



Technical Memorandum

Date: July 14, 2021
To: Jeff Jones – Westpark Communities
From: John Gard – Fehr & Peers
Subject: Sierra Vista Specific Plan Parcel WB-41 Retail Feasibility Traffic Analysis

RS21-4058

This technical memorandum evaluates anticipated traffic levels along the frontage of Parcel WB-41 in the Sierra Vista Specific Plan (SVSP) for a future year scenario consisting of differing levels of land absorption in North and West Roseville than what is currently assumed in the City of Roseville 2035 travel demand model. Those traffic forecasts will help inform whether this parcel can realistically be expected to develop with retail land uses.

Project Location and Size

Parcel WB-41 is located in the southeast quadrant of the planned Santucci Boulevard/Pleasant Grove Boulevard intersection. The *Sierra Vista Specific Plan (2010)* shows this parcel as 10.1 acres and consisting of community commercial zoning. The document indicates that community commercial parcels may have floor-to-area ratios (FAR) of up to 0.4. However, experience suggests a more typical FAR is 0.25, which would correspond to approximately 110,000 square feet of retail space.

Land Use Assumptions in North & West Roseville

The City of Roseville 2035 travel demand model was used as the basis for developing cumulative traffic forecasts for the City's updated General Plan (adopted in August 2020). **Table 1** displays the assumed land use growth from the model for six distinct specific plans, projects, and planning areas in North and West Roseville and adjacent unincorporated Placer County.

As shown, over 21,000 new dwelling units and 13 million square feet of retail, office, industrial, medical-office, and high-tech industrial space is assumed to be developed in these plans over the next 15 years.

Table 1 – Land Use Growth (2020 to 2035) in City of Roseville Travel Demand Model							
Land Use Category	Specific Plan / Area						
	Amoruso Ranch Specific Plan	Creekview Specific Plan	Regional University	Placer Ranch Specific Plan	Sunset Industrial Area Remainder	Sierra Vista Specific Plan	Total
Single-Family Residential	2,044 du's	1,464 du's	718 du's	3,096 du's	158 du's	6,131 du's	13,611 du's
Multi-Family Residential	982 du's	547 du's	945 du's	2,011 du's	0 du's	2,577 du's	7,062 du's
Age-Restricted Residential	0 du's	0 du's	0 du's	720 du's	0 du's	0 du's	720 du's
Retail	442 ksf	162 ksf	133 ksf	1,734 ksf	219 ksf	2,171 ksf	4,861 ksf
Office	34 ksf	0 ksf	0 ksf	1,042 ksf	678 ksf	571 ksf	2,325 ksf
Industrial	0 ksf	0 ksf	0 ksf	1,692 ksf	2819 ksf	0 ksf	4,511 ksf
Medical Office	0 ksf	0 ksf	0 ksf	0 ksf	204 ksf	0 ksf	204 ksf
High Tech Industrial	0 ksf	0 ksf	0 ksf	1,104 ksf	0 ksf	0 ksf	1,140 ksf
K-12 Schools	650 students	600 students	600 students	1800 students	150 students	4,350 students	8150 students
University	0 students	0 students	6,000 students	46,800 students ¹	0 students	0 students	52,800 students
Parks	20 acres	16 acres	35 acres	51 acres	0 acres	106 acres	228 acres
PQPL	15 ksf	0 ksf	48 ksf	59 ksf	5 ksf	0 ksf	127 ksf
Note: ¹ # of students factored up to match expected trip generation. - du = dwelling units, ksf = thousand square feet Source: City of Roseville 2035 travel demand model.							

Westpark Communities developed a revised set of land use assumptions (i.e., "Westpark Land Use and Roadway Network" scenario) for these six plans/projects, which are shown in **Table 2**. As shown, land uses within the Amoruso and Creekview Specific Plans were left unchanged, while assumed development in Regional University, Placer Ranch, and the Sunset Industrial Remainder area were decreased substantially. Within the Sierra Vista Specific Plan, the amount of assumed retail was decreased substantially, but no other changes were made.

According to Table 2, the Westpark Land Use and Roadway Network scenario would yield over 17,500 new dwelling units and five million square feet of new retail, office, industrial, medical-office, and high-tech industrial space in these plans. This represents a substantial level of new development when viewed over a 15 to 20 year timeframe.

