# APPENDIX F:
# VEHICLE MILES TRAVELED ANALYSIS

# Hexagon Transportation Consultants, Inc.

## Memorandum

**Date:** July 12, 2022

**To:** Ms. Terri McCracken, Placeworks

**From:** Brian Jackson

**Subject:** VMT Analysis for the Proposed Residential Mixed-Use Project at 1655 S. De Anza Boulevard in Cupertino, California

Hexagon Transportation Consultants, Inc. has completed a Vehicle Miles Traveled (VMT) analysis for a proposed residential mixed-use project at 1655 S. De Anza Boulevard in Cupertino, California. As proposed, the project would demolish 11,648 square feet (s.f.) of retail space and construct 34 residential dwelling units and 7,595 s.f. of retail space. The 34 residential dwelling units would consist of 11 townhomes and 23 apartments, including 12% affordable apartment units (9% very low income and 3% low income). The VMT policy, screening criteria, analysis methodology, and analysis results are described below.

## VMT Policy and Screening Criteria

The City of Cupertino adopted a new VMT policy on February 16, 2021 based on the Senate Bill (SB) 743. VMT measures the total miles of travel by personal motorized vehicles a project is expected to generate in a day.

The VMT analysis prepared for the project was prepared in accordance with the City's Ordinance No. 21-2223, which outlines the methodology for analyzing a project's VMT impact. A project may be screened out from a detailed VMT analysis based on its location, characteristics, or a combination of the two. The City's screening criteria for land use developments are detailed below.

### Screening Criteria

1. Small projects defined as projects generating 836 daily VMT or less, which is equivalent to 110 daily vehicle trips or less; or
2. Projects located within ¼ mile walking distance of a high quality transit corridor or major transit stop as defined by CEQA *; or
3. Local-serving retail projects of 50,000 s.f. or less; or
4. Land use projects consisting of 100% affordable housing; or
5. Transportation projects that do not add vehicle capacity.

* A high quality transit corridor is defined as a transit corridor that provides fixed-route transit service with service intervals of 15 minutes or less during the weekday peak commute periods. A major transit stop is defined as a rail station, a ferry terminal served by bus or rail service, or the intersection of two or more major bus routes with service intervals of 15 minutes or less during the weekday peak commute periods.

The retail component of the project would meet the City's screening criteria. The proposed retail use is expected to result in a less-than-significant VMT impact since it would be less than 50,000 s.f. in size.

The residential component of the project does not meet the City's screening criteria because it does not qualify as a "small" project, the project site is not located within ¼ mile of a major transit stop, and the project would not consist of 100% affordable housing. Thus, VMT was analyzed for the residential component of the project based on the project description provided above.

## VMT Analysis Methodology

To determine whether a project would result in CEQA transportation impacts related to VMT, the City of Cupertino typically utilizes the Santa Clara Countywide VMT Evaluation Tool, provided on the Valley Transportation Authority website. The VMT evaluation tool streamlines the analysis of VMT for residential, office, and industrial land use projects with local traffic. VTA's tool calculates a project's VMT and compares it to the appropriate thresholds of significance based on the project location (i.e., assessor's parcel number) and type of development. The thresholds of significance for development projects in the City of Cupertino are based on the existing citywide average VMT level for residential uses. When assessing a residential project, the project's VMT is divided by the number of residents expected to occupy the project to determine the VMT per capita. The project VMT is compared to the City's significance threshold for residential land uses.

According to City policy, the VMT impact threshold for residential uses is 14.4% below the citywide average VMT. Thus, projects that include residential uses are said to create a significant adverse impact when the estimated project generated VMT exceeds the existing citywide average daily VMT per capita minus 14.4%. Currently, the reported citywide average is 13.42 daily VMT per capita. This equates to a significant impact threshold of 11.50 daily VMT per capita.

## VMT Analysis Results

The project daily VMT estimated by the VTA's VMT Evaluation Tool is 13.97 per capita (see attached VMT Evaluation Tool Summary Report). The project daily VMT, therefore, exceeds the residential threshold of 11.50 daily VMT per capita. Since the VMT generated by the project would exceed the threshold of significance, the project would result in a significant transportation impact on VMT, and mitigation measures are required to reduce the VMT impact to a less-than-significant level.

