



# HEXAGON TRANSPORTATION CONSULTANTS, INC.

## Memorandum

**Date:** July 12, 2017  
**To:** Ms. Lily Lim, City of San Mateo  
**From:** Gary Black  
**Subject:** 4 W. Santa Inez, San Mateo, California–Parking Feasibility Study

## Introduction

Hexagon Transportation Consultants, Inc. has completed a parking feasibility study for the proposed multifamily residential project at 4 West Santa Inez in San Mateo, California. The project site is located west of El Camino Real between Engle Road and West Santa Inez Avenue (see Figure 1). The proposed project would include 10 condominium dwelling units with an underground parking garage. The project proposes six three-bedroom units, three two-bedroom units, and one one-bedroom unit.

## Project Parking Requirements and Supply

The San Mateo City Municipal Code Section 27.64.100 specifies the parking requirements for residential uses based on the number of bedrooms. The San Mateo parking requirements are:

- 1.6 resident parking spaces for every one-bedroom unit
- 1.8 resident parking spaces for every two-bedroom unit
- 2.0 resident parking spaces for every three-bedroom or more unit
- 0.2 visitor parking spaces for every residential unit

To meet the San Mateo parking requirements, the project would need to provide 21 parking spaces (19 for tenants and two for visitors). One visitor space and one tenant space would need to be handicapped accessible.

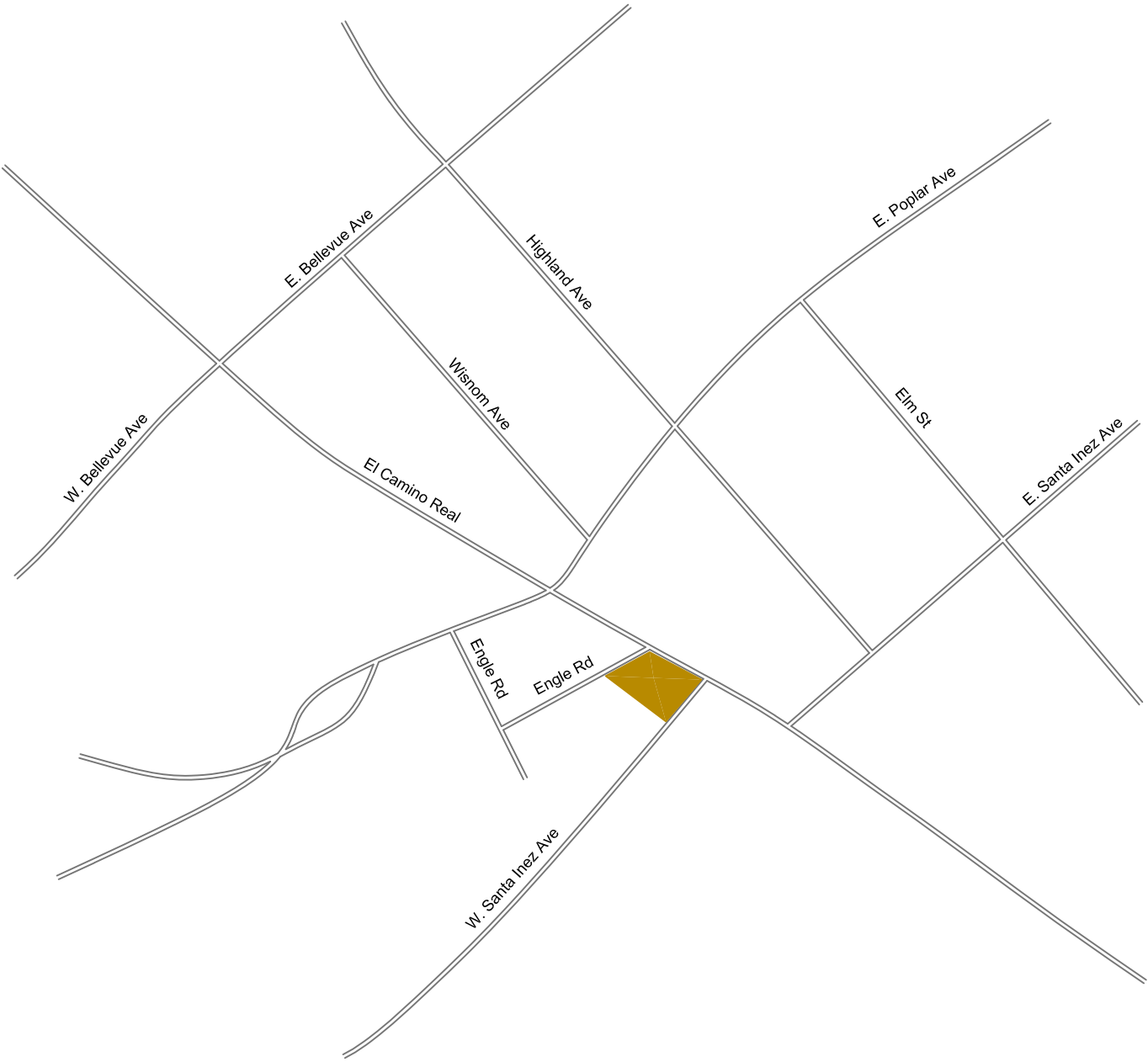
The project proposes an underground parking garage with four standard parking spaces, two handicapped spaces, and 17 mechanical puzzle lift spaces (one mechanical puzzle lift with ten spaces and one mechanical puzzle lift with seven spaces) for a total of 23 spaces. In the underground garage, 21 of the parking spaces would be within a gated area and two spaces (one standard and one handicapped) would be outside the gated area.

