Addendum/Initial Study

190 North Winchester Addendum

Prepared by

In Consultation with

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SECTION 1.0 INTRODUCTION AND PURPOSE

1.1 PURPOSE OF ADDENDUM

The California Environmental Quality Act (CEQA) recognizes that between the date an environmental document is certified and the date the project is fully implemented, one or more of the following changes may occur: 1) the project may change; 2) the environmental setting in which the project is located may change; 3) laws, regulations, or policies may change in ways that impact the environment; and/or 4) previously unknown information can arise. Before proceeding with a project, CEQA requires the Lead Agency to evaluate these changes to determine whether or not they affect the conclusions in the environmental document.

In 2016, the City of Santa Clara, as the Lead Agency, adopted the Santana Terrace Senior Apartments Mitigated Negative Declaration (MND). The MND analyzed the replacement of the then-existing 65,000 square foot three-story office building with a 92-unit senior apartment home community, where occupancy would be restricted to ages of 55 and above.

The intent and purpose of the MND was to provide project-level environmental review for the residential project. This addendum tiers from the approved MND and provides analysis for the proposed changes to the project and assesses the differences of the project with the previously analyzed design.

CEQA Guidelines Section 15162 states that when an Environmental Impact Report (EIR) has been certified or a Negative Declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the Lead Agency determined, on the basis of substantial evidence in light of the whole record, one or more of the following:

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 previously 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 previously 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 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.

CEQA Guidelines Section 15164 states that the Lead Agency (City of Santa Clara) or a Responsible Agency shall prepare an addendum to a previously certified Negative Declaration if some changes or additions are necessary, but none of the conditions described in Section 15162 (see above) calling for preparation of a subsequent Negative Declaration have occurred.

This addendum analyzes the Santana Terrance Senior Apartments project under Section 15162. The proposed project would remove the 55 plus age restriction from the constructed units to allow all age groups to occupy the development.

Based on the modified project description and knowledge of the project site (based on the environmental review prepared for the MND), the City has concluded that the modified project would not result in any new impacts not previously disclosed in the MND and would not result in a substantial increase in the magnitude of any significant environmental impacts previously identified in the Negative Declaration. For these reasons, an addendum to the MND has been prepared for the modified project.

This addendum will not circulate for public review, but will be attached to the MND, pursuant to CEQA Guidelines Section 15164(c). A copy of the MND is available at the City of Santa Clara City Hall at 1500 Warburton Ave, Santa Clara, CA 95050, during normal business hours, or on the City's website at this link.

SECTION 2.0 PROPOSED CHANGES TO THE APPROVED PROJECT

2.1 APPROVED PROJECT OVERVIEW

Existing Project Site

The 1.86-acre project site is located at 190 North Winchester Boulevard, on the east side of North Winchester Boulevard, south of the intersection of Pruneridge Avenue and Winchester Boulevard. The neighborhood is fully developed with a variety of uses and the surrounding properties include single family residences to the south and west, a private institutional school and apartments to the north, and a mix of retail businesses along Winchester Boulevard to the east and north.

The property was designated as Regional Commercial in the City's General Plan and was Zoned Office General. The approved project changed the General Plan and Zoning designation to High Density Residential and Planned Development, respectively. The property was developed with a 42-foot tall, 65,000 square foot, three-story office building built in 1973, that has since been removed.

Senior Housing Proposal

The project applicant, USA Property Fund, Inc., proposed, and the City approved, replacement of the then-existing office with a 92-unit senior apartment home community. The new community consists of two buildings flanking a large shared open amenity space. The eastern building facing North Winchester Boulevard is setback 20-feet from the street with a three-story front elevation stepping back to four-stories to create an open, roof deck at the fourth-floor level. The recently constructed residential buildings are nearly the same height as the prior office structure.

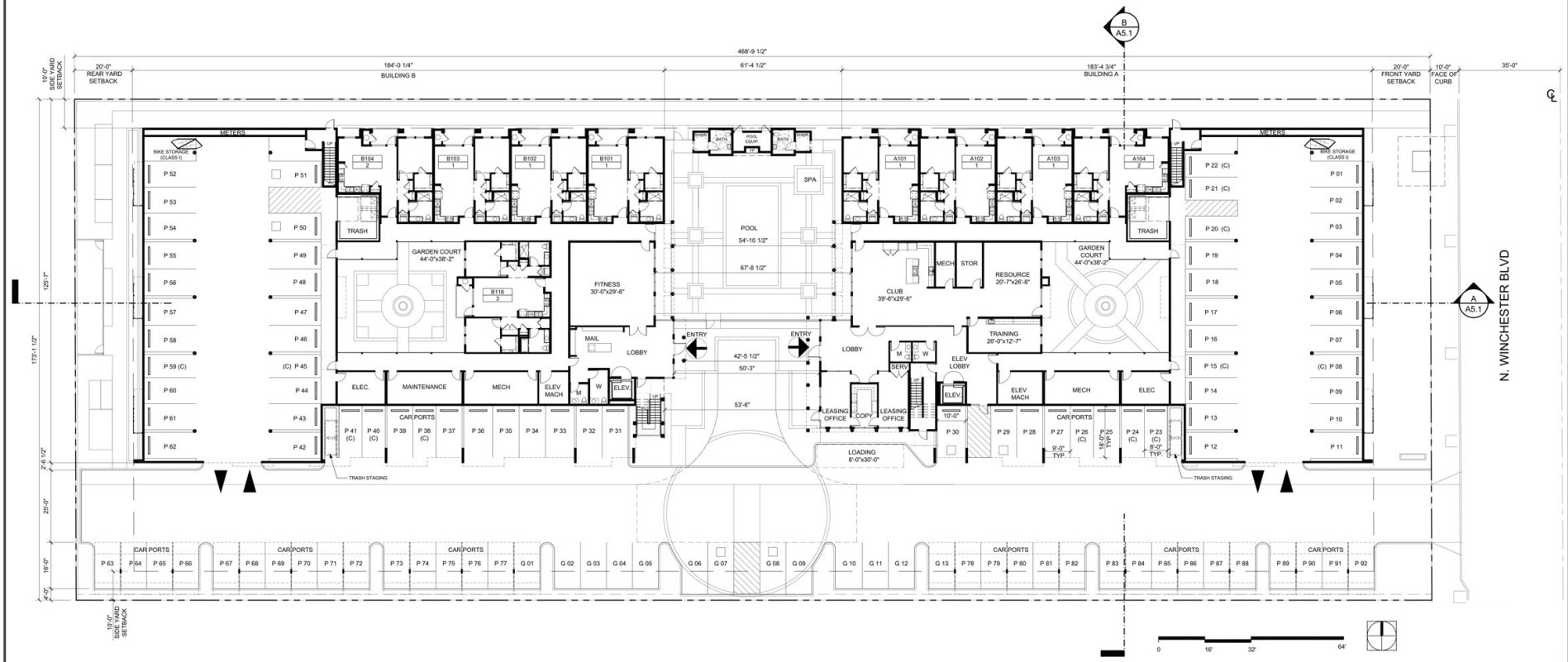
The entry to the project from North Winchester Boulevard is via a single driveway along the southern boundary. Parking is provided on both sides of the driveway with carports and open parking on the south edge and tuck under parking stalls and multi-car garage spaces on the ground floor level of the building.

Landscape areas and sidewalks provide a continuous loop around the site with access to seating areas, outdoor exercise equipment, and a separately fenced pet area. A large spa area is located at the center of the site.

Interior open air landscaped courtyards with self-contained fountains provide relaxing zones while the fourth-floor roof-top terrace is designed with multiple outdoor uses including an outdoor entertainment kitchen with barbecues, dining and gaming tables, conversation pits, and sundeck.

The one- and two-bedroom units range in size from 697 to 1,052 square feet with features including washer/dryers, walk-in closets, pantries, and great room floor plans. Each apartment also has a private outdoor patio or deck. Each of the buildings has an elevator to all floors as well as trash and recycle access on each floor. In addition to the multiple outdoor spaces, flexible indoor community amenity spaces are provided.

The project site plan and aerial of completed structure are included in Figures 2.1-1 and 2.1-2.



Source: Dahlin Group, June 29, 2015.

SITE PLAN

FIGURE 2.1-1

AERIAL PHOTOGRAPH AND SURROUNDING LAND USES | FIGURE 2.1-2

2.2 MODIFIED PROJECT

The modified project would retain the same design as the senior housing proposal which has been approved and constructed on-site. The modified project would solely remove the 55 plus age restriction on occupancy of the units to allow all age groups to occupy the development. This would not alter the access, parking, or construction of the approved project.