Table 2 – Land Use Growth Under Westpark Land Use and Roadway Network							
Land Use Category	Specific Plan / Area						
	Amoruso Ranch Specific Plan	Creekview Specific Plan	Regional University	Placer Ranch Specific Plan	Sunset Industrial Area Remainder	Sierra Vista Specific Plan	Total
Single-Family Residential	2,044 du's	1,464 du's	718 du's	2,000 du's	0 du's	6,131 du's	12,357 du's
Multi-Family Residential	982 du's	547 du's	0 du's	500 du's	0 du's	2,577 du's	4,606 du's
Age-Restricted Residential	0 du's	0 du's	0 du's	720 du's	0 du's	0 du's	720 du's
Retail	442 ksf	162 ksf	0 ksf	308 ksf	110 ksf	1,086 ksf	2,108 ksf
Office	34 ksf	0 ksf	0 ksf	185 ksf	339 ksf	571 ksf	1,129 ksf
Industrial	0 ksf	0 ksf	0 ksf	300 ksf	1410 ksf	0 ksf	1,710 ksf
Medical Office	0 ksf	0 ksf	0 ksf	0 ksf	102 ksf	0 ksf	102 ksf
High Tech Industrial	0 ksf	0 ksf	0 ksf	196 ksf	0 ksf	0 ksf	196 ksf
K-12 Schools	650 students	600 students	0 students	900 students	0 students	4,350 students	5,600 students
University	0 students	0 students	0 students	0 students	0 students	0 students	0 students
Parks	20 acres	16 acres	0 acres	51 acres	0 acres	106 acres	193 acres
PQPL	15 ksf	0 ksf	0 ksf	10 ksf	3 ksf	0 ksf	28 ksf
Note: ¹ Values shown in red represent a reduction in land use relative to Table 1. - du = dwelling units, ksf = thousand square feet Source: Westpark Communities, 2021.							

Roadway Network Assumptions in North & West Roseville

Appendix A contains a map showing the cumulative number of planned lanes in the City of Roseville based on the adopted General Plan. As shown, Santucci Boulevard would extend as six lanes from Baseline Road to Blue Oaks Boulevard. Although not shown in the figure, Placer Parkway (four-lane expressway) is assumed in the travel demand model to continue in a northeast direction from Santucci Boulevard through the Amoruso Ranch and Placer Ranch Specific Plans, terminating at State Route 65.

The Westpark Land Use and Roadway Network scenario would not construct Placer Parkway from west of Fiddymont Road to Santucci Boulevard. Additionally, Blue Oaks Boulevard would not extend westerly from Westbrook Boulevard to Santucci Boulevard (as Santucci Boulevard/Placer Parkway would not be constructed). **Figure 1** shows this modified circulation network.

Traffic Forecasts

The City's model was modified to reflect the Westpark Land Use and Roadway Network scenario and then run. Appendix A shows average daily traffic volume model plots from the unadjusted model and with the Westpark Land Use and Roadway Network scenario.

Table 3 compares the cumulative volume of traffic passing through the Santucci Boulevard/Pleasant Grove Boulevard intersection under the City's unadjusted cumulative model and under the Westpark Land Use and Roadway Network scenario.

Table 3 – Cumulative Traffic Volume Passing Through the Santucci Boulevard/Pleasant Grove Boulevard Intersection		
<i>Intersection</i>	<i>Unadjusted City of Roseville Traffic Model</i>	<i>Westpark Land Use and Roadway Network scenario</i>
Santucci Boulevard/Pleasant Grove Boulevard	3,530 vehicles	720 vehicles (- 80%)

Substantially less traffic (i.e., 80 percent less) would be present along Santucci Boulevard and Pleasant Grove Boulevard under the Westpark Land Use and Roadway Network scenario. This is due to the reduction in land uses in North and West Roseville and the removal of roadways that likely will not be funded and may not be needed without the added development.

Retail Site Feasibility Evaluation

This section is comprised of three subsections that answer the following questions:

1. Under the Westpark Land Use and Roadway Network scenario, are there sufficient volumes of adjacent street traffic from which to draw pass-by¹ trips if retail were developed on Parcel 41?
2. Are there other retail centers within the City of Roseville of whose size and level of adjacent street traffic is comparable to what is forecast for Parcel 41?
3. Is the geographic location of Parcel 41 favorable or unfavorable as a retail destination when viewed under the Westpark Land Use and Roadway Network scenario?

