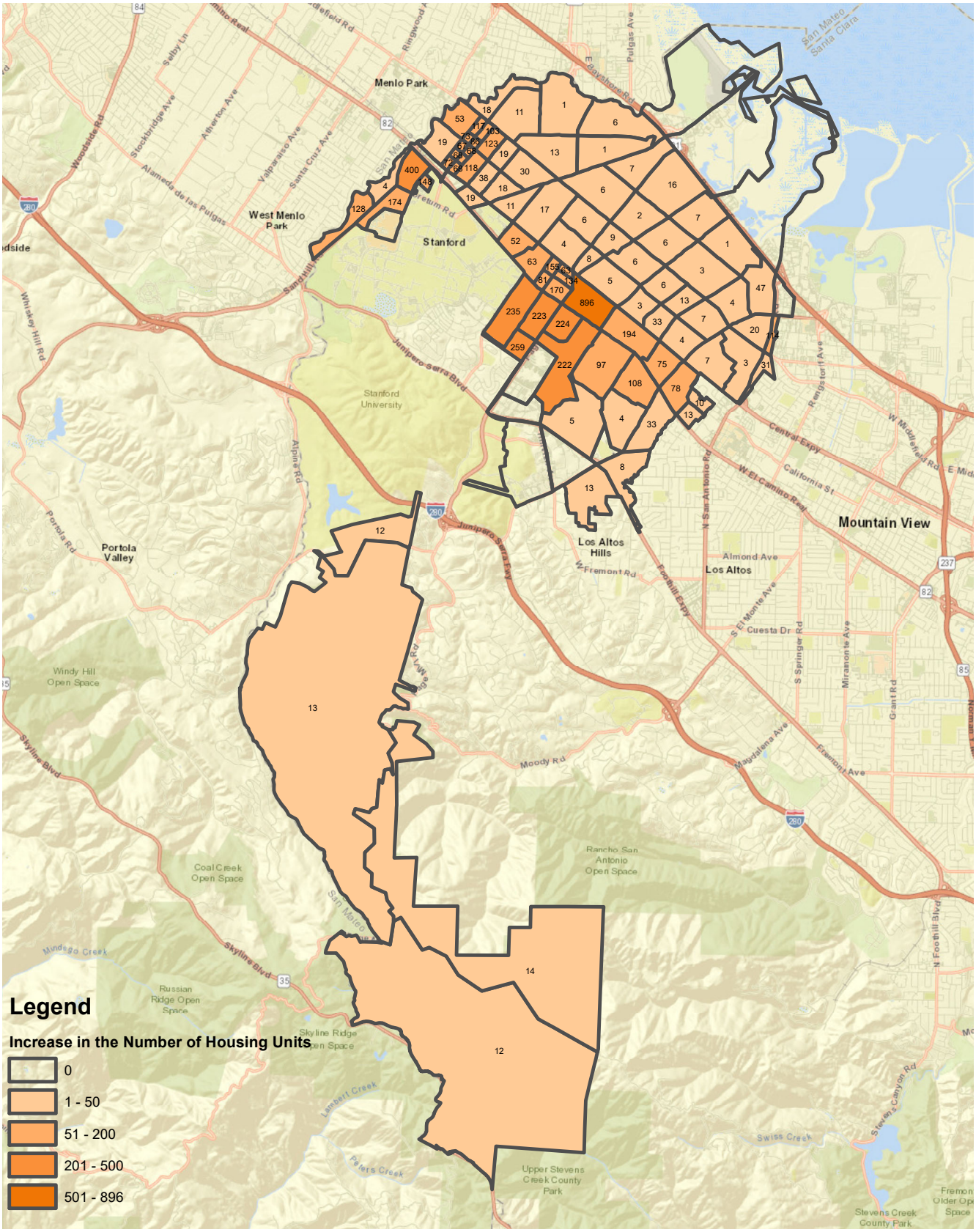


Figure 1
Increase in Housing Units by Palo Alto TAZ for the Comprehensive Plan

NORTH
Not to Scale

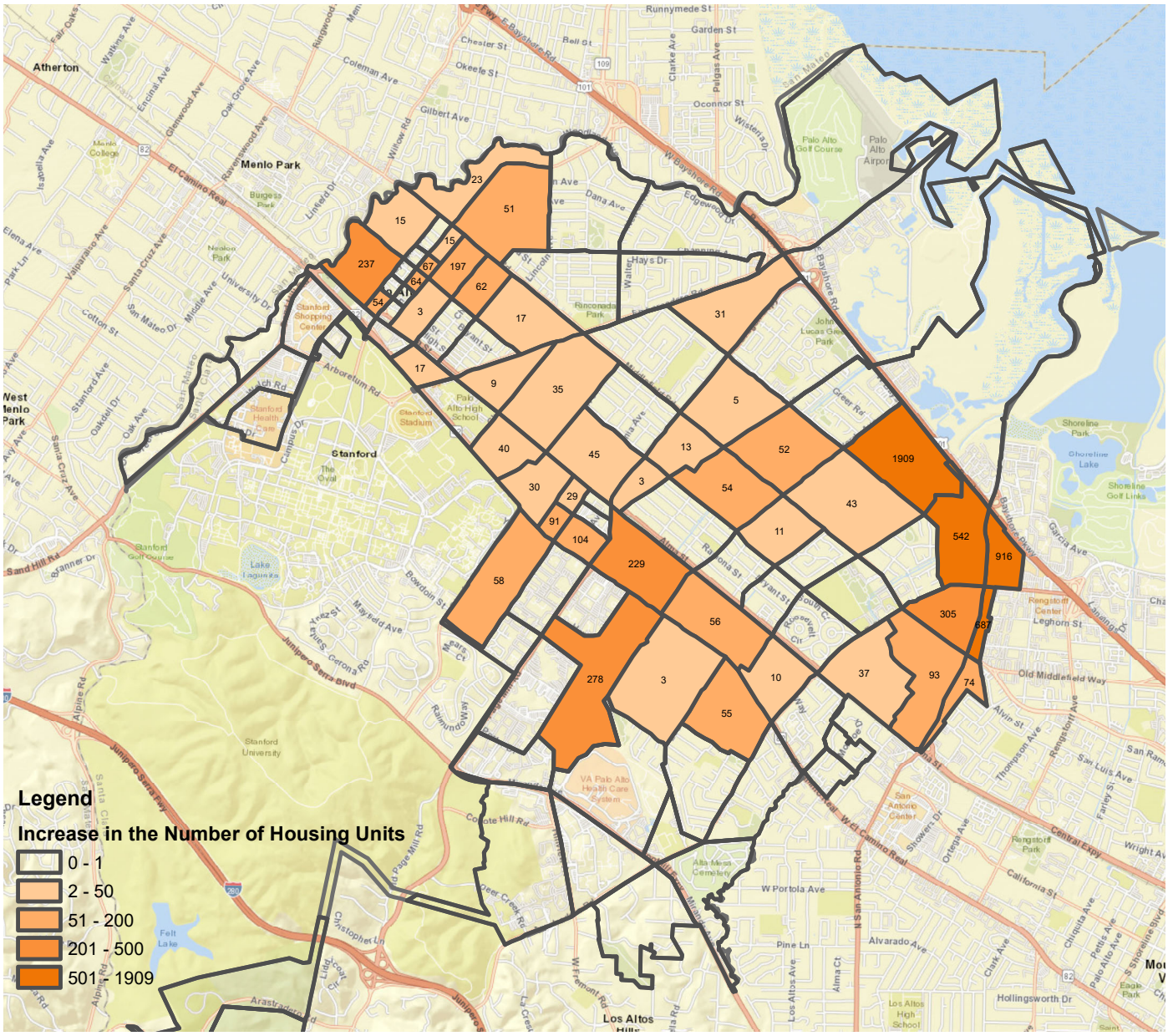


Figure 2
Increase in Housing Units by Palo Alto TAZ for the Housing Element

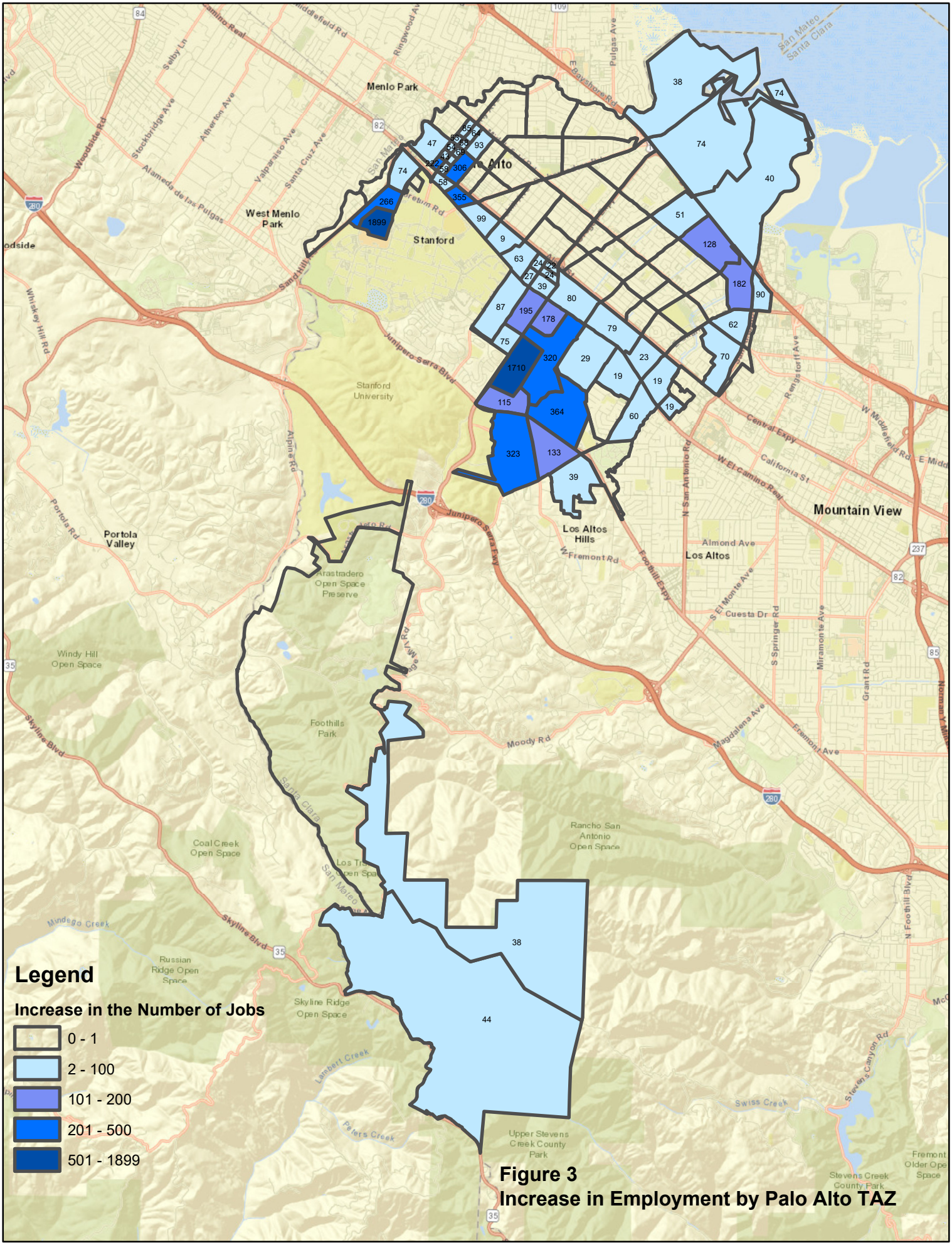


Figure 3
Increase in Employment by Palo Alto TAZ

Residential VMT Analysis

The PA model was used to estimate the 2015 baseline countywide VMT, the VMT for the Comprehensive Plan, and the Housing Element. Table 1 below shows the residential VMT, the number of housing units, the population, and the VMT per resident for Santa Clara County and three Palo Alto scenarios. The county average VMT per resident for residential development is 12.90, and the threshold of significance is 85 percent of 12.90 or 10.97 daily vehicle miles per resident. As a whole, the Comprehensive Plan and the Housing Element have a residential VMT of 9.02 and 9.28, respectively, which is less than 85 percent of the county average VMT per resident. Thus, the VMT per resident for the Housing Element (and also for the Comprehensive Plan) as a whole would be below the threshold of 10.97 VMT per resident. Therefore, implementing the Housing Element would result in a **less-than-significant** VMT impact on transportation.