SECTION 3.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT

The discussion below describes the environmental impacts of the modified project compared to the impacts of the approved Santana Terrace Apartments project. Also noted are any changes that have occurred in the environmental setting that would result in new impacts or impacts of greater severity than those identified in the previously adopted MND. This Addendum only addresses those resource areas which could potentially have new impacts or impacts of greater severity (specific to the project site) than were addressed in the MND. Based on the project's consistency with the development assumptions and General Plan and zoning designations, and the fact that the structure is already fully constructed, the modified project would have the same impacts with regard to the following environmental issues because the MND's treatment of those issues was based on baseline conditions which now have changed or was related to project construction impacts, which have now occurred with completion of project construction:

- Aesthetics
- Biological Resources
- Agricultural Resources
- Cultural Resources/Tribal Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Wildfire

The afore-mentioned topics would be unaffected by the proposed change in project occupancy given they were related to baseline conditions which have now changed, or they were temporary impacts during construction, which has been completed. All relevant best management practices, conditions of approval, and mitigation measures identified in the adopted Santana Terrace Senior Apartment MND for these resource areas are incorporated by reference and have been fully implemented or would be required by the project, if tied to the time of occupancy.

The modified project would only remove the limitation for unit leasing to allow for all ages of residents. This would not change the existing built structure and would not result in construction of new project features. Therefore, this Addendum analyzes solely the operational impacts of the modified project based on the proposed change in occupancy and consistency with the MND regarding the following environmental issues:

- Air Quality
- Energy
- Greenhouse Gas Emissions
- Noise Impacts
- Population and Housing
- Public Services
- Recreation
- Transportation
- Utilities and Service Systems

SECTION 4.0 ENVIRONMENTAL IMPACT DISCUSSION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

4.1	Air Quality	4.6	Public Services
4.2	Energy	4.7	Recreation
4.3	Greenhouse Gas Emissions	4.8	Transportation
4.4	Noise	4.9	Utilities and Service Systems
4.5	Population and Housing		

The discussion for each environmental subject includes the following subsections:

- **Environmental Setting** – This subsection 1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and 2) describes the existing, physical environmental conditions at the project site and in the surrounding area, as relevant.
- **Impact Discussion** – This subsection 1) includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts and 2) discusses the project's impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. "Mitigation measures" are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact GHG-1 answers the first checklist question in the Greenhouse Gas Emissions section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM GHG-1.3 refers to the third mitigation measure for the first impact in the Greenhouse Gas Emissions section.

4.1 AIR QUALITY

The change to the 2016 adopted MND and approved senior housing project relevant to air quality is the creation of additional trips to and from the project site based on the change in occupancy from senior residents to residents of all ages. The following analysis addresses the air quality impacts that would result from operation of the modified project.

4.1.1 Findings of Previously Certified MND

4.1.1.1 *Bay Area Clean Air Plan*

The MND found that the approved senior housing project would not be consistent with the City's General Plan without a General Plan Amendment because it proposed residential development on land that was at the time of analysis designated for commercial development. The approved senior housing project was not, however, determined to create a substantial increase on a regional level and would not result in a major increase in housing in the City of Santa Clara relative to ABAG's projections.

The senior housing project also included building fixtures that comply with the 2013 Building Energy Efficiency Standards (Title 24) to reduce water use, energy use, and GHG emissions. Lastly, the project is located in proximity to existing transit and other services. Because the project was required to comply with the mandatory measures in the 2013 Green Building Standards Code (CGC or CALGreen) for residential development and is consistent with applicable control measures in the Bay Area 2010 Clean Air Plan (CAP), the adopted MND found it would not conflict with implementation of the 2010 CAP.

4.1.1.2 *Impacts to Regional and Local Air Quality*

The MND found that the 92-unit senior housing project would be screened out under the 451-unit residential project screening size for residential developments and would have a less than significant impact for operational air quality impacts.

4.1.1.3 *Carbon Monoxide Emissions*

The MND found that, according to BAAQMD screening criteria, a project would have a less than significant impact to carbon monoxide (CO) levels if project traffic would not increase traffic levels at any affected intersection to more than 44,000 vehicles per hour. Intersections in the project area were determined to have traffic volumes of less than 10,000 vehicles per hour. The approved senior housing project would result in a net decrease of approximately 157 peak hour traffic trips per day compared to the prior office development on the site and would not cause any local intersection to exceed 44,000 vehicles per hour. As a result, the MND determined that the senior housing project would not result in a significant CO impact.

4.1.2 Air Quality Impacts Resulting from the Modified Project

4.1.2.1 *Bay Area Clean Air Plan*

The modified project proposes the same density of units as the approved senior housing project and would be consistent with the General Plan High Density residential designation approved with the

MND. Additionally, the modified project would result in minimal increases in air quality impacts when compared to the approved project (and prior office development baseline) and would result in the same increase in housing. Therefore, the modified project would be consistent with the Bay Area Clean Air Plan.

Additionally, because the project is already constructed the modified project would comply with the 2013 Building Energy Efficiency Standards (Title 24), mandatory measures in the 2013 CGC for residential development, and 2010 CAP. Therefore, the modified project would not conflict with the 2010 CAP.

4.1.2.2 *Impacts to Regional and Local Air Quality*

The modified project would not increase the number of residential units on the project site and would be below the 451-unit residential project screening size for residential developments. The adopted MND determined that the approved senior housing project would contribute approximately 310 total daily trips to the project site, resulting in a 407-trip reduction from the baseline condition of 717 daily trips for the office building. The proposed unrestricted age population would generate about 655 trips per day, or 345 more daily trips. While the unrestricted age population living in the development would drive more than the senior housing age-restricted population, the increase in trips is not substantial for its potential to emit criteria pollutants, as the screening level is 451 units, as noted above. In relation to the prior office baseline condition, the unrestricted age population now proposed would represent a reduction of 62 total daily trips. Therefore, the modified project would result in less-than-significant operational impacts, consistent with the adopted MND.

4.1.2.3 *Carbon Monoxide Emissions*

The modified project would contribute a total of 58 additional peak hour trips (26 during the AM period and 32 during the PM period) to the project site as a result of the unrestricted age occupancy, compared to the trips that would have resulted from the senior project. Nevertheless, this would still result in a reduction of 99 net peak hour trips from the 198 existing office land use peak hour trips and would not cause any local intersection to exceed 44,000 vehicles per hour. As a result, the modified project would not result in a significant CO impact and the intensity of impact would remain the same as the adopted MND.

4.2 ENERGY

Energy not was not a required analysis under CEQA at the time the MND was approved. As of December 2018, energy usage is required to be addressed under the CEQA Checklist and, therefore, is included in this Addendum.

4.2.1 Environmental Setting

4.2.1.1 *Regulatory Framework*

State

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. In 2008, Executive Order S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.[1]

Local

Santa Clara General Plan

Energy-related General Plan policies applicable to the project are shown in the following table.

Policy	Description
5.10.3-P6	Promote sustainable buildings and land planning for all new development, including programs that reduce energy and water consumption in new development.

[1] California Air Resources Board. "The Advanced Clean Cars Program." Accessed March 4, 2020. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program.

4.2.1.2 *Existing Conditions*

Total energy usage in California was approximately 7,877 trillion British thermal units (Btu) in the year 2018, the most recent year for which this data was available.[2] Out of the 50 states, California is ranked second in total energy consumption and 48th in energy consumption per capita. The breakdown by sector was approximately 18.3 percent (1,440.1 trillion Btu) for residential uses, 19.2 percent (1,510.4 trillion Btu) for commercial uses, 23.5 percent (1,847.9 trillion Btu) for industrial uses, and 39.1 percent (3,078.4 trillion Btu) for transportation.[3] This energy is primarily supplied in the form of natural gas, nuclear electric power, hydroelectric power, and other nonhydroelectric renewables.

Electricity

Electricity in Santa Clara County in 2019 was consumed primarily by the commercial sector (76 percent), followed by the residential sector consuming 24 percent. In 2019, a total of approximately 16,664 gigawatt hours (GWh) of electricity was consumed in Santa Clara County.[4] Silicon Valley Power (SVP) is the City of Santa Clara's energy utility and would provide electricity service to the project site. SVP provides residential customers with carbon-free power as their standard, default power supply. This means the power generation produces no net carbon emissions.