Pass-by Traffic Considerations

Data from the *Trip Generation Handbook* (Institute of Transportation Engineers, 2017) indicates the following with regard to travel characteristics at retail centers:

- Appendix A presents pass-by trip data for 25 retail centers ranging from 50,000 to 150,000 square feet. These sites had an average pass-by rate of 37 percent during the weekday PM peak period.
- Appendix A shows that for 12 retail center data points with at least 25 percent pass-by trips, the average volume of adjacent street traffic was 2,000 vehicles during the PM peak period.

Table 4 shows the number of new and pass-by trips that Parcel 41 would generate during the weekday PM peak hour based on trip rates published in the *Trip Generation Manual* (Institute of Transportation Engineers, 2017) and the above information.

¹ A pass-by trip is defined as trip already on the adjacent street that enters a retail center en route to a different primary destination. Pass-by trips do not add to the roadway network; however, businesses rely on existing traffic levels to support their activity. Grocery stores, restaurants, coffee shops, and gas stations are examples of land uses that attract pass-by trips.

Table 4 – Parcel 41 Trip Generation During Weekday PM Peak Hour			
<i>Trip Type</i>	<i>Inbound Trips</i>	<i>Outbound Trips</i>	<i>Total Trips</i>
New Trips (63%)	184	183	367
Pass-by Trips (37%)	108	108	216
Total Trips	292	291	583
Source: Fehr & Peers, 2021 based on <i>Trip Generation Manual</i> (ITE, 2017).			

Table 5 then shows the proportion of adjacent street travelers that would need to become pass-by trips into Parcel 41 (to achieve the expected pass-by percentages) under the unadjusted City of Roseville travel demand model and under the Westpark Land Use and Roadway Network scenario.

Table 5 – Parcel 41 Weekday PM Peak Hour Pass-by Traffic Considerations		
<i>Metric</i>	<i>Unadjusted City of Roseville Traffic Model</i>	<i>Westpark Land Use and Roadway Network scenario</i>
Adjacent Street Traffic	3,530 vehicles	720 vehicles
Inbound Pass-by Trips	108 vehicles	108 vehicles
Level of Pass-by Activity Required ¹	3 out of every 100 motorists	15 out of every 100 motorists
Note: ¹ Calculated by dividing number of inbound pass-by trips by adjacent street traffic volume. Source: Fehr & Peers, 2021		

For the expected 37 percent pass-by proportion to be realized, this would require 15 percent of existing motorists along the project frontage to perform a pass-by trip into the site. This is very much at the high end of this type of travel behavior, as evidenced by the fact that retail sites (with similar pass-by rates) surveyed in the ITE document had an average of 2,000 adjacent street PM peak hour vehicles from which to draw pass-by trips.

Comparison to Similarly Sized Retail Centers in Roseville

According to the City’s 2020 base year travel demand model, there are 17 traffic analysis zones (TAZs) within the City that contain retail ranging in size from 80,000 to 140,000 square feet (i.e., within 30,000 square feet of Parcel 41). Appendix A lists each of these TAZs along with their location. As shown, nearly all TAZs are situated along heavily traveled arterial streets. Many of the sites are located along arterials such as Roseville

Parkway, Blue Oaks Boulevard, Foothills Boulevard, Eureka Road, and Pleasant Grove Boulevard, each of which carries in excess of 40,000 vehicles per day. Hence, most of these centers have ample existing adjacent traffic from which pass-by trips can come. This is in contrast to Parcel 41, which would have a little more than 11,000 daily vehicles along its frontages under the Westpark Land Use and Roadway Network scenario. Thus, there does not exist a retail center in Roseville of comparable size to what Parcel 41 would yield that also has similar levels of traffic to what would be on streets adjacent to Parcel 41 under the Westpark Land Use and Roadway Network scenario.