### Project Mitigation

Based on the VMT reduction strategies included in the VMT Evaluation Tool and the proposed residential land use, it is recommended that the project implement traffic calming measures and pedestrian network improvements (Tier 2 multimodal infrastructure improvements), as well as implement a school pool program, a bicycle program, a car share program, and a behavioral intervention program (Tier 4 TDM strategies) to mitigate the significant VMT impact. These VMT reduction strategies are described below.

#### Traffic Calming Measures and Pedestrian Network Improvements

According to the City of Cupertino 2016 Bicycle Transportation Plan, Class II buffered bike lanes are planned along Prospect Road between De Anza Boulevard and Stelling Road. To accommodate the buffered bike lanes, the travel lanes on Prospect Road east of Galway Drive would be narrowed. These planned improvements are scheduled to be completed during the Summer of 2022. Narrowing travel lane widths (i.e., Road Diet) results in reduced vehicle speeds. Providing traffic calming measures such as narrowing travel lane widths creates a safer environment and promotes walking and biking as alternatives to driving. Accordingly, the planned multi-modal infrastructure improvements would reduce drive-alone commute trips, thereby reducing VMT.

### Project Fair Share Contribution

The project would pay a fair share contribution toward the planned bicycle improvements along Prospect Road. City staff have estimated the cost to construct the buffered bike lanes will total $100,000. In order to determine the project's fair share amount, the Santa Clara VTA Countywide Transportation Model was utilized to calculate the annual traffic growth expected to occur along this segment of Prospect Road. The 2015 model volumes were compared against 2040 model volumes (see attached) to determine the amount of annual traffic growth. Based on the total amount of traffic growth that is estimated to occur along this segment of Prospect Road between now (2022) and 2040, the project-generated trips – calculated by applying the ITE trip generation rates for Multifamily Housing (ITE Land Use 221) – make up approximately 10 percent of the traffic growth (prior to applying trip credits associated with the existing uses to be replaced by the project). Accordingly, a fair share contribution for the project equates to $10,000, based on a cost of $100,000 to construct buffered bike lanes on Prospect Road between De Anza Boulevard and Stelling Road.

## School Pool Program

The project would implement a School Pool Program. The purpose of this program would be to match parents of the proposed residential development who transport students to and from schools without a bussing program, including private schools, charter schools, and neighborhood schools where students cannot walk or bike, or where parents would rather their children not walk or bike. Nearby public schools (located within a two-mile radius of the project site) include 11 elementary schools, 3 middle schools, and 2 high schools. There are also 2 preschools within ¼-mile of the project site.

The school pool program would be open to all residents of the development. It is estimated that half the households with school-age children would likely participate in the school carpool program. School carpools are effective at reducing the total number of vehicle trips traveling between homes and schools and are thereby effective at reducing VMT.

School pool program information would be included in resident welcome packets. An online kiosk with current school pool program information would also be provided. The online kiosk would provide resident and school information for residents interested in participating in the school carpool program. Those residents that register for the program online could connect with other residents participating in the program to schedule carpools. The building management would be responsible for creating the website so that it is up and running as soon as the residential development is ready for leasing. The building management (and/or website designer) would be responsible for adding new information to the website so that the online kiosk remains current and informative.

## Bicycle Program

Upon move-in, each resident would receive one properly-sized electric bicycle. This would serve as a low-barrier-to-entry introduction to bicycling for residents who may not otherwise consider bicycling as a viable mode of transportation. The electric assist would allow users of all fitness levels to participate in biking and help users to reach farther away destinations that they may have previously considered too far to bike to. This strategy would promote bicycling as an alternative to driving, thereby reducing VMT. All residents would be eligible to receive an electric bicycle.