Natural Gas

PG&E provides natural gas services within the City. In 2019, approximately one percent of California's natural gas supply came from in-state production, while the remaining supply was imported from other western states and Canada.[5] In 2019, residential and commercial customers in California used 34 percent of the state's natural gas, power plants used 35 percent, the industrial sector used 21 percent, and other uses used 10 percent. Transportation accounted for one percent of natural gas use in California. In 2019, Santa Clara County used approximately 3.5 percent of the state's total consumption of natural gas.[6]

Fuel for Motor Vehicles

In 2019, 15.4 billion gallons of gasoline were sold in California.[7] The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 24.9 mpg in 2018.[8] Federal

[2] United States Energy Information Administration. "State Profile and Energy Estimates, 2018." Accessed March 16, 2021. https://www.eia.gov/state/?sid=CA#tabs-2.
[3] United States Energy Information Administration. "State Profile and Energy Estimates, 2017." Accessed March 16, 2021. https://www.eia.gov/state/?sid=CA#tabs-2.
[4] California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed March 16, 2021. http://ecdms.energy.ca.gov/elecbycounty.aspx.
[5] California Gas and Electric Utilities. 2020 *California Gas Report.* Accessed March 16, 2021. https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf.
[6] California Energy Commission. "Natural Gas Consumption by County." Accessed February 8, 2020. http://ecdms.energy.ca.gov/gasbycounty.aspx.
[7] California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed March 16, 2021. https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist.
[8] United States Environmental Protection Agency. "The 2018 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." March 2019.

fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was subsequently revised to apply to cars and light trucks model years 2011 through 2020. [9,10]

4.2.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Impact EN-1: The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (Less than Significant Impact)

Operation

Operation of the proposed project would consume energy for multiple purposes including, building heating and cooling, lighting, and appliance use. Operational energy would also be consumed by resident vehicle use to and from the site. Based on the CalEEMod output prepared for the approved project, which analyzed a fully occupied, age-restricted development, it is estimated that the proposed project would use approximately 374,150 kWh of electricity, 783,954 kBtu of natural gas per year, and 60,673 gallons[11] of gasoline per year. The approved senior housing project has been constructed according to the California Building Code (CBC) and CALGreen Standards. Additionally, the approved project implemented green-building features. While the proposed unrestricted housing project would result in an incremental increase in the number of daily trips compared to the approved senior housing, compared to the prior baseline condition of the office development on the site, the proposed unrestricted housing development would result in a reduction in daily vehicle trips compared to the prior office development. As a result, energy would not be wasted or unnecessarily consumed, and the impact would be less than significant. **(Less than Significant Impact)**

[9] United States Department of Energy. *Energy Independence & Security Act of 2007.* Accessed March 16, 2021. http://www.afdc.energy.gov/laws/eisa.
[10] Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007.* Accessed March 16, 2021. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.
[11] Assumes 24.9 mpg for gasoline usage for 1,510,760 vehicle miles traveled

Impact EN-2:	The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant Impact)

The approved project would not result in a substantial energy increase and would implement energy efficiency standards consistent with the CBC and CALGreen. Therefore, the project would comply with state and local plans for renewable energy and energy efficiency. **(Less than Significant Impact)**

4.3 GREENHOUSE GAS EMISSIONS

The changes to the 2016 approved project relevant to Greenhouse Gas (GHG) emissions are the change in the significance thresholds as well as the change in occupancy. The 2016 approved project was assessed using the year 2020 reduction targets. The modified project is now required to be assessed using the year 2030 reduction targets. The modified project would occupy the structures constructed for the approved project. Therefore, the construction-related GHG emissions have already been released into the atmosphere consistent with the adopted MND and no further analysis is required. The following analysis addresses the operational GHG impacts that would result from implementation of the modified project with an unrestricted age population. Information in this section is based on a CalEEMod run for modified mobile sources, included in Appendix A.

4.3.1 Findings of the previously certified MND

4.3.1.1 *Greenhouse Gas Emissions Impact*

Operational GHG Emissions

In 2011, BAAQMD developed screening criteria to provide a conservative indication of whether a project could result in potentially significant GHG impacts. If the screening criteria are not exceeded by the project, then a detailed assessment of GHG emissions is not required because the project is assumed to result in a less than significant air quality impact. The approved project exceeded the BAAQMD screening size for operational GHG emissions (78 dwelling units for condos). As a result, the projected GHG emissions from the project were evaluated through the CalEEMod modeling program.

BAAQMD's threshold for GHG emissions for projects operational prior to 2020 was 1,100 MT of CO_2e/yr. GHG emissions for the approved senior housing project were calculated based on an assumed operational start year of 2018. The model calculated emissions for transportation, area sources, electricity consumption, natural gas combustion, electricity usage associated with water usage and wastewater discharge, and solid waste landfilling and transportation, as shown in Table 4.3-1 below.

Table 4.3-1 Annual Project GHG Emissions in Metric Tons (CO_2e)

Source Category	2018 Senior Housing Project Emissions
Area	5
Energy Consumption	131
Mobile	264
Solid Waste Generation	19
Water Usage	18
Total Emissions Per Year	**437**
BAAQMD Bright-Line Threshold	1,100

The approved project was determined to generate approximately 437 MT of CO_2e per year, which was 400 MT of CO_2e per year less than the emissions resulting from operation of the existing office building (837 MT of CO_2e per year). Therefore, the approved project was determined to not exceed the emissions threshold for GHGs and had a less than significant impact.

4.3.2 Greenhouse Gas Emissions Impacts Resulting from the Modified Project

4.3.2.1 *Greenhouse Gas Emissions Impact*

Operational GHG Emissions

The modified project would marginally increase vehicle trips to and from the project site during business operations compared to the approved senior housing project, as discussed in Section 4.7 Transportation. The unrestricted age housing project would create approximately 655 daily trips during operations which would be an increase from the 310 trips analyzed in the MND. Although BAAQMD has yet to publish a threshold for 2030, for the purposes of this Addendum, and consistent with other environmental documents prepared in Santa Clara, a 660 MT CO_2e per year for 2030 is utilized. This threshold is utilized for new projects that will be constructed and operational after 2020 and before 2031. GHG emissions that would be generated by the project were calculated using CalEEMod and would increase the GHG emissions by approximately 311 MT of CO_2e per year.

The updated values can be seen in Table 4.3-2 below.

Table 4.3-2 Annual Modified Project GHG Emissions in Metric Tons (CO_2e)

Source Category	2021 Project Emissions
Area	5
Energy Consumption	131
Mobile	575
Solid Waste Generation	19
Water Usage	18
Total Emissions Per Year	**784**
Baseline Office Building Emissions	**837**
BAAQMD Bright-Line Threshold	660

The modified project was determined to generate approximately 784 MT of CO_2e per year, which is 53 MT of CO_2e per year less than the emissions resulting from operation of the baseline office building (837 MT of CO_2e per year). Therefore, although the modified unrestricted age project would exceed the emissions calculated for the approved senior housing project, the GHG emissions of the modified project would be lower than the emissions of the baseline office building and would be consistent with the findings of the adopted MND.

4.4 NOISE

The change to the 2016 approved MND relevant to noise is the increase in trips, resulting from the change in unit occupancy. The following analysis addresses the potential operational noise impacts that would result from the modified project. Because the project is already constructed, the noise impacts related to construction of the project have already occurred consistent with the conclusions of the MND. Therefore, no further discussion of construction noise and vibration is provided.

4.4.1 Findings of the previously certified MND

4.4.1.1 *Project-Generated Traffic Noise Impacts*

Based on the average household size in the City of Santa Clara of 2.7 residents per unit, the 92 housing units would conservatively result in a net increase of 248 residents. The number of residents would most likely be lower than 248 based on the age restriction of the units, the size of the units (a mix of 63 one-bedroom units and 29 two-bedroom units), and as the seniors living there would be less likely to have a second or third occupant in a unit.

Based upon the traffic estimates for the senior housing project, traffic noise levels would not increase as a result of the project due to the net negative change in daily vehicle trips compared to the office baseline. Compared to the existing office building, the approved project would result in a net decrease of approximately 407 daily vehicle trips from the project site. Therefore, it was determined that implementation of the approved senior housing project would result in a decrease in traffic-related noise on Winchester Boulevard and other local roadways and would result in a less than significant ambient noise level impact.

4.4.2 Noise Impacts Resulting from the Modified Project

4.4.2.1 *Project-Generated Traffic Noise Impacts*

The modified unrestricted age project would contribute approximately 248 residents to the project site which would decrease the number of daily vehicle trips from the project site by approximately 65 trips compared to the office baseline. The unrestricted occupancy of the units would increase the number of trips from the site, compared to the 55 plus restricted senior residency, by approximately 345 trips. However, the modified project would still result in less traffic than the baseline office. Therefore, there would be a reduction in the traffic-related noise on Winchester Boulevard compared to the baseline conditions. The modified project would incrementally increase the amount of daily vehicle trips compared to the approved senior housing project, but the significance of noise impacts related to project generated traffic would remain less than significant, both in relation to existing high traffic volumes on North Winchester and compared to the office baseline.

4.5 POPULATION AND HOUSING

The change to the 2016 approved project relevant to population and housing would be the age distribution and number of occupants in each unit, based on the removal of the 55 plus age restriction of the units. The location and design of the proposed project would not change; therefore, the modified project would be consistent with the impacts of the adopted MND on displacement of housing.

4.5.1 Findings of the previously certified MND

4.5.1.1 *Population and Housing Impacts*

The approved senior housing project demolished an office building and constructed two residential buildings totaling 92 housing units. The housing units were proposed to be age restricted to senior citizens of 55 years of age or older. Based on the average household size in the City of Santa Clara of 2.7 residents per unit, the 92 housing units would conservatively result in a net increase of 248 residents. The number of residents would most likely be lower than 248 based on the age restriction of the units, as the seniors living there would be less likely to have a third occupant in a unit.

