



## Memorandum

**Date:** January 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 described 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).

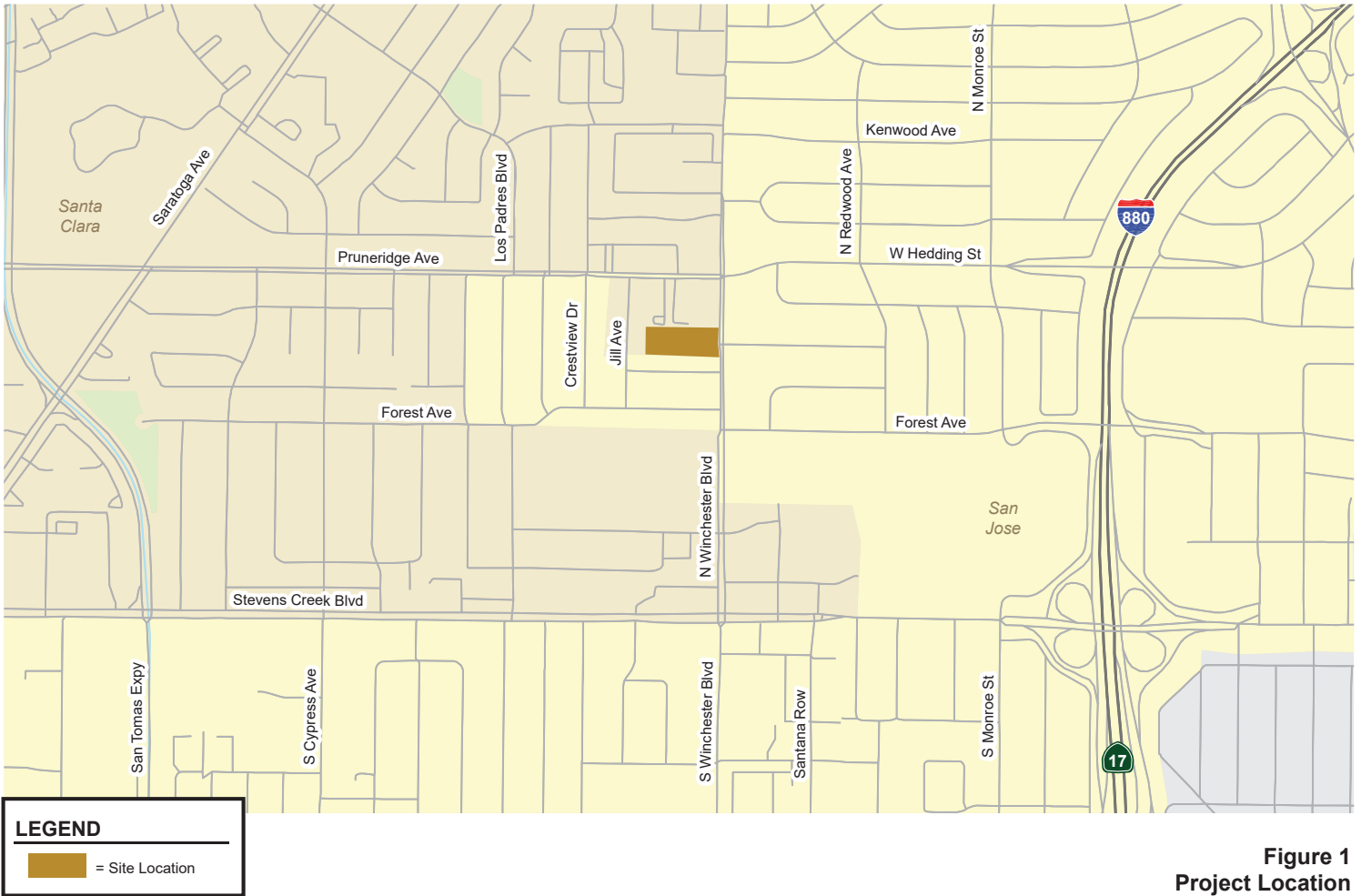


Figure 1  
Project Location

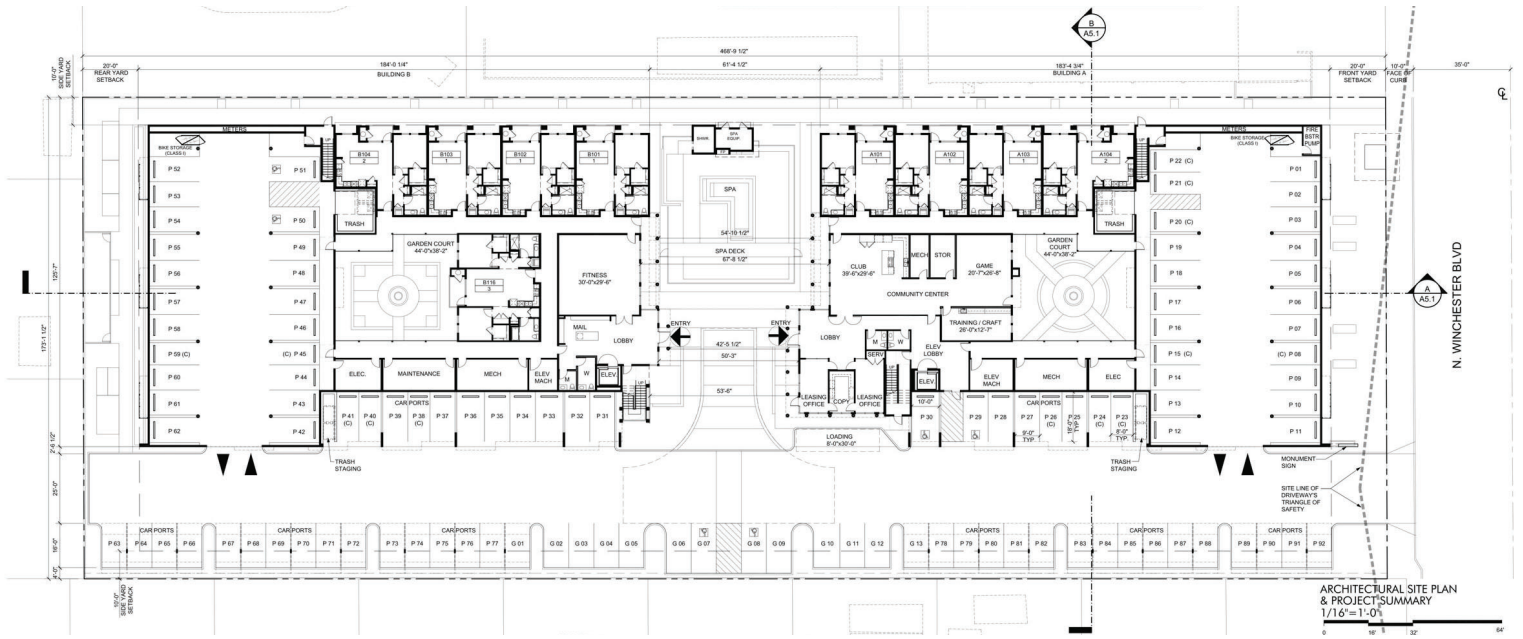


Figure 2  
Project Site Plan

**Table 1**  
**Initial Study Report Trip Generation Summary**

Land Use	Size	Units	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b>Project Use</b>								
Senior Adult Housing <sup>1</sup>	92	d.u.	6	12	18	12	11	23
<b>Previous Use</b>								
Office Building <sup>1</sup>	59,000	s.f.	89	12	101	16	81	97
<b>Net Trips</b>			<b>(83)</b>	<b>0</b>	<b>(83)</b>	<b>(4)</b>	<b>(70)</b>	<b>(74)</b>

**Notes:**

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

<sup>1</sup> 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 is 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	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b>Project Use</b>								
General Population Housing <sup>1</sup>	92	d.u.	10	34	44	35	20	55
Senior Adult Housing <sup>2</sup>	92	d.u.	6	12	18	12	11	23
<b>Difference In Project Trips</b>			<b>4</b>	<b>22</b>	<b>26</b>	<b>23</b>	<b>9</b>	<b>32</b>

**Notes:**

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

<sup>1</sup> 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).

<sup>2</sup> 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	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
<b>Project Use</b>								
General Population Housing <sup>1</sup>	92	d.u.	10	34	44	35	20	55
<b>Previous Use</b>								
Office Building <sup>2</sup>	59,000	s.f.	89	12	101	16	81	97
<b>Net Trips</b>			<b>(79)</b>	<b>22</b>	<b>(57)</b>	<b>19</b>	<b>(61)</b>	<b>(42)</b>

Notes:

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

<sup>1</sup> 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).

<sup>2</sup> 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.

**Table 4**  
**Project VMT Summary**

Scenario	VMT
Countywide Average VMT Baseline	13.33
<i>Threshold (15% Below Baseline)</i>	<i>11.33</i>
<b>Project VMT</b>	<b>7.17</b>

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
<b>Average</b>			<b>1.17</b>		<b>0.82</b>

## 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.