Table 1: VMT Projections for Palo Alto and Santa Clara County

Area	Scenario	Residential VMT [1]	Housing Units	Population	VMT per Resident [2]
City of Palo Alto	2015	643,912	27,771	69,537	9.26
	2031 Comp	763,463	33,771	84,597	9.02
	2031 HEU	801,073	34,439	86,277	9.28
Santa Clara County	2015	23,897,059	627,249	1,852,178	12.90

[1] Residential VMT = Home-Based Trip Productions * Travel Distance

[2] VMT per Resident = Residential VMT / Population

Site-Specific VMT Analysis

The 289 Housing Element sites are spread out over 44 TAZs. A VMT analysis for each of the 44 TAZs shows that the Housing Element sites in three TAZs have a VMT per resident higher than the threshold of 85 percent of the countywide average, but these VMTs are still lower than the county average of 12.90. A summary of the VMT data for those three TAZs is shown in Table 2. A map of the VMT per resident for the Housing Element TAZs is shown on Figure 4. The sites in the other 41 TAZs have VMT per resident values less than 85 percent of the county average.

Table 2
Housing Sites in TAZs with VMTs Higher than 85 Percent of the County Average

TAZ	Residential VMT [1]	Total Housing Units	Population	VMT per Resident [2]	HEU Housing Units
477	28,129	916	2,299	12.23	916
496	8,071	327	626	12.89	17
533	15,605	677	1,314	11.88	62
				Total	995

[1] Residential VMT = Home-Based Trip Productions * Travel Distance

[2] VMT per Resident = Residential VMT / Population

Note: The threshold of significance is 85 percent of the county average, or 11.0 daily miles per resident

Individual housing development projects located at sites in these three TAZs are subject to mitigate VMT impacts. A list of TDM strategies to mitigate VMT impacts can be found in Appendix G of the document "SB 743 Implementation Decisions for Palo Alto" at this link.

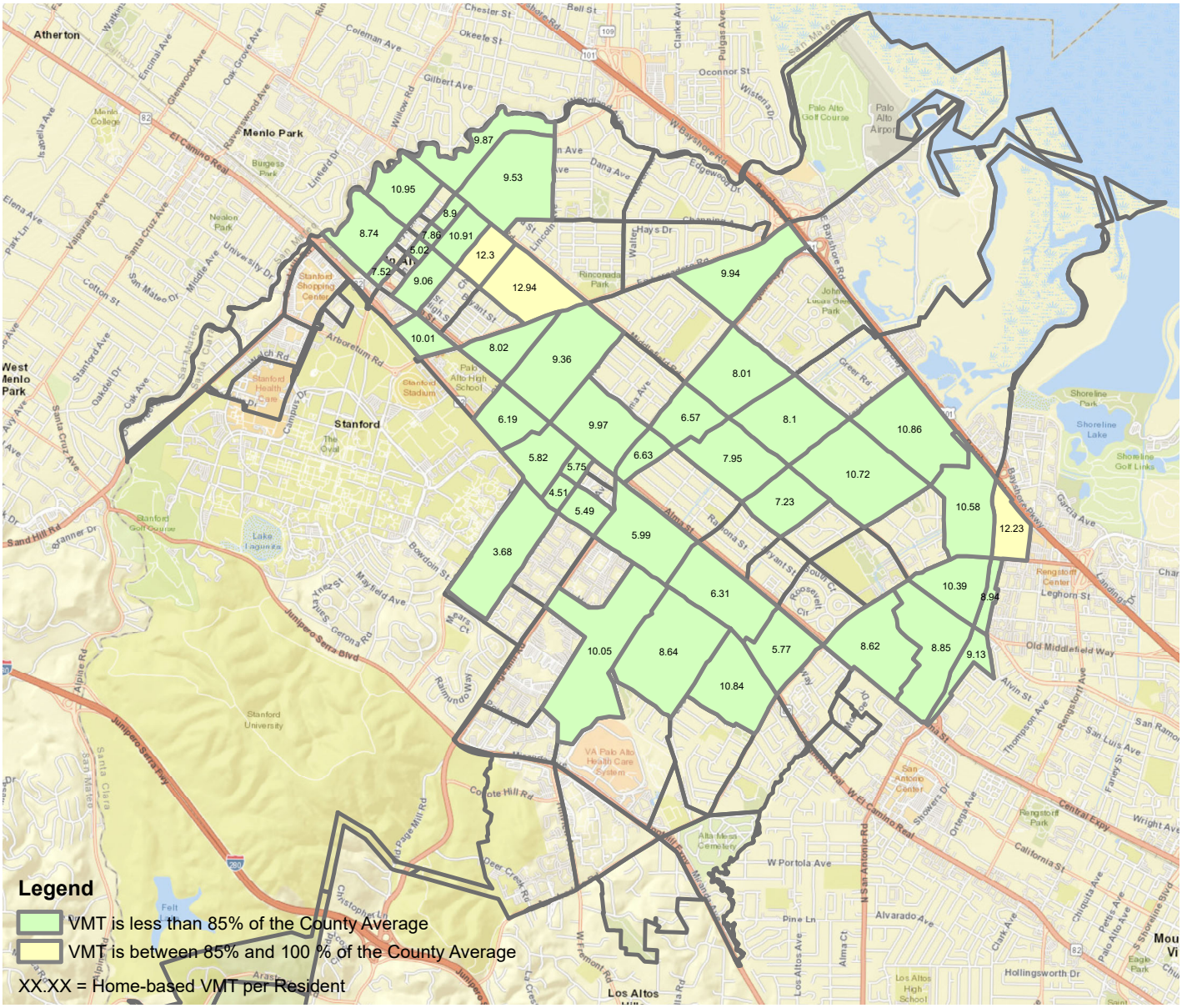


Figure 4
Home-Based VMT per Resident for the Housing Element TAZs

NORTH
Not to Scale

Appendix B

Greenhouse Gas Emissions Modeling Results

Palo Alto HEU - GHG Emissions Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Palo Alto HEU - GHG Emissions
Lead Agency	—
Land Use Scale	Plan/community
Analysis Level for Defaults	County
Windspeed (m/s)	4.20
Precipitation (days)	18.8
Location	Palo Alto, CA, USA
County	Santa Clara
City	Palo Alto
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1726
EDFZ	1
Electric Utility	City of Palo Alto
Gas Utility	City of Palo Alto Ultilities