Because the residences are for seniors, some residents will be retired out of the workforce. Therefore, it was determined that the increase in housing would not have the same effect on the jobs/housing imbalance as a standard housing project. However, the project was determined to help the City achieve the overall goal of increasing housing supply.

4.5.2 Population and Housing Impacts Resulting from the Modified Project

4.5.2.1 *Population and Housing Impacts*

The modified unrestricted age project would provide the same number of residential units on the project site and would contribute the full 248 residents to the city with the age restriction modified for the development. The senior housing project, as noted above, was conservatively assumed to include 2.7 residents per unit, but because of the smaller unit sizes and mix of 63 one-bedroom units and 29 two-bedroom units, it is likely that the senior units would have had less than the City of Santa Clara average household size. As a result, the change in the project to an unrestricted age population would not cause a need to recalculate the expected project population. The modified project would, therefore, fully contribute to the goal of increasing housing supply in the City of Santa Clara and would result in a less than significant impact consistent with the adopted MND.

4.6 PUBLIC SERVICES AND RECREATION

The change to the 2016 approved MND relevant to public service and recreation would be the age distribution and number of occupants in each unit, based on the removal of the 55 plus age restriction of the units. The approved project analyzed the potential for 248 residents in the units but assumed that the senior living situation would result in a slightly decreased number of occupants than the city's average occupancy due to the age of the residents. Because the MND analysis was based on the 248-resident occupancy, the police protection, fire protection, library impacts, and park impacts would not require reanalysis for the change in occupancy and all conclusions would remain the same as the approved project. The approved project assumed a lower number of students than under an unlimited age model, therefore, the analysis below focuses on impacts to school facilities created by the modified project.

4.6.1 Findings of the previously certified MND

4.6.1.1 *School Impacts*

The project site is located within the Campbell Union School District (CUSD) and Campbell Union High School District (CUHSD). Implementation of the approved project would increase the local senior resident population. Although the approved project was for senior residents, it was determined that a small portion of the residents may have or be guardians to school age children. As a result, the MND found that the project could cause a small increase in demand on local school facilities.

Based on student generation rates for CUSD and CUHSD, a standard (non-age restricted) multi-family residence would generate up to 37 new elementary, nine middle school, and seven high school students (for a total of 53 students). It is estimated that the approved senior housing project would generate up to 27 new students (approximately 50 percent of the standard student generation). This would equate to approximately 18 elementary school, five middle school, and four high school students. Based on this estimate, the approved senior housing project marginally increased the need for school facilities but did not require the construction of any new school facilities or expansion of the existing schools to serve the new student population.

According to California Government Code Section 66000, a qualified agency, such as a local school district, may impose fees on developers to compensate for the impact that a project will have on existing facilities and services. The California Legislature passed Senate Bill 50 (SB 50) in 1998 to insert new language into the Government Code (Sections 65995.5-65885.7), which authorized school districts to impose fees on developers of new residential construction in excess of mitigation fees authorized by Government Code Section 66000. SB 50 also restricts the ability of local agencies to deny project approvals on the basis that public school facilities are inadequate. School districts must meet a list of specific criteria, including the completion and annual update of a School Facility Needs Analysis, in order to impose additional fees.

Under SB 50, school districts may collect fees to offset the costs associated with increasing school capacity as a result of development. Under the terms of this statute, payment of statutory fees by property owners or property developers is deemed to mitigate in full for the purposes of CEQA any impacts to school facilities associated with a qualifying project. The fees are assessed based upon the proposed square footage of the new or expanded development. The payment of school impact fees,

consistent with SB 50, was determined to allow the local school district to provide sufficient services for students generated by the approved project.

4.6.1.2 *Recreational Impacts*

The Santa Clara Parks and Recreation Department (Department) provides parks and recreational services in the City. The department is responsible for maintaining and programming the various parks and recreation facilities and works cooperatively with public agencies in coordinating all recreational activities within the City. Overall, as of May 2021, the Department maintains and operates Central Park, a 45.04-acre community park (45.04 acres improved and Central Park North 34.93 acres unimproved, resulting in 79.97 acres), 30 neighborhood parks (124.517 acres improved and 6.132 acres unimproved resulting in 130.649 acres), 13 mini parks (2.59 acres improved and 3.189 acres unimproved resulting in 5.779 acres), public open space (16.13 acres improved and 40.08 acres unimproved resulting in 56.21 acres), recreational facilities (23.898 acres improved and excluding the Santa Clara Golf and Tennis Club/BMX track), recreational trails (7.59 acres improved and 0.20 acres unimproved resulting in 7.79 acres), and joint use facilities (48.588 acres) throughout the City totaling approximately 268.354 improved acres and 84.531 unimproved acres. Community parks are over fifteen acres, neighborhood parks are one to fifteen acres and mini parks are typically less than one acre in size.

Santa Clara City Code Chapter 17.35 requires new residential developments to provide developed park and recreational land and/or pay a fee in lieu of parkland dedication, at the City's discretion, and pursuant to the State of California Quimby Act (Quimby) and/or the Mitigation Fee Act (MFA) to help mitigate the impacts of the new resident demand on existing parkland and recreational facilities. The City is meeting the standard of three acres per 1,000 residents per the Quimby provisions of the City Code and 2.60 acres per 1,000 residents per the MFA provisions of the City Code with regard to neighborhood parks.

Quimby Act-California Code Section 66477

The Quimby Act (California Government Code Section 66477) was approved by the California legislature to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees due in lieu of parkland dedication to help mitigate the impacts from new residential developments. This legislation was initiated in 1980's in response to California's increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California's growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parkland, pay a fee in-lieu of parkland dedication, or perform a combination of the two at the discretion of the City.

Mitigation Fee Act

Mitigation Fee Act. In 1989, the State Legislature passed Assembly Bill 1600 (AB1600), adding Section 66000 et seq. to the California Government Code (the "Mitigation Fee Act"), which sets forth requirements for local agencies to follow if they collect fees from developers to defray the cost of the construction of public facilities related to development projects. These legal requirements are frequently referred to as "AB 1600 requirements." Each local agency imposing such development impact fees must prepare an annual report providing specific information about these fees (i.e., a

"nexus study") that shows the proper connection of the fees to the project and how accounting and reporting for the fees collected are regulated.

Implementation of this project would contribute to an increase in demand for parkland because it was determined to potentially add an additional 248 new residents to the City.[12] The increased population associated with the project would contribute to the overuse of existing parks near the project site that would potentially lead to physical deterioration of park facilities and overcrowding. The project did not dedicate any public parkland and was required to pay a fee in-lieu of parkland dedication in the amount of $1,924,000 to help mitigate the impacts of the new resident demand on existing parkland and recreational facilities. This resulted in a less than significant impact on recreation resources as a result of the approved project.

4.6.2 Public Services and Recreation Impacts Resulting from the Modified Project

4.6.2.1 *School Impacts*

The modified project would contribute students to the local school districts. According to the findings of the adopted MND, the unrestricted multifamily units would generate up to 37 new elementary, nine middle school, and seven high school students (for a total of 53 students). This would be approximately double the number of students estimated for the senior housing option. As stated above, the adopted MND required compliance with the California Government Code Section 66000 and SB 50. Therefore, the impact of the modified project on school service ratios would be consistent with the adopted MND and would be required to pay school impact fees consistent with SB 50 in proportion to the students generated by the project.

4.6.2.2 *Recreational Impacts*

The modified project would not increase the number of people expected for the project site in the approved project. As stated above the approved project was required to pay an in-lieu fee of $1,924,000 to reduce impacts to existing parkland and recreational facilities. Therefore, the impacts of the modified project would be consistent with the adopted MND and would result in a less than significant impact on parkland and recreational facilities.

[12] 2.7 residents per unit * 92 units = 248 residents

4.7 TRANSPORTATION

The change to the 2016 approved MND relevant to transportation would be the age distribution and number of occupants in each unit, based on the removal of the 55 plus age restriction of the units which may change the number of trips to and from the project site. In addition, the City has adopted a VMT policy that is applicable to the project, while the senior housing project was approved prior to the City's adoption of the VMT policy. The site design, airport operations, and emergency access to the site would remain the same as the approved project because the approved project was constructed. Additionally, the public transportation, pedestrian, and bicycle facilities would not change as a result of modification of the approved project. Therefore, the analysis below focuses on the trip generation of the proposed project and any changes to VMT that would occur as a result of the change in the age of the resident population. The information in this section is based on the Transportation Study prepared by Hexagon Transportation consultants on March 18, 2021, included as Appendix B.

4.7.1 Findings of the previously certified MND

4.7.1.1 *Transportation Impacts*

The adopted MND determined that the senior housing project would contribute approximately 310 total daily trips to the project site. This would result in a 407-trip reduction from the baseline condition of 717 daily trips for the office building. The MND concluded that the senior housing project would be associated with fewer than 100 trips in each peak hour and would result in no new net trips to the project site. Therefore, the senior housing project would have a less than significant impact on level of service.