## Car Share Program

The project would provide subsidized memberships to a car sharing program (e.g., Zipcar and GetAround) for residents upon request. With the exception of one GetAround vehicle located within ½-mile of the project site, there are no existing car sharing services within walking distance of the site. Thus, the project would need to add dedicated car share vehicle parking on-site or at a

convenient location. Car sharing services are a low-cost alternative to car ownership and provide flexibility to those who use other transportation modes for their daily commute but may need to access a car for mid-day errands. Car sharing helps support the use of walking, biking, carpooling, and transit by providing another means for business/day trips or a guaranteed ride home option, allowing for overall reductions in automobile use which results in reduced VMT. All residents with a valid driver's license would be eligible to participate in the Car Share Program.

**Behavioral Intervention Program**

As part of the new resident move-in process, each resident would be provided with individualized transportation information to encourage residents to use travel modes other than single-occupant vehicles. Additional encouragement could be provided in the form of subsidies if participation in the program is lower than expected. This process would include a review of the most current VTA bicycle and transit maps. Each resident would work with the transportation coordinator to identify key destinations for that resident which may include locations such as work, school, shopping and/or recreational destinations. The resident and coordinator would then map out feasible bicycle routes (including the bicycle facility class types) and transit routes to each destination including travel times, necessary bus transfers, and fare pricing. Bicycle and transit routes to common amenities such as grocery stores, drug stores, banks, and post offices would also be mapped out. Implementing this program would encourage the use of transit, shared ride modes, bicycling, and walking, thereby reducing drive-alone vehicle trips and VMT. It is estimated that approximately 40% of the residents/households would participate in the Behavioral Intervention Program.

## Conclusions of VMT Impact and Mitigation

Based on the VMT Evaluation Tool, implementing the multimodal infrastructure improvements and TDM measures described above would lower the project VMT to 11.49 per capita, which would reduce the project impact to a less-than-significant level (below the City's threshold of 11.50 VMT per capita).

# Santa Clara Countywide VMT Evaluation Tool - Version 2 - Report

## Project Details

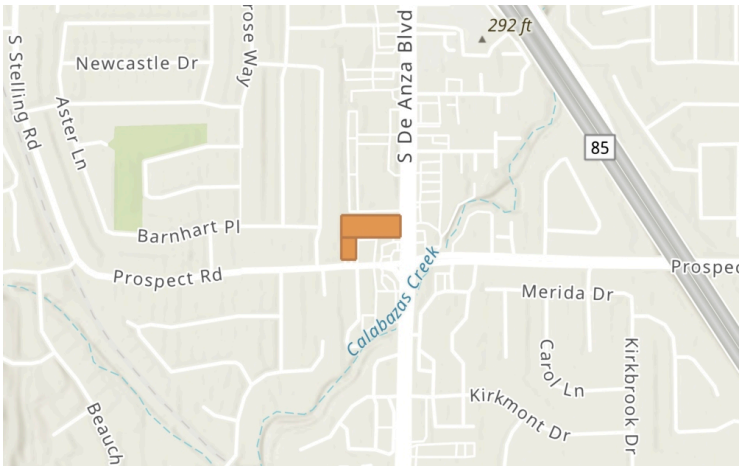
| | |
|---|---|
| Timestamp of Analysis | July 11, 2022, 08:22:43 PM |
| Project Name | 1655 S. De Anza Boulevard Residential Mixed-Use Project |
| Project Description | 11 SF DU + 23 MF DU (incl. 12% low income) + 7,595 SF Retail |

## Project Location Map

Jurisdiction:

Cupertino

| APN | TAZ |
|---|---|
| 36610126 | 126 |
| 36610061 | 126 |




## Analysis Details

| | |
|---|---|
| Data Version | VTA Countywide Model December 2019 |
| Analysis Methodology | Parcel Buffer Method |
| Baseline Year | 2022 |

## Project Land Use

### Residential:

| | |
|---|---|
| Single Family DU: | 11 |
| Multifamily DU: | 23 |
| Total DUs: | 34 |

### Non-Residential:

| | |
|---|---|
| Office KSF: | |
| Local Serving Retail KSF: | 8 |
| Industrial KSF: | 0 |

### Residential Affordability (percent of all units):

| | |
|---|---|
| Extremely Low Income: | 0 % |
| Very Low Income: | 9 % |
| Low Income: | 3 % |