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	665	Dwelling Unit	17.5	638,400	0.00	0.00	1,669	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.77	46.2	39.8	38.9	0.06	1.81	19.8	21.6	1.66	10.1	11.8	—	9,373	9,373	0.43	0.48	24.5	9,549
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.57	46.1	27.4	35.5	0.04	1.20	5.25	5.74	1.10	1.25	1.70	—	9,011	9,011	0.33	0.50	0.64	9,168
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.54	27.7	18.1	24.6	0.03	0.76	4.50	5.26	0.70	1.82	2.52	—	6,362	6,362	0.22	0.34	7.40	6,477
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.46	5.05	3.31	4.49	0.01	0.14	0.82	0.96	0.13	0.33	0.46	—	1,053	1,053	0.04	0.06	1.22	1,072

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.77	4.01	39.8	37.1	0.06	1.81	19.8	21.6	1.66	10.1	11.8	—	8,639	8,639	0.43	0.46	24.5	8,813
2024	3.47	2.95	15.1	35.4	0.04	0.52	4.46	4.98	0.48	1.07	1.55	—	8,533	8,533	0.29	0.46	23.0	8,701

2025	3.79	46.2	15.2	38.9	0.04	0.49	5.25	5.74	0.45	1.25	1.70	—	9,373	9,373	0.30	0.48	24.5	9,549
2026	3.46	46.0	14.3	37.1	0.04	0.43	5.25	5.68	0.40	1.25	1.65	—	9,246	9,246	0.30	0.48	22.2	9,420
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.56	3.01	27.4	34.0	0.04	1.20	4.46	5.04	1.10	1.07	1.60	—	8,324	8,324	0.33	0.47	0.64	8,474
2024	3.40	2.87	15.6	32.5	0.04	0.52	4.46	4.98	0.48	1.07	1.55	—	8,225	8,225	0.32	0.47	0.59	8,374
2025	3.57	46.1	15.7	35.5	0.04	0.49	5.25	5.74	0.45	1.25	1.70	—	9,011	9,011	0.32	0.50	0.64	9,168
2026	3.40	45.8	14.8	34.0	0.04	0.43	5.25	5.68	0.40	1.25	1.65	—	8,892	8,892	0.32	0.50	0.58	9,048
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	2.54	2.14	18.1	20.0	0.03	0.76	4.50	5.26	0.70	1.82	2.52	—	4,092	4,092	0.16	0.12	2.37	4,134
2024	2.42	2.05	11.0	23.0	0.03	0.38	3.16	3.53	0.35	0.75	1.10	—	5,921	5,921	0.22	0.34	7.07	6,035
2025	2.48	27.7	10.9	24.6	0.03	0.34	3.61	3.95	0.32	0.86	1.18	—	6,362	6,362	0.22	0.34	7.40	6,477
2026	1.43	18.8	6.56	14.5	0.02	0.21	2.04	2.25	0.19	0.49	0.68	—	3,689	3,689	0.13	0.19	3.77	3,752
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.46	0.39	3.31	3.65	0.01	0.14	0.82	0.96	0.13	0.33	0.46	—	677	677	0.03	0.02	0.39	685
2024	0.44	0.37	2.01	4.21	< 0.005	0.07	0.58	0.64	0.06	0.14	0.20	—	980	980	0.04	0.06	1.17	999
2025	0.45	5.05	1.99	4.49	< 0.005	0.06	0.66	0.72	0.06	0.16	0.22	—	1,053	1,053	0.04	0.06	1.22	1,072
2026	0.26	3.43	1.20	2.64	< 0.005	0.04	0.37	0.41	0.03	0.09	0.12	—	611	611	0.02	0.03	0.62	621

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.1	30.9	12.8	113	0.23	0.64	7.54	8.18	0.64	1.33	1.97	324	27,711	28,035	23.5	0.97	44.0	28,954

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.4	27.2	13.4	71.0	0.22	0.63	7.54	8.17	0.62	1.33	1.95	324	26,464	26,788	23.6	1.04	5.59	27,692
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.7	27.9	6.46	81.8	0.17	0.11	7.16	7.28	0.11	1.26	1.37	324	17,642	17,966	23.3	0.96	20.7	18,854
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.96	5.10	1.18	14.9	0.03	0.02	1.31	1.33	0.02	0.23	0.25	53.6	2,921	2,974	3.86	0.16	3.43	3,122

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.92	9.24	5.85	72.7	0.19	0.10	7.54	7.64	0.09	1.33	1.42	—	19,279	19,279	0.72	0.73	39.4	19,554
Area	4.21	21.6	6.91	40.7	0.04	0.54	—	0.54	0.55	—	0.55	0.00	8,432	8,432	0.16	0.02	—	8,441
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	101	0.00	101	0.35	0.22	—	176
Waste	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.2	0.00	—	778
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.57	4.57
Total	14.1	30.9	12.8	113	0.23	0.64	7.54	8.18	0.64	1.33	1.97	324	27,711	28,035	23.5	0.97	44.0	28,954
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.59	8.88	6.85	68.2	0.18	0.10	7.54	7.64	0.09	1.33	1.42	—	18,133	18,133	0.81	0.80	1.02	18,393
Area	0.77	18.4	6.56	2.79	0.04	0.53	—	0.53	0.53	—	0.53	0.00	8,331	8,331	0.16	0.02	—	8,340

Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	101	0.00	101	0.35	0.22	—	176
Waste	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.2	0.00	—	778
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.57	4.57
Total	10.4	27.2	13.4	71.0	0.22	0.63	7.54	8.17	0.62	1.33	1.95	324	26,464	26,788	23.6	1.04	5.59	27,692
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	9.00	8.34	6.12	63.1	0.17	0.09	7.16	7.26	0.09	1.26	1.35	—	17,387	17,387	0.73	0.73	16.2	17,640
Area	1.72	19.6	0.33	18.7	< 0.005	0.02	—	0.02	0.02	—	0.02	0.00	255	255	0.01	< 0.005	—	256
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	101	0.00	101	0.35	0.22	—	176
Waste	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.2	0.00	—	778
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.57	4.57
Total	10.7	27.9	6.46	81.8	0.17	0.11	7.16	7.28	0.11	1.26	1.37	324	17,642	17,966	23.3	0.96	20.7	18,854
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.64	1.52	1.12	11.5	0.03	0.02	1.31	1.32	0.02	0.23	0.25	—	2,879	2,879	0.12	0.12	2.68	2,921
Area	0.31	3.57	0.06	3.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	42.2	42.2	< 0.005	< 0.005	—	42.3
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	0.06	0.04	—	29.2
Waste	—	—	—	—	—	—	—	—	—	—	—	36.8	0.00	36.8	3.68	0.00	—	129
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.76	0.76
Total	1.96	5.10	1.18	14.9	0.03	0.02	1.31	1.33	0.02	0.23	0.25	53.6	2,921	2,974	3.86	0.16	3.43	3,122

3. Construction Emissions Details

3.1. Demolition (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.39	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.39	2.84	27.3	23.5	0.03	1.20	—	1.20	1.10	—	1.10	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	0.39	3.75	3.22	< 0.005	0.16	—	0.16	0.15	—	0.15	—	469	469	0.02	< 0.005	—	471
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.07	0.68	0.59	< 0.005	0.03	—	0.03	0.03	—	0.03	—	77.7	77.7	< 0.005	< 0.005	—	77.9
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	0.71	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	134	134	0.01	< 0.005	0.61	136
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.61	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	124	124	< 0.005	0.01	0.02	125
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.1	17.1	< 0.005	< 0.005	0.04	17.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.84	2.84	< 0.005	< 0.005	0.01	2.88
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.39	0.32	3.27	2.92	< 0.005	0.15	—	0.15	0.14	—	0.14	—	435	435	0.02	< 0.005	—	437
Dust From Material Movement	—	—	—	—	—	—	1.62	1.62	—	0.83	0.83	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.60	0.53	< 0.005	0.03	—	0.03	0.02	—	0.02	—	72.1	72.1	< 0.005	< 0.005	—	72.3
Dust From Material Movement	—	—	—	—	—	—	0.29	0.29	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.05	0.83	0.00	0.00	0.14	0.14	0.00	0.03	0.03	—	156	156	0.01	0.01	0.71	159
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.0	12.0	< 0.005	< 0.005	0.03	12.2
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.99	1.99	< 0.005	< 0.005	< 0.005	2.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	4.43	3.72	37.3	31.4	0.06	1.59	—	1.59	1.47	—	1.47	—	6,598	6,598	0.27	0.05	—	6,621

Dust From Material Movement	—	—	—	—	—	—	9.20	9.20	—	3.65	3.65	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.66	6.45	0.01	0.33	—	0.33	0.30	—	0.30	—	1,356	1,356	0.05	0.01	—	1,360
Dust From Material Movement	—	—	—	—	—	—	1.89	1.89	—	0.75	0.75	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.40	1.18	< 0.005	0.06	—	0.06	0.06	—	0.06	—	224	224	0.01	< 0.005	—	225
Dust From Material Movement	—	—	—	—	—	—	0.35	0.35	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	0.95	0.00	0.00	0.17	0.17	0.00	0.04	0.04	—	178	178	0.01	0.01	0.81	181
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.3	34.3	< 0.005	< 0.005	0.07	34.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.68	5.68	< 0.005	< 0.005	0.01	5.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2023) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.50	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.32	0.27	2.50	2.78	< 0.005	0.12	—	0.12	0.11	—	0.11	—	507	507	0.02	< 0.005	—	508
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.46	0.51	< 0.005	0.02	—	0.02	0.02	—	0.02	—	83.9	83.9	< 0.005	< 0.005	—	84.2
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.93	1.77	1.44	22.6	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	4,268	4,268	0.21	0.16	19.4	4,339
Vendor	0.20	0.07	2.70	1.29	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,974	1,974	0.12	0.29	5.12	2,068
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.86	1.68	1.76	19.5	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	3,951	3,951	0.12	0.17	0.50	4,004
Vendor	0.19	0.07	2.85	1.32	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,975	1,975	0.12	0.29	0.13	2,064
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.39	0.35	0.34	4.07	0.00	0.00	0.83	0.83	0.00	0.19	0.19	—	844	844	0.02	0.04	1.77	857
Vendor	0.04	0.01	0.59	0.28	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	417	417	0.03	0.06	0.47	437
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.06	0.74	0.00	0.00	0.15	0.15	0.00	0.04	0.04	—	140	140	< 0.005	0.01	0.29	142

Vendor	0.01	< 0.005	0.11	0.05	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	69.1	69.1	< 0.005	0.01	0.08	72.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.44	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.03	0.86	8.04	9.39	0.02	0.36	—	0.36	0.33	—	0.33	—	1,717	1,717	0.07	0.01	—	1,723
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	0.16	1.47	1.71	< 0.005	0.07	—	0.07	0.06	—	0.06	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.84	1.67	1.29	21.0	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	4,186	4,186	0.07	0.16	17.8	4,252
Vendor	0.20	0.07	2.58	1.23	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,949	1,949	0.12	0.29	5.12	2,043
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.77	1.60	1.62	18.1	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	3,877	3,877	0.11	0.17	0.46	3,929
Vendor	0.19	0.07	2.72	1.27	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,950	1,950	0.12	0.29	0.13	2,039
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.26	1.14	1.05	12.8	0.00	0.00	2.80	2.80	0.00	0.66	0.66	—	2,807	2,807	0.07	0.12	5.49	2,850
Vendor	0.14	0.05	1.91	0.89	0.01	0.02	0.36	0.37	0.02	0.10	0.12	—	1,396	1,396	0.09	0.21	1.58	1,462
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.21	0.19	2.33	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	465	465	0.01	0.02	0.91	472
Vendor	0.03	0.01	0.35	0.16	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	231	231	0.01	0.03	0.26	242
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.35	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.96	0.80	7.46	9.31	0.02	0.31	—	0.31	0.28	—	0.28	—	1,713	1,713	0.07	0.01	—	1,719
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.18	0.15	1.36	1.70	< 0.005	0.06	—	0.06	0.05	—	0.05	—	284	284	0.01	< 0.005	—	285
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.75	1.59	1.16	19.6	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	4,103	4,103	0.07	0.16	16.2	4,168
Vendor	0.18	0.07	2.46	1.19	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,918	1,918	0.11	0.28	5.08	2,008
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.58	1.53	1.47	16.8	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	3,801	3,801	0.10	0.17	0.42	3,853