4.7.2 Transportation Impacts Resulting from the Modified Project

4.7.2.1 *Transportation Impacts*

The modified project would potentially increase the number of occupants, many of whom would be employed or attend school, on the project site and would therefore, generate more daily and peak hour trips. The transportation study prepared for the modified unrestricted age project determined that the project would generate 655 total daily trips and a maximum of 55 peak hour trips in the PM peak hour. This would represent an increase of 345 daily trips compared to the approved senior housing project, but a reduction of 62 total daily trips from the baseline office use and would result in fewer than 100 trips in each peak hour. Therefore, the modified unrestricted age project would be consistent with the findings in the adopted MND and would result in a less than significant impact.

4.7.2.2 *Project Generated Vehicle Miles Traveled (VMT)*

The City of Santa Clara requires that all projects evaluate and disclose transportation environmental impacts by measuring VMT. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day.

The City of Santa Clara VMT policy states that a project will have a less than significant impact if the project's VMT is 15 percent below the countywide average VMT of 13.33 VMT per capita. Based on the VMT Evaluation conducted by Hexagon Transportation Consultants, the VMT for the

modified unrestricted age project would be 7.17 VMT per capita. A 15 percent reduction in the Countywide Average for residential uses of 13.33 daily VMT per capita would be 11.33 VMT per capita. Therefore, the modified project would result in VMT per capita lower than the City threshold and would result in a less than significant impact. **(Less than Significant Impact)**

4.7.3 Non CEQA Project Issues

4.7.3.1 *Project Parking Requirements*

The modified unrestricted age project would provide 105 parking spots for residents (consistent with the approved senior housing project) on the project site. This would provide a ratio of 0.91 parking spaces per bedroom in the development.

Hexagon Transportation Consultants prepared a parking analysis comparing the modified project to other developments near the project site. The nearby developments provide an average of 1.17 parking spaces per bedroom, and usually have a peak parking demand of approximately 0.82 parking spaces per bedroom. Although the modified project would provide less than the average number of parking spaces per bedroom, the modified project would provide greater than the average parking demand for developments of similar design. Therefore, the project would have adequate parking to operate as a general population housing use. It should be noted that limiting parking supply is an acknowledged Transportation Demand Management (TDM) approach to limiting VMT, while excessive parking can lead to excessive VMT.

4.8 UTILITIES AND SERVICE SYSTEMS

The change to the 2016 approved MND relevant to utilities and service systems would be the age distribution and number of occupants in each unit, based on the removal of the 55 plus age restriction of the units from the approved project. The approved senior housing project structure is currently constructed on the project site, therefore impacts resulting from the construction of infrastructure would be consistent with the analysis and impacts in the adopted MND. Additionally, all analysis in the adopted MND was calculated based on full multifamily occupancy, i.e. no reduction was taken for smaller on average senior households, and the MND's analysis would, therefore, apply to the operations of the unrestricted age project. For these reasons, the impact significance for utilities and service systems would remain the same for operations of the modified project.

4.9 WILDFIRE

Wildfire was not a required analysis under CEQA at the time the MND was adopted. As of December 2018, wildfire risk is required to be addressed under the CEQA Checklist and, therefore, is included in this Addendum.

4.9.1 Environmental Setting

4.9.1.1 *Existing Conditions*

The project site is located in a highly urbanized area in the middle of Santa Clara. This area is not located within a Fire Hazard Severity Zone as designated by the Cal Fire, Fire and Resource Assessment Program.[12]

4.9.2 Impact Discussion

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
1) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
2) 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?	☐	☐	☐	☒
3) 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?	☐	☐	☐	☒
4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(No Impact)**

[12] California Department of Forestry and Fire Protection. Fire and Resource Assessment Program. Very High Fire Hazard Severity Zones in LRA: As recommended by Calfire. October 8, 2008.

SECTION 5.0 REFERENCES

The analysis in this Initial Study is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

California Air Resources Board. "The Advanced Clean Cars Program." Accessed March 4, 2020. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program.

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Public Law 110–140—December 19, 2007. Energy Independence & Security Act of 2007. Accessed March 16, 2021. http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf.

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United States Department of Energy. Energy Independence & Security Act of 2007. Accessed March 16, 2021. http://www.afdc.energy.gov/laws/eisa.

United States Energy Information Administration. "State Profile and Energy Estimates, 2018." Accessed March 16, 2021. https://www.eia.gov/state/?sid=CA#tabs-2.

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United States Environmental Protection Agency. "The 2018 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." March 2019.

SECTION 6.0 LEAD AGENCY AND CONSULTANTS

6.1 LEAD AGENCY

City of Santa Clara
1500 Warburton Avenue
Santa Clara, CA 95050

6.2 CONSULTANTS

David J. Powers & Associates, Inc.
Environmental Consultants and Planners
Akoni Danielsen, Principal Project Manager
Patrick Kallas, Associate Project Manager
Ryan Osako, Graphic Artist

Hexagon Transportation Consultants, Inc.
Consulting Transportation Analysts
Gary Black, Principal

190 North Winchester

Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Low Rise	92.00	Dwelling Unit	1.86	81,021.60	248

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site built

Vehicle Trips - number of trips from traffic study

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	92,000.00	81,021.60
tblLandUse	LotAcreage	5.75	1.86
tblLandUse	Population	263.00	248.00
tblVehicleTrips	ST_TR	7.16	7.11
tblVehicleTrips	SU_TR	6.07	7.11
tblVehicleTrips	WD_TR	6.59	7.11

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021			1.4681								0.0000	248.0133	248.0133	0.0373	0.0000	248.9447
2022			0.2211								0.0000	36.6178	36.6178	5.8300e-003	0.0000	36.7635
Maximum			**1.4681**								**0.0000**	**248.0133**	**248.0133**	**0.0373**	**0.0000**	**248.9447**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021			1.4681								0.0000	248.0131	248.0131	0.0373	0.0000	248.9445
2022			0.2211								0.0000	36.6177	36.6177	5.8300e-003	0.0000	36.7635
Maximum			**1.4681**								**0.0000**	**248.0131**	**248.0131**	**0.0373**	**0.0000**	**248.9445**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area			0.9769								4.1943	2.8386	7.0329	7.8200e-003	2.8000e-004	7.3104
Energy			0.0184								0.0000	166.4616	166.4616	6.2200e-003	2.0100e-003	167.2152
Mobile			1.9085								0.0000	574.6681	574.6681	0.0201	0.0000	575.1699
Waste											8.5906	0.0000	8.5906	0.5077	0.0000	21.2828
Water											1.9017	13.2832	15.1849	0.1959	4.7400e-003	21.4943
Total			**2.9038**								**14.6865**	**757.2515**	**771.9380**	**0.7377**	**7.0300e-003**	**792.4726**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area			0.9769								4.1943	2.8386	7.0329	7.8200e-003	2.8000e-004	7.3104
Energy			0.0184								0.0000	166.4616	166.4616	6.2200e-003	2.0100e-003	167.2152
Mobile			1.9085								0.0000	574.6681	574.6681	0.0201	0.0000	575.1699
Waste											8.5906	0.0000	8.5906	0.5077	0.0000	21.2828
Water											1.9017	13.2832	15.1849	0.1959	4.7400e-003	21.4943
Total			**2.9038**								**14.6865**	**757.2515**	**771.9380**	**0.7377**	**7.0300e-003**	**792.4726**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/24/2021	4/20/2021	5	20	
2	Site Preparation	Site Preparation	4/21/2021	4/22/2021	5	2	
3	Grading	Grading	4/23/2021	4/28/2021	5	4	
4	Building Construction	Building Construction	4/29/2021	2/2/2022	5	200	
5	Paving	Paving	2/3/2022	2/16/2022	5	10	
6	Architectural Coating	Architectural Coating	2/17/2022	3/2/2022	5	10	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 1.5

Acres of Paving: 0

Residential Indoor: 164,069; Residential Outdoor: 54,690; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	6.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	6.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading	Graders	1	6.00	187	0.41
Paving	Paving Equipment	1	8.00	132	0.36
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Building Construction	Welders	3	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	66.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	5	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	13.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			0.1449								0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total			**0.1449**								**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

3.2 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			2.9700e-003								0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total			**2.9700e-003**								**0.0000**	**0.8535**	**0.8535**	**2.0000e-005**	**0.0000**	**0.8540**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			0.1449								0.0000	21.0713	21.0713	5.3900e-003	0.0000	21.2060
Total			**0.1449**								**0.0000**	**21.0713**	**21.0713**	**5.3900e-003**	**0.0000**	**21.2060**