### Parking:

| | |
|---|---|
| Motor Vehicle Parking: | 99 |
| Bicycle Parking: | 22 |

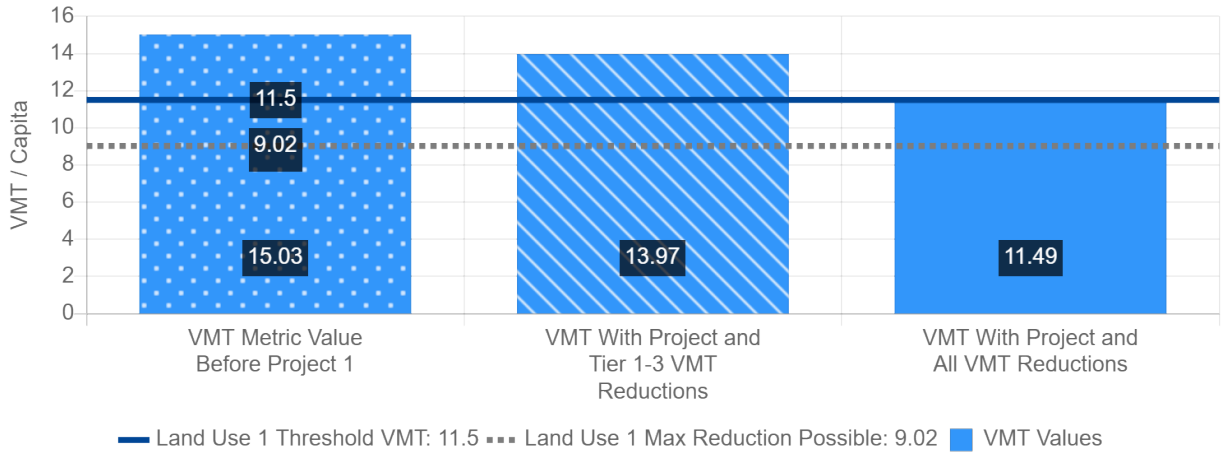
## Proximity to Transit Screening

Inside a transit priority area? No (Fail)

# Residential Vehicle Miles Traveled (VMT) Screening Results

| | |
|---|---|
| Land Use Type 1: | Residential |
| VMT Metric 1: | Home-based VMT per Capita |
| VMT Baseline Description 1: | City Average |
| VMT Baseline Value 1: | 13.42 |
| VMT Threshold Description 1 / Threshold Value 1: | -14.3% / 11.5 |
| 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 | 15.03 | 13.97 | 11.49 |
| Low VMT Screening Analysis | No (Fail) | No (Fail) | Yes (Pass) |



# Tier 1 Project Characteristics

## PC01 Increase Residential Density

| | |
|---|---|
| Existing Residential Density: | 6.48 |
| With Project Residential Density: | 6.61 |

## PC02 Increase Residential Diversity

| | |
|---|---|
| Existing Residential Diversity Index: | 0.5 |
| With Project Residential Diversity Index: | 0.49 |

## PC03 Affordable Housing

| | |
|---|---|
| Extremely Low Income: | 0 % |
| Very Low Income: | 9 % |
| Low Income: | 3 % |

## PC04 Increase Employment Density

| | |
|---|---|
| Existing Employment Density: | 28.29 |
| With Project Employment Density: | 28.54 |

# Tier 2 Multimodal Infrastructure

## MI04 Traffic Calming

| | |
|---|---|
| Traffic Calming Added Beyond Development Frontage: | Yes |

## MI05 Pedestrian Networks

| | |
|---|---|
| Pedestrian Improvements Beyond Development Frontage: | Yes |

# Tier 4 TDM Programs

## TP01 School Pool Programs

| | |
|---|---|
| School Pool Program Percent of Expected Participant Households: | 50 % |