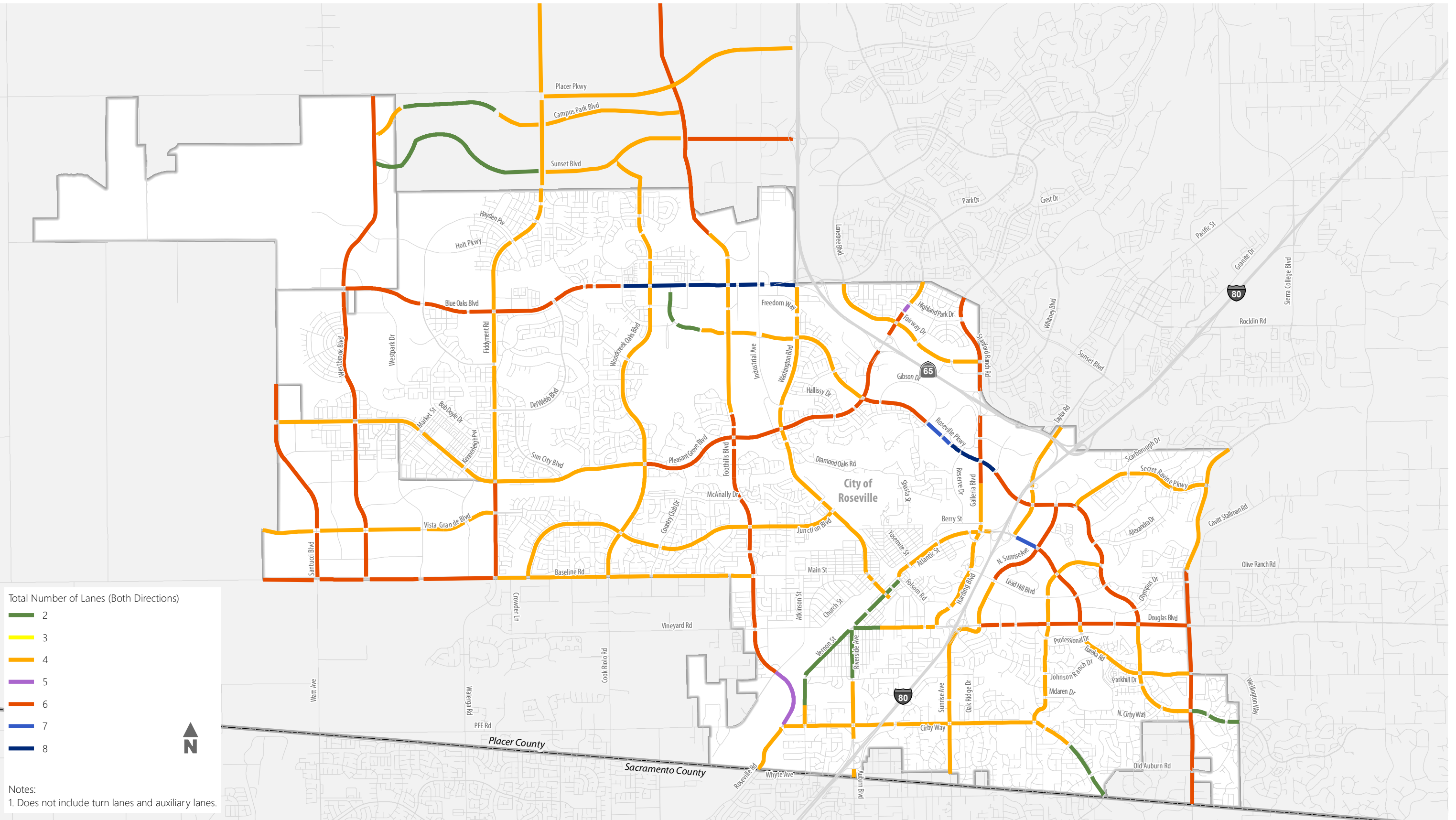
Parcel 41 Proximity to Nearby Residential

The presence of larger retail sites to the east and south of the project, combined with the majority of Sierra Vista Specific Plan dwelling units being located closer to those parcels, suggests that Parcel 41 may not attract retail trips to the same degree the other sites would.

In conclusion, this analysis has found that under the Westpark Land Use and Roadway Network scenario, Parcel 41 is unlikely to develop as a retail center because it would not have adequate adjacent street traffic flows from which to draw pass-by traffic. Its viability as a retail center is further diminished by its physical location relative to anticipated residential development in West Roseville and competing retail sites.