3.2 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			2.9700e-003								0.0000	0.8535	0.8535	2.0000e-005	0.0000	0.8540
Total			**2.9700e-003**								**0.0000**	**0.8535**	**0.8535**	**2.0000e-005**	**0.0000**	**0.8540**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road			7.5600e-003								0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total			**7.5600e-003**								**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			1.8000e-004								0.0000	0.0525	0.0525	0.0000	0.0000	0.0526
Total			**1.8000e-004**								**0.0000**	**0.0525**	**0.0525**	**0.0000**	**0.0000**	**0.0526**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road			7.5600e-003								0.0000	1.5118	1.5118	4.9000e-004	0.0000	1.5241
Total			**7.5600e-003**								**0.0000**	**1.5118**	**1.5118**	**4.9000e-004**	**0.0000**	**1.5241**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			1.8000e-004								0.0000	0.0525	0.0525	0.0000	0.0000	0.0526
Total			**1.8000e-004**								**0.0000**	**0.0525**	**0.0525**	**0.0000**	**0.0000**	**0.0526**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road			0.0127								0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total			**0.0127**								**0.0000**	**2.4767**	**2.4767**	**8.0000e-004**	**0.0000**	**2.4968**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			3.7000e-004								0.0000	0.1051	0.1051	0.0000	0.0000	0.1051
Total			**3.7000e-004**								**0.0000**	**0.1051**	**0.1051**	**0.0000**	**0.0000**	**0.1051**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road			0.0127								0.0000	2.4767	2.4767	8.0000e-004	0.0000	2.4968
Total			**0.0127**								**0.0000**	**2.4767**	**2.4767**	**8.0000e-004**	**0.0000**	**2.4968**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			3.7000e-004								0.0000	0.1051	0.1051	0.0000	0.0000	0.1051
Total			**3.7000e-004**								**0.0000**	**0.1051**	**0.1051**	**0.0000**	**0.0000**	**0.1051**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			1.1416								0.0000	160.6697	160.6697	0.0287	0.0000	161.3867
Total			**1.1416**								**0.0000**	**160.6697**	**160.6697**	**0.0287**	**0.0000**	**161.3867**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0242								0.0000	22.9241	22.9241	1.0000e-003	0.0000	22.9491
Worker			0.1336								0.0000	38.3486	38.3486	8.7000e-004	0.0000	38.3704
Total			**0.1578**								**0.0000**	**61.2727**	**61.2727**	**1.8700e-003**	**0.0000**	**61.3195**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			1.1416								0.0000	160.6695	160.6695	0.0287	0.0000	161.3865
Total			**1.1416**								**0.0000**	**160.6695**	**160.6695**	**0.0287**	**0.0000**	**161.3865**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0242								0.0000	22.9241	22.9241	1.0000e-003	0.0000	22.9491
Worker			0.1336								0.0000	38.3486	38.3486	8.7000e-004	0.0000	38.3704
Total			**0.1578**								**0.0000**	**61.2727**	**61.2727**	**1.8700e-003**	**0.0000**	**61.3195**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			0.1464								0.0000	20.8813	20.8813	3.6400e-003	0.0000	20.9723
Total			**0.1464**								**0.0000**	**20.8813**	**20.8813**	**3.6400e-003**	**0.0000**	**20.9723**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			2.9600e-003								0.0000	2.9503	2.9503	1.2000e-004	0.0000	2.9534
Worker			0.0160								0.0000	4.8022	4.8022	1.0000e-004	0.0000	4.8047
Total			**0.0189**								**0.0000**	**7.7525**	**7.7525**	**2.2000e-004**	**0.0000**	**7.7581**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			0.1464								0.0000	20.8813	20.8813	3.6400e-003	0.0000	20.9722
Total			**0.1464**								**0.0000**	**20.8813**	**20.8813**	**3.6400e-003**	**0.0000**	**20.9722**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			2.9600e-003								0.0000	2.9503	2.9503	1.2000e-004	0.0000	2.9534
Worker			0.0160								0.0000	4.8022	4.8022	1.0000e-004	0.0000	4.8047
Total			**0.0189**								**0.0000**	**7.7525**	**7.7525**	**2.2000e-004**	**0.0000**	**7.7581**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			0.0440								0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9315
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			**0.0440**								**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9315**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			1.3700e-003								0.0000	0.4113	0.4113	1.0000e-005	0.0000	0.4115
Total			**1.3700e-003**								**0.0000**	**0.4113**	**0.4113**	**1.0000e-005**	**0.0000**	**0.4115**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road			0.0440								0.0000	5.8848	5.8848	1.8700e-003	0.0000	5.9314
Paving											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total			**0.0440**								**0.0000**	**5.8848**	**5.8848**	**1.8700e-003**	**0.0000**	**5.9314**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			1.3700e-003								0.0000	0.4113	0.4113	1.0000e-005	0.0000	0.4115
Total			**1.3700e-003**								**0.0000**	**0.4113**	**0.4113**	**1.0000e-005**	**0.0000**	**0.4115**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road			9.0700e-003								0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total			**9.0700e-003**								**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			1.3700e-003								0.0000	0.4113	0.4113	1.0000e-005	0.0000	0.4115
Total			**1.3700e-003**								**0.0000**	**0.4113**	**0.4113**	**1.0000e-005**	**0.0000**	**0.4115**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road			9.0700e-003								0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2787
Total			**9.0700e-003**								**0.0000**	**1.2766**	**1.2766**	**8.0000e-005**	**0.0000**	**1.2787**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor			0.0000								0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker			1.3700e-003								0.0000	0.4113	0.4113	1.0000e-005	0.0000	0.4115
Total			**1.3700e-003**								**0.0000**	**0.4113**	**0.4113**	**1.0000e-005**	**0.0000**	**0.4115**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated			1.9085								0.0000	574.6681	574.6681	0.0201	0.0000	575.1699
Unmitigated			1.9085								0.0000	574.6681	574.6681	0.0201	0.0000	575.1699

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	654.12	654.12	654.12	1,510,760	1,510,760
Total	654.12	654.12	654.12	1,510,760	1,510,760

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.607897	0.037434	0.184004	0.107261	0.014919	0.004991	0.012447	0.020659	0.002115	0.001554	0.005334	0.000623	0.000761

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated											0.0000	116.3907	116.3907	5.2600e-003	1.0900e-003	116.8467
Electricity Unmitigated											0.0000	116.3907	116.3907	5.2600e-003	1.0900e-003	116.8467
NaturalGas Mitigated			0.0184								0.0000	50.0710	50.0710	9.6000e-004	9.2000e-004	50.3685
NaturalGas Unmitigated			0.0184								0.0000	50.0710	50.0710	9.6000e-004	9.2000e-004	50.3685

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	938294			0.0184								0.0000	50.0710	50.0710	9.6000e-004	9.2000e-004	50.3685
Total				**0.0184**								**0.0000**	**50.0710**	**50.0710**	**9.6000e-004**	**9.2000e-004**	**50.3685**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	938294			0.0184								0.0000	50.0710	50.0710	9.6000e-004	9.2000e-004	50.3685
Total				**0.0184**								**0.0000**	**50.0710**	**50.0710**	**9.6000e-004**	**9.2000e-004**	**50.3685**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	400090	116.3907	5.2600e-003	1.0900e-003	116.8467
Total		**116.3907**	**5.2600e-003**	**1.0900e-003**	**116.8467**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	400090	116.3907	5.2600e-003	1.0900e-003	116.8467
Total		**116.3907**	**5.2600e-003**	**1.0900e-003**	**116.8467**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated			0.9769								4.1943	2.8386	7.0329	7.8200e-003	2.8000e-004	7.3104
Unmitigated			0.9769								4.1943	2.8386	7.0329	7.8200e-003	2.8000e-004	7.3104

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth			0.2923								4.1943	1.7228	5.9170	6.7400e-003	2.8000e-004	6.1675
Landscaping			0.6846								0.0000	1.1159	1.1159	1.0800e-003	0.0000	1.1429
Total			**0.9769**								**4.1943**	**2.8386**	**7.0329**	**7.8200e-003**	**2.8000e-004**	**7.3104**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products											0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth			0.2923								4.1943	1.7228	5.9170	6.7400e-003	2.8000e-004	6.1675
Landscaping			0.6846								0.0000	1.1159	1.1159	1.0800e-003	0.0000	1.1429
Total			**0.9769**								**4.1943**	**2.8386**	**7.0329**	**7.8200e-003**	**2.8000e-004**	**7.3104**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	15.1849	0.1959	4.7400e-003	21.4943
Unmitigated	15.1849	0.1959	4.7400e-003	21.4943

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.99417 / 3.77893	15.1849	0.1959	4.7400e-003	21.4943
Total		**15.1849**	**0.1959**	**4.7400e-003**	**21.4943**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	5.99417 / 3.77893	15.1849	0.1959	4.7400e-003	21.4943
Total		**15.1849**	**0.1959**	**4.7400e-003**	**21.4943**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	8.5906	0.5077	0.0000	21.2828
Unmitigated	8.5906	0.5077	0.0000	21.2828

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	42.32	8.5906	0.5077	0.0000	21.2828
Total		**8.5906**	**0.5077**	**0.0000**	**21.2828**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	42.32	8.5906	0.5077	0.0000	21.2828
Total		**8.5906**	**0.5077**	**0.0000**	**21.2828**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Hexagon Transportation Consultants, Inc.