Vendor	0.18	0.07	2.58	1.21	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,919	1,919	0.11	0.28	0.13	2,004
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.11	1.08	0.94	11.8	0.00	0.00	2.79	2.79	0.00	0.65	0.65	—	2,745	2,745	0.06	0.11	5.00	2,784
Vendor	0.13	0.05	1.82	0.86	0.01	0.02	0.35	0.37	0.02	0.10	0.12	—	1,370	1,370	0.08	0.20	1.57	1,432
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.20	0.17	2.15	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	454	454	0.01	0.02	0.83	461
Vendor	0.02	0.01	0.33	0.16	< 0.005	< 0.005	0.06	0.07	< 0.005	0.02	0.02	—	227	227	0.01	0.03	0.26	237
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.28	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.50	0.41	3.82	5.02	0.01	0.15	—	0.15	0.13	—	0.13	—	929	929	0.04	0.01	—	932
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.70	0.92	< 0.005	0.03	—	0.03	0.02	—	0.02	—	154	154	0.01	< 0.005	—	154
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.55	1.51	1.02	18.3	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	4,026	4,026	0.07	0.16	14.7	4,089
Vendor	0.18	0.06	2.34	1.15	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,885	1,885	0.11	0.28	4.59	1,974
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	1.50	1.34	1.33	15.6	0.00	0.00	3.96	3.96	0.00	0.93	0.93	—	3,730	3,730	0.10	0.17	0.38	3,782
Vendor	0.17	0.05	2.47	1.16	0.01	0.03	0.50	0.53	0.03	0.14	0.16	—	1,886	1,886	0.11	0.28	0.12	1,971
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.57	0.51	0.45	5.97	0.00	0.00	1.52	1.52	0.00	0.35	0.35	—	1,461	1,461	0.03	0.06	2.46	1,482
Vendor	0.07	0.02	0.94	0.45	0.01	0.01	0.19	0.20	0.01	0.05	0.06	—	730	730	0.04	0.11	0.77	764
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.08	1.09	0.00	0.00	0.28	0.28	0.00	0.06	0.06	—	242	242	0.01	0.01	0.41	245

Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	121	121	0.01	0.02	0.13	127
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.91	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.10	0.90	1.25	< 0.005	0.04	—	0.04	0.04	—	0.04	—	190	190	0.01	< 0.005	—	191
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.02	0.16	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.5	31.5	< 0.005	< 0.005	—	31.6
Paving	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.03	0.57	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	126	126	< 0.005	< 0.005	0.46	128
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.04	0.04	0.49	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	117	117	< 0.005	0.01	0.01	118
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.9	14.9	< 0.005	< 0.005	0.03	15.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.46	2.46	< 0.005	< 0.005	< 0.005	2.50
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.17. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	42.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	42.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.08	0.52	0.68	< 0.005	0.02	—	0.02	0.01	—	0.01	—	79.2	79.2	< 0.005	< 0.005	—	79.4
Architectural Coatings	—	25.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.1	13.1	< 0.005	< 0.005	—	13.2

Architect Coatings	—	4.65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.35	0.32	0.23	3.91	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	821	821	0.01	0.03	3.24	834
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.31	0.29	3.36	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	760	760	0.02	0.03	0.08	771
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.18	0.18	0.16	1.96	0.00	0.00	0.46	0.46	0.00	0.11	0.11	—	456	456	0.01	0.02	0.83	462
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.36	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.4	75.4	< 0.005	< 0.005	0.14	76.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.19. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	42.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	42.9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.35	0.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.6	54.6	< 0.005	< 0.005	—	54.8
Architectural Coatings	—	17.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.04	9.04	< 0.005	< 0.005	—	9.07

Architectural Coatings	—	3.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.30	0.20	3.65	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	805	805	0.01	0.03	2.94	818
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.30	0.27	0.27	3.12	0.00	0.00	0.79	0.79	0.00	0.19	0.19	—	746	746	0.02	0.03	0.08	756
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.10	1.26	0.00	0.00	0.32	0.32	0.00	0.07	0.07	—	308	308	0.01	0.01	0.52	313
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	51.1	51.1	< 0.005	< 0.005	0.09	51.8
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	9.92	9.24	5.85	72.7	0.19	0.10	7.54	7.64	0.09	1.33	1.42	—	19,279	19,279	0.72	0.73	39.4	19,554
Total	9.92	9.24	5.85	72.7	0.19	0.10	7.54	7.64	0.09	1.33	1.42	—	19,279	19,279	0.72	0.73	39.4	19,554
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	9.59	8.88	6.85	68.2	0.18	0.10	7.54	7.64	0.09	1.33	1.42	—	18,133	18,133	0.81	0.80	1.02	18,393
Total	9.59	8.88	6.85	68.2	0.18	0.10	7.54	7.64	0.09	1.33	1.42	—	18,133	18,133	0.81	0.80	1.02	18,393
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	1.64	1.52	1.12	11.5	0.03	0.02	1.31	1.32	0.02	0.23	0.25	—	2,879	2,879	0.12	0.12	2.68	2,921
Total	1.64	1.52	1.12	11.5	0.03	0.02	1.31	1.32	0.02	0.23	0.25	—	2,879	2,879	0.12	0.12	2.68	2,921