## TP02 Bike Share Programs

| | |
|---|---|
| Percent Change in Bike Trips: | 6% |

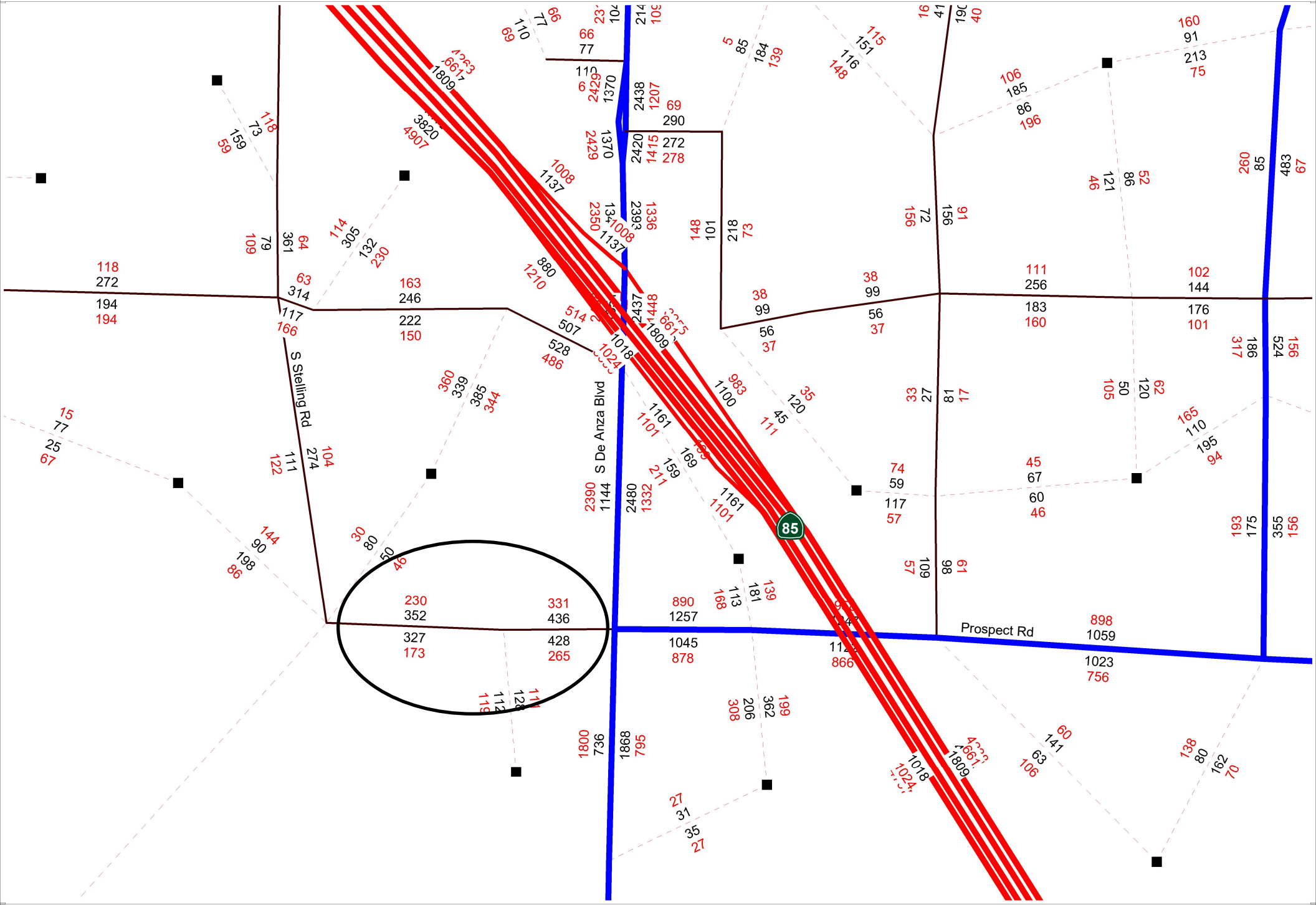
## TP03 Car Share Programs

| | |
|---|---|
| Car Share Program Percent of Eligible Residents/Employees: | 100 % |

## TP15 Behavioral Intervention

| | |
|---|---|
| Percent of Eligible Individuals Participating: | 40 % |

# VTA Model
## 2015 AM - Black
## 2015 PM - Red



# VTA Model
## 2040 AM - Black
## 2040 PM - Red