Memorandum

Date: May 19, 2021

To: Mr. Steve Gall, USA Properties Fund

From: Gary Black, Rueben Rodriguez

Subject: Transportation Study for the 190 North Winchester Boulevard (Santana Terrace Apartments) Project in Santa Clara, California

Hexagon Transportation Consultants, Inc. has completed a transportation study for the 190 North Winchester Boulevard (Santana Terrace apartments) project in Santa Clara, California. The project site is located on the west side of Winchester Boulevard, south of West Hedding Street/Pruneridge Avenue (see Figure 1). The project will include 92 residential units (69 one-bedroom units and 23 two-bedroom units) and 105 parking spaces (see Figure 2). The project has been approved for senior housing; however, the project is considering repurposing the units to general population housing. This change in use requires the project to evaluate the difference in trip generation between the two housing types. Also, since the approval of the project, California Environmental Quality Act (CEQA) policy has changed, and analysis of vehicle miles traveled (VMT) is required. Therefore, this transportation study includes a trip generation comparison between the approved senior housing units to general housing units and a VMT analysis per the City guidelines. This transportation study also includes an analysis of parking demand.

The results and recommendations of the transportation study are descried below.

Trip Generation Analysis

The Initial Study report for the project was prepared by the City of Santa Clara and published in October 2015. The Initial Study report included trip generation estimates for the 92 residential units, analyzed as senior housing. The Initial Study report estimated that the 92 senior housing units would generate 18 AM peak-hour vehicle trips (6 inbound and 12 outbound) and 23 PM peak-hour vehicle trips (12 inbound and 11 outbound). The Initial Study showed that by including trip credits for the previous on-site use, a 59,000 square foot (s.f.) office building, the 92 senior housing units would not increase the number of peak hour trips (see Table 1).

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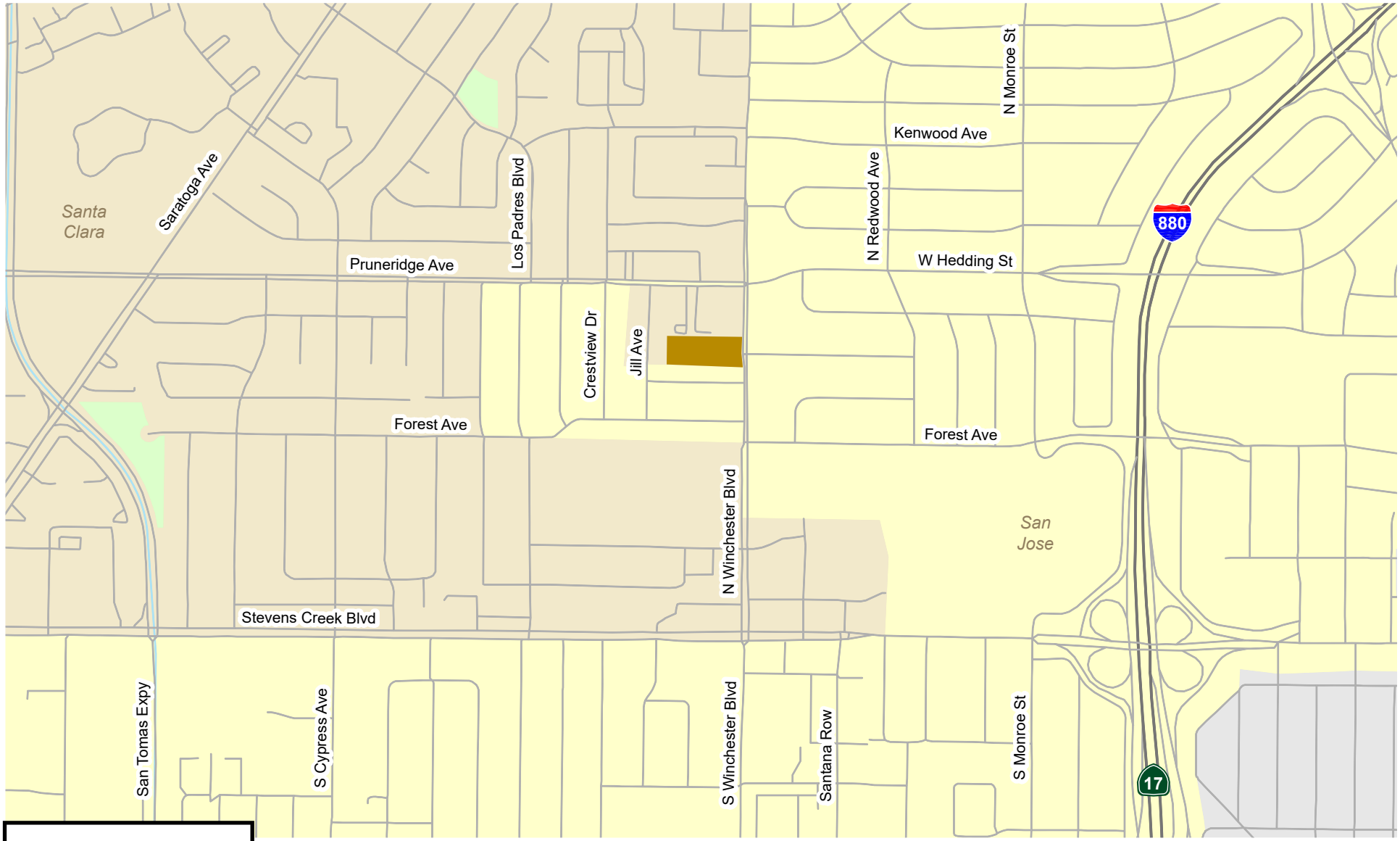

Figure 1
Project Location

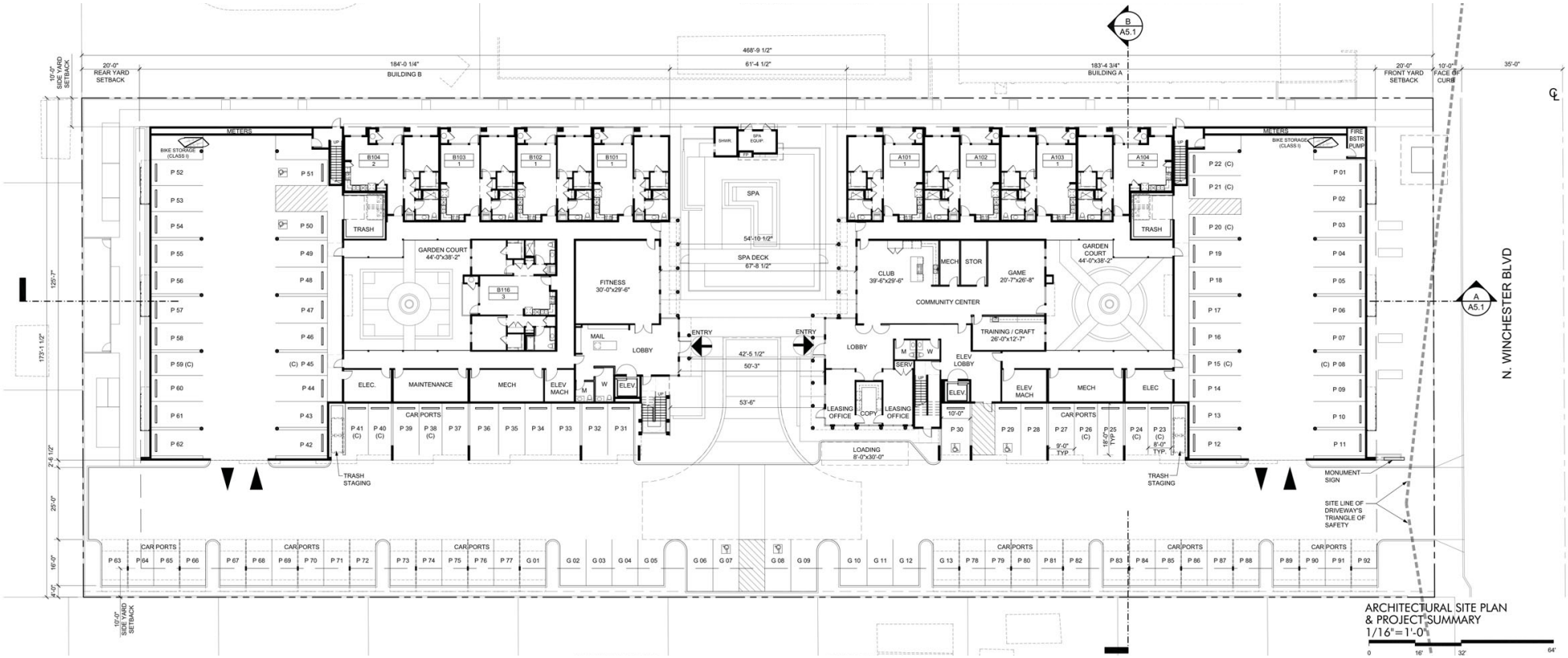

Figure 2
Project Site Plan

NORTH
Not to Scale

Table 1
Initial Study Report Trip Generation Summary

Land Use	Size	Units	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Project Use									
Senior Adult Housing[1]	92	d.u.	310	6	12	18	12	11	23
Previous Use									
Office Building[1]	59,000	s.f.	717	89	12	101	16	81	97
Net Trips			***(407)***	***(83)***	***0***	***(83)***	***(4)***	***(70)***	***(74)***

Notes:
d.u. = dwellings units, s.f. = square feet

[1] Trip generation estimates based on the information from the *Initial Study Santana Terrace Senior Apartments* prepared by the City of Santa Clara and published in October 2015.