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.77	0.38	6.56	2.79	0.04	0.53	—	0.53	0.53	—	0.53	0.00	8,331	8,331	0.16	0.02	—	8,340
Consumer Products	—	13.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	4.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.44	3.26	0.35	37.9	< 0.005	0.01	—	0.01	0.02	—	0.02	—	101	101	< 0.005	< 0.005	—	101
Total	4.21	21.6	6.91	40.7	0.04	0.54	—	0.54	0.55	—	0.55	0.00	8,432	8,432	0.16	0.02	—	8,441
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	0.77	0.38	6.56	2.79	0.04	0.53	—	0.53	0.53	—	0.53	0.00	8,331	8,331	0.16	0.02	—	8,340

Consum Products	—	13.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	4.31	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.77	18.4	6.56	2.79	0.04	0.53	—	0.53	0.53	—	0.53	0.00	8,331	8,331	0.16	0.02	—	8,340
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hearths	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	34.0	34.0	< 0.005	< 0.005	—	34.0
Consumer Products	—	2.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.79	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.31	0.29	0.03	3.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.24	8.24	< 0.005	< 0.005	—	8.26
Total	0.31	3.57	0.06	3.42	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	0.00	42.2	42.2	< 0.005	< 0.005	—	42.3

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	101	0.00	101	0.35	0.22	—	176
Total	—	—	—	—	—	—	—	—	—	—	—	101	0.00	101	0.35	0.22	—	176

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	101	0.00	101	0.35	0.22	—	176
Total	—	—	—	—	—	—	—	—	—	—	—	101	0.00	101	0.35	0.22	—	176
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	0.06	0.04	—	29.2
Total	—	—	—	—	—	—	—	—	—	—	—	16.8	0.00	16.8	0.06	0.04	—	29.2

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.2	0.00	—	778
Total	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.2	0.00	—	778
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.2	0.00	—	778
Total	—	—	—	—	—	—	—	—	—	—	—	222	0.00	222	22.2	0.00	—	778

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	36.8	0.00	36.8	3.68	0.00	—	129
Total	—	—	—	—	—	—	—	—	—	—	—	36.8	0.00	36.8	3.68	0.00	—	129

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.57	4.57
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.57	4.57
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.57	4.57
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.57	4.57
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.76	0.76
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.76	0.76

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	2/7/2023	4/18/2023	5.00	50.0	—
Site Preparation	Site Preparation	4/19/2023	5/31/2023	5.00	30.0	—
Grading	Grading	6/1/2023	9/14/2023	5.00	75.0	—
Building Construction	Building Construction	9/15/2023	7/17/2026	5.00	740	—
Paving	Paving	7/31/2026	10/3/2026	5.00	46.0	—
Architectural Coating	Architectural Coating	3/4/2025	7/28/2026	5.00	366	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37

Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	11.7	LDA,LDT1,LDT2
Demolition	Vendor	—	8.40	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	11.7	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.40	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	11.7	LDA,LDT1,LDT2
Grading	Vendor	—	8.40	HHDT,MHDT

Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	479	11.7	LDA,LDT1,LDT2
Building Construction	Vendor	71.1	8.40	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	11.7	LDA,LDT1,LDT2
Paving	Vendor	—	8.40	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	95.8	11.7	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.40	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	2,542,752	847,584	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	—	—
Site Preparation	—	—	45.0	0.00	—
Grading	—	—	225	0.00	—
Paving	0.00	0.00	0.00	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	0.00
2025	0.00	0.00	0.00	0.00
2026	0.00	0.00	0.00	0.00

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	3,618	3,265	2,720	1,255,235	27,403	24,733	20,603	9,508,239

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0
Gas Fireplaces	339
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	326
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
2542752	847,584	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value

Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	7,837,103	0.00	0.0000	0.0000	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	47,436,451	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	164	0.00

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type
—	—

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	11.8	annual days of extreme heat
Extreme Precipitation	4.05	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	10.7	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A

Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	10.6
AQ-PM	15.6
AQ-DPM	54.0
Drinking Water	38.1
Lead Risk Housing	68.1
Pesticides	0.00
Toxic Releases	28.4
Traffic	30.2
Effect Indicators	—
CleanUp Sites	73.7
Groundwater	91.9
Haz Waste Facilities/Generators	51.9
Impaired Water Bodies	23.9
Solid Waste	0.00

Sensitive Population	—
Asthma	0.66
Cardio-vascular	4.54
Low Birth Weights	36.4
Socioeconomic Factor Indicators	—
Education	3.87
Housing	22.1
Linguistic	24.8
Poverty	8.07
Unemployment	29.4

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	95.14949313
Employed	43.98819453
Median HI	99.29423842
Education	—
Bachelor's or higher	99.60220711
High school enrollment	100
Preschool enrollment	73.48902862
Transportation	—
Auto Access	68.11240857
Active commuting	83.57500321
Social	—
2-parent households	94.40523547

Voting	96.57384833
Neighborhood	—
Alcohol availability	81.20107789
Park access	81.35506224
Retail density	46.32362376
Supermarket access	56.22994996
Tree canopy	94.4180675
Housing	—
Homeownership	63.76235083
Housing habitability	86.19273707
Low-inc homeowner severe housing cost burden	41.33196458
Low-inc renter severe housing cost burden	96.25304761
Uncrowded housing	87.19363531
Health Outcomes	—
Insured adults	99.75619145
Arthritis	0.0
Asthma ER Admissions	96.2
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	97.7
Cognitively Disabled	80.8
Physically Disabled	96.9
Heart Attack ER Admissions	93.0

Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	19.6
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	95.8
Children	64.0
Elderly	25.8
English Speaking	76.2
Foreign-born	51.5
Outdoor Workers	79.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	86.7
Traffic Density	34.0
Traffic Access	87.4
Other Indices	—
Hardship	0.9
Other Decision Support	—
2016 Voting	98.7

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	7.00
Healthy Places Index Score for Project Location (b)	99.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Pursuant to DOF 2.51 residents per household, consistent with Pop and Housing
Construction: Construction Phases	Architectural coating occurs simultaneously as building construction
Construction: Architectural Coatings	BAAQMD Regulation 8 Rule 3, Nonflat Coating
Operations: Architectural Coatings	BAAQMD Regulation 8 Rule 3, Nonflat Coating
Operations: Energy Use	Pursuant to Palo Alto's All-Electric Ordinance, natural gas converted to electricity
Operations: Water and Waste Water	WTP 100% aerobic