We hope this information is helpful. Please call or email me with any questions or comments.

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Total Number of Lanes (Both Directions)

- 2
- 3
- 4
- 5
- 6
- 7
- 8

Notes:
1. Does not include turn lanes and auxiliary lanes.



Figure 1

Westpark Modified Roadway Network Scenario

Appendix A – Model Plots, ITE Data, and City of Roseville
General Plan Lane Configuration Map

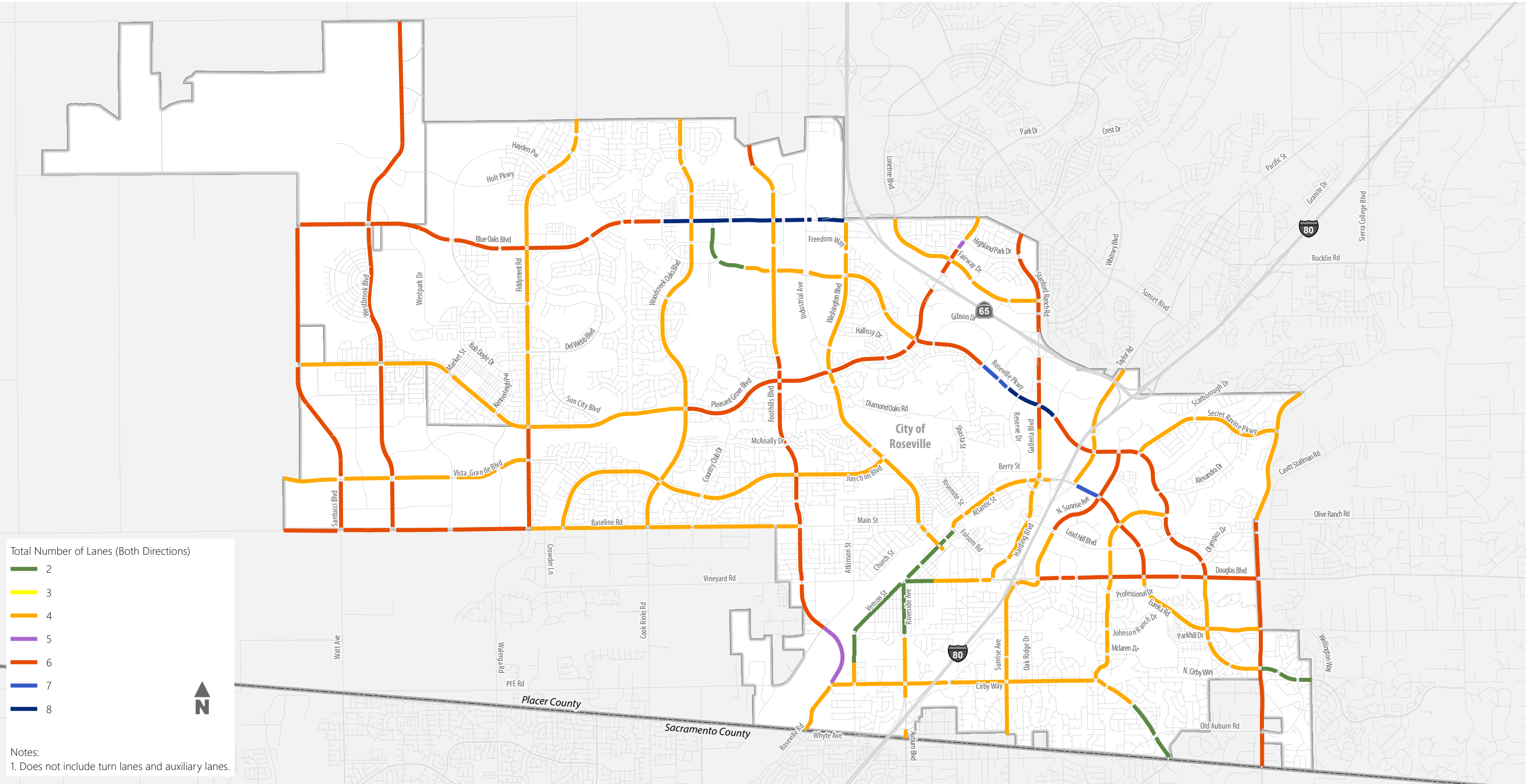
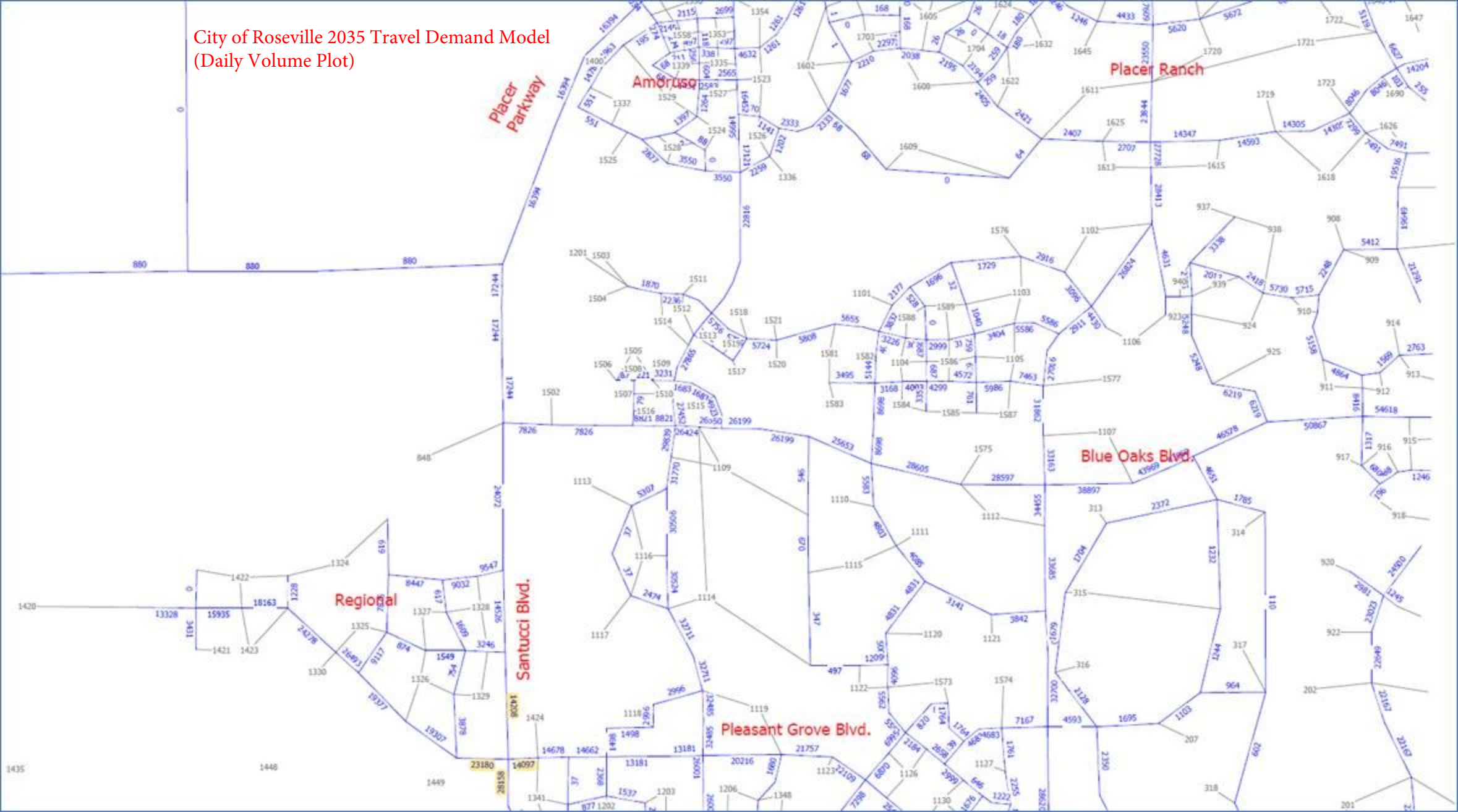


Figure 4.3-4

General Plan Number of Travel Lanes

City of Roseville 2035 Travel Demand Model
(Daily Volume Plot)



City of Roseville 2035 Travel Demand Model (ADT Plot)
with Westpark Land Use and Roadway Network Adjustments