The project is considering repurposing the 92 units from senior housing units to general population housing units. Senior housing developments and general population housing developments have different trip generation characteristics. Typically, general population housing uses generate more trips during the peak hours than senior housing uses. A comparison of the trip generation estimates for the senior housing units and general population housing units in shown in Table 2. The proposed general population housing units are estimated to generate 26 more AM peak hour and 32 more PM peak hour vehicle trips compared to the approved senior housing units.

Table 2
Project Trip Generation Comparison Summary

Land Use	Size	Units	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Project Use									
General Population Housing[1]	92	d.u.	655	10	34	44	35	20	55
Senior Adult Housing[2]	92	d.u.	310	6	12	18	12	11	23
Difference In Project Trips			***345***	***4***	***22***	***26***	***23***	***9***	***32***

Notes:
d.u. = dwellings units, s.f. = square feet

[1] General population housing trips based on the rates published in the ITE *Trip Generation Manual, 10th Edition (2017)* for Multifamily Housing (Mid-Rise) (Land Use Code 220).
[2] Trip generation estimates based on the information from the *Initial Study Santana Terrace Senior Apartments* prepared by the City of Santa Clara and published in October 2015.

Similar to the Initial Study report, the general population housing trip generation can be compared to the previous office building (see Table 3). This comparison shows that the 92 residential units would not increase the number of peak hour trips compared to the previous office building.

Table 3
Net Trip Generation Summary with General Population Housing Units

Land Use	Size	Units	Daily	AM Peak Hour In	AM Peak Hour Out	AM Peak Hour Total	PM Peak Hour In	PM Peak Hour Out	PM Peak Hour Total
Project Use									
General Population Housing[1]	92	d.u.	655	10	34	44	35	20	55
Previous Use									
Office Building[2]	59,000	s.f.	717	89	12	101	16	81	97
Net Trips			***(62)***	***(79)***	***22***	***(57)***	***19***	***(61)***	***(42)***

Notes:
d.u. = dwellings units, s.f. = square feet

1 General population housing trips based on the rates published in the ITE *Trip Generation Manual, 10th Edition (2017)* for Multifamily Housing (Mid-Rise) (Land Use Code 220).
2 Trip generation estimates based on the information from the *Initial Study Santana Terrace Senior Apartments* prepared by the City of Santa Clara and published in October 2015.

The project's Initial Study report concluded that the project's peak-hour trip generation estimates are below the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP) threshold of 100 net new peak-hour vehicle trips. In addition, the project's Initial Study concluded that the residential units would generate fewer trips than the previous on-site office building use. These conclusions would remain valid if the project were to be used as 92 general population housing units instead of 92 senior housing units.

VMT Analysis

The City of Santa Clara requires that all projects evaluate and disclose transportation environmental impacts by measuring VMT. VMT is the total miles of travel by personal motorized vehicles a project is expected to generate in a day.

The City's VMT policy states that the baseline VMT is the Countywide Average VMT and that a project will have a less than significant impact if the project's VMT is 15% below the baseline. The Countywide Average VMT, the VMT threshold, and the project's VMT were determined based on the Santa Clara Countywide VMT Evaluation Tool (VMT Evaluation Tool).

Based on the VMT Evaluation Tool, the Countywide Average for residential uses is 13.33 daily VMT per capita. Therefore, the VMT threshold for a residential project to be considered less-than significant is 11.33 VMT per capita. The VMT for the project based on the VMT Evaluation Tool is 7.17 VMT per capita (see Table 4). Thus, the VMT for the project would be below the City of Santa Clara VMT policy threshold and is expected to have a less-than significant impact on VMT. The VMT Evaluation Tool report is provided as Appendix A.

Table 4
Project VMT Summary

Scenario	VMT
Countywide Average VMT Baseline	13.33
Threshold (15% Below Baseline)	*11.33*
Project VMT	**7.17**

Notes:
VMT = vehicle miles traveled
[1] The VMT were determined based on the Santa Clara Countywide VMT Evaluation Tool. VMT is measured in home-based VMT per capita.

Parking Demand Analysis

A parking demand analysis was conducted to determine a typical parking demand ratio for residential developments in this type of setting. This analysis considered general population residential developments that are comparable in size and location. To evaluate the parking demand for the project, Hexagon utilized parking survey data from recent parking studies conducted at general population housing developments.

General Population Housing Parking Demand

The general population housing parking demand is based on counts conducted at four nearby general population residential developments. The four facilities listed below were counted on a typical weekday and a typical weekend day.

- Hearth North Apartments – 2870 Kaiser Drive (Santa Clara, California)
- Hearth South Apartments – 2900 Hearth Place (Santa Clara, California)
- Cobalt Apartments – 50 Saratoga Avenue (Santa Clara, California)
- Park Central Apartments – 1050 Benton Street (Santa Clara, California)

The results of the parking demand counts show that on average the general population housing developments provide 1.17 parking spaces per bedroom, and there is an average parking demand of 0.82 parking spaces per bedroom (see Table 5).

Table 5
General Population Parking Demand

Facility	Bedrooms	Parking Provided	Parking Provided per Bedroom	Peak Parking Demand	Parking Demand per Bedroom
Hearth North Apartments	449	474	1.06	364	0.81
Hearth South Apartments	404	462	1.14	317	0.78
Cobalt Apartments	326	378	1.16	274	0.84
Park Central Apartments	261	345	1.32	219	0.84
Average			***1.17***		***0.82***

Project Parking

The project will include 105 parking spaces and 115 bedrooms (69 one-bedroom units and 23 two-bedroom units), which equates to 0.91 spaces per bedroom. The current 0.91 parking spaces per bedroom provided by the project is greater than the average demand per bedroom from the counts collected at the four nearby general population housing developments in the City of Santa Clara. Therefore, the project should have adequate parking to operate as a general population housing use.

Conclusions

The purposes of this transportation study were to compare the trip generation between the approved senior housing units and the proposed general population units, to satisfy the City of Santa Clara's VMT policy, and to evaluate parking demand for the project. Based on the analysis, Hexagon has the following conclusions.

- The proposed general population housing units are estimated to generate 26 more AM peak hour and 32 more PM peak hour vehicle trips compared to the approved senior housing units.
- The project's Initial Study report concluded that the project's peak-hour trip generation estimates are below the VTA CMP threshold of 100 net new peak-hour vehicle trips. In addition, the project's Initial Study concluded that the residential units would generate fewer trips than the previous on-site office building use. These conclusions would remain valid if the project were to be used as 92 general population housing units instead of 92 senior housing units.
- The VMT for the project based on the VMT Evaluation Tool is 7.17 daily VMT per capita, which is below the City of Santa Clara VMT policy threshold and thus, the project is expected to have a less-than significant impact on VMT.
- The project includes 105 parking spaces and 115 bedrooms (69 one-bedroom units and 23 two-bedroom units), which equates to 0.91 spaces per bedroom.
- The parking demand surveys show that the average parking demand per bedroom at the four nearby general population housing developments in the City of Santa Clara is 0.82 parking spaces per bedroom. Therefore, the project should have adequate parking to operate as a general population housing use.

Appendix A

VMT Evaluation Tool Report

Santa Clara Countywide VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: January 08, 2021, 10:33:34 AM

Project Name: 130 N. Winchester (Santana Terrace)

Project Description: 92 Residential Units

Project Location

Jurisdiction:
Santa Clara

APN	TAZ
30316073	1249

Inside Transit Priority Area (TPA)?
Yes (Pass)

Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1

Data Version: VTA Countywide Model December 2019

Analysis Methodology: TAZ

Baseline Year: 2021

Project Land Use

Residential:

Single Family DU:

Multifamily DU:

Total DUs: 0

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

Motor Vehicle Parking:

Bicycle Parking:

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project:	Home-based VMT per Capita
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.33
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	7.17	null	null
Low VMT Screening Analysis	Yes (Pass)	null	null