Appendix C

Native American Tribal Correspondence

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

September 29, 2022

Amah Mutsun Tribal Band
Valentin Lopez, Chairperson
PO Box 5272
Galt, California 95632
Via Email: vlopez@amahmutsun.org

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson Lopez:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development(HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Amah Mutsun Tribal Band is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project

within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 289-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

September 29, 2022

Amah Mutsun Tribal Band of Mission San Juan Bautista
Irene Zwierlein, Chairperson
3030 Soda Bay Road
Lakeport, California 95453
Via email: amahmutsuntribal@gmail.com

Dear Chairperson, Zwierlein:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development(HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Amah Mutsun Tribal Band of Mission San Juan Bautista is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 289-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

September 29, 2022

Indian Canyon Mutsun Band of Costanoan
Kanyon Sayers-Roods, MLD Contact
1615 Pearson Court
San Jose, California 95122
Via email: kanyon@kanyonkonsulting.com

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson Sayers-Roods:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development(HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of Indian Canyon Mutsun Band of Costanoan is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project

within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 289-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

September 29, 2022

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
Hollister, California 95024
Via email: ams@indiancanyons.org

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson Marie Sayers:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development(HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Indian Canyon Mutsun Band of Costanoan is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project

within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 289-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

September 29, 2022

Muwekma Ohlone Indian Tribe of the SF Bay Area
Monica Arellano, Vice Chairwoman
20885 Redwood Road, Suite 232
Castro Valley, California 94546
Via email: marellano@muwekma.org

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson Arellano:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development(HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Muwekma Ohlone Indian Tribe of the SF Bay Area is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project

within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 289-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

September 29, 2022

The Ohlone Indian Tribe
Andrew Galvan
P.O. Box 3388
Fremont, California 94539
Via email: chochenyo@AOL.com

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson Galvan:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development(HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Ohlone Indian Tribe is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project

within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 289-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

September 29, 2022

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas, California 93906
Via email: kwood8934@aol.com

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson Woodrow:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development(HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Wuksache Indian Tribe/Eshom Valley Band is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project

within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 289-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

June 21, 2022

Tamien Nation
Quirina Luna Geary, Chairperson
P.O. Box 8053
San Jose, California 95155
Via email: qgeary@tamien.org

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson Geary:

The City of Palo Alto, acting as the lead agency in accordance with the California Environmental Quality Act, is preparing a Supplemental EIR for its 2023-31 Housing Element Update. The proposed project consists of a complete update to the Housing Element and related edits to the City's Comprehensive Plan Land Use Element and Palo Alto Municipal Code.

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development (HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Tamien Nation is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

In accordance with AB 52 your tribes have 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project within 90 days of receipt of this letter. If you require any additional

information or have any questions, please contact me at (650) 329-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong
Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map

PLANNING & DEVELOPMENT SERVICES

CITY OF PALO ALTO
250 Hamilton Avenue, 5th Floor
Palo Alto, CA 94301
(650) 329-2441

Tamien Nation
Johnathan Wasaka Costillas, THPO
P.O. Box 866
Clearlake Oaks, California 94523
Via email: thpo@tamien.org

September 29, 2022

RE: Assembly Bill 52 and Senate Bill 18 Consultation, City of Palo Alto 2023-31 Housing Element Update, Palo Alto, California

Dear Chairperson, Costillas:

The Housing Element is one of the seven state-mandated elements of the local Comprehensive Plan and is required to be updated every eight years. The City of Palo Alto is preparing the 2023-2031 Housing Element Update to comply with the legal mandate that requires each local government to identify adequate sites for housing to meet the existing and projected housing needs for varying income-levels in the community. It is intended to provide the city with a comprehensive strategy for promoting the production of safe, decent and affordable housing, and affirmatively furthering fair housing during the housing cycle. The Housing Element Update establishes goals, policies, and actions to address the existing and projected housing needs in Palo Alto. Overall, the City's zoning and other land use regulations must accommodate at least 6,695 new units during the 8-year planning period in order to demonstrate to the State Department of Housing and Community Development (HCD) that the City's Housing Element has identified adequate land use capacity and implementing policies to accommodate its Regional Housing Needs Allocation (RHNA) in addition to the identified "buffer" of 10 percent above its RHNA. By comparison, the 2017 Comprehensive Plan anticipated—and the Comprehensive Plan Environmental Impact Report evaluated—the addition of 3,545 to 4,420. Although no development is specifically proposed as part of the Housing Element Update, the City's CEQA analysis will evaluate the potential buildout of these housing units within the boundaries of the City of Palo Alto. The Housing Element will also identify a list of Housing Inventory Sites which reflect the sites within the City as the highest likelihood of housing redevelopment in order to accommodate the RHNA. A map of the jurisdictions boundaries as well as a list of the draft Housing Inventory Sites is attached.

The City of Palo Alto is sending this letter because the Native American Heritage Commission has provided your name as a representative of a tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The input of the Tamien Nation is important to the City of Palo Alto's planning process and we invite you to engage in scoping consultation pursuant to Government Code §65352.4 (Assembly Bill 52) and Government Code § 65352.3– 65352.4 (Senate Bill 18) or to confidentially provide any information you have regarding Native American cultural resources located in or near the proposed project area that may be affected by project activities.

If you wish to engage in consultation under AB 52 (California Public Resources Code § 21080.3.1) for this or future projects, you may submit a written request for notification of proposed projects. In accordance with AB 52 your tribe has 30 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Under the provisions of SB 18, your tribe has 90 days from receipt of this letter to respond in writing if you wish to consult on the proposed project. Therefore, the City respectfully requests receipt of any questions or comments on this project within 90 days of receipt of this letter. If you require any additional information or have any questions, please contact me at (650) 329-2493 or via e-mail at tim.wong@cityofpaloalto.org. Thank you for your assistance.

Sincerely,

Tim Wong

Senior Planner
City of Palo Alto, Planning and Development Services Department

Enclosure:

Regional Location Map