A summary of the parking requirements and parking supply is shown in Table 1.


**Table 1**  
**Parking Requirements and Supply**

	Type					Total
	Residential	Visitor	Standard	Accessible	Mechanical Puzzle Lift	
<b>Required</b>						
San Mateo Code <sup>1</sup>	19	2	-	-	-	21
<b>Supply</b>						
Proposed Project	-	-	4	2	17	23

<sup>1</sup> Parking required based on San Mateo City Municipal Code, 27.64.100.



LEGEND

 = Proposed Project Site Location

**Figure 1**  
**Proposed Project Location**

## Parking Feasibility

### Parking Assignment

The project parking would be divided into visitor spaces and residential assigned spaces. It is anticipated that the two spaces located outside the gated area would be allocated as visitor spots. The gated area of the parking garage would have two, 2-level mechanical puzzle lifts, provided by CityLift, and three standard parking spaces. The puzzle lift spaces would not be assigned, which would allow residents the option to choose a space to park in. The puzzle lifts would be independently accessed, and residents would simply need to drive up to the open space provided in the puzzle lift to park. To retrieve their vehicle from a puzzle lift, residents would approach the puzzle lift their vehicle is parked in, and the puzzle lift would shift to move the requested vehicle to the floor level. Residents would then be able to get into their car and leave the space as if it were a standard parking space. According to CityLift, the average retrieval time for these puzzle lift systems is 33 seconds. The single accessible space should be assigned as needed by the tenants.

The project meets the requirements of San Mateo's Security Code that requires all resident parking spaces to be gated.

### Parking Access and Layout

The underground parking garage would be accessible from a single full access driveway on West Santa Inez Avenue in the southwest corner of the project site (see Figure 2). There are one standard parking stall and one handicapped stall shown outside the gate. The standard stall is shown to be accessed from a ramp with a slope of 1 in 15 (6.67%). While this conforms to the maximum allowable slope for parking spaces, it would involve making a multiple point turn to access the parking space. The accessible parking space outside of the gate is on a slope of 1/4" in 12" (2.08%) which is allowable for an accessible parking space. The standard stall and the accessible parking space can be accessed without using the puzzle lift.

The drive/parking aisles are shown to measure 24', which is adequate to allow vehicles to turn in and out of the parking spaces. The underground parking layout shows adequate width for spaces adjacent to walls.

An adequate pedestrian path is shown from the elevators and ramps to the bicycle storage space.



### **Mechanical Puzzle Lift Maintenance**

Parking lifts are a common consideration with new projects because they increase the capacity of the parking supply while minimizing the footprint of the parking area. For the proposed residential development, mechanical puzzle lifts are a viable option. The project proposes two 2-level mechanical puzzle lifts, which would provide 17 parking spaces. The guidelines provided below would help ensure that the puzzle lifts be used effectively and efficiently.

- The Homeowner's Association (HOA) should maintain the puzzle lifts and keep them operational at all times. The HOA for the project should enter into a maintenance agreement with the manufacturer of the puzzle lifts for the maintenance of all the puzzle lifts on the project site. As part of the contract with the manufacturer, the HOA should sign up for the maximum level of maintenance service provided by the manufacturer.
- The HOA for the project should be required to provide training in the use and operation of the puzzle lifts in accordance with the manufacturer's standards. This training should be provided to all occupants of the building in perpetuity.
- The puzzle lifts should be cleaned several times a year. The cleaning should include sweeping up debris, wiping up excess water, removing oil spills, checking nuts/bolts/screws, etc.
- Emergency contact information and maintenance service contact information should be posted visibly.

### **Conclusions**

The key findings based on the parking feasibility study for the proposed multifamily project at 4 West Santa Inez in San Mateo, California are listed below.

- The project is required to provide 19 parking spaces for the residential tenants and two parking spaces for visitors.
- The project proposes a 23 space underground parking garage, with 21 parking spaces located within a gated area and two spaces outside the gated area.
- Including mechanical puzzle lift spaces in the project design is feasible. The guidelines listed in this report should be followed to optimize the use of the puzzle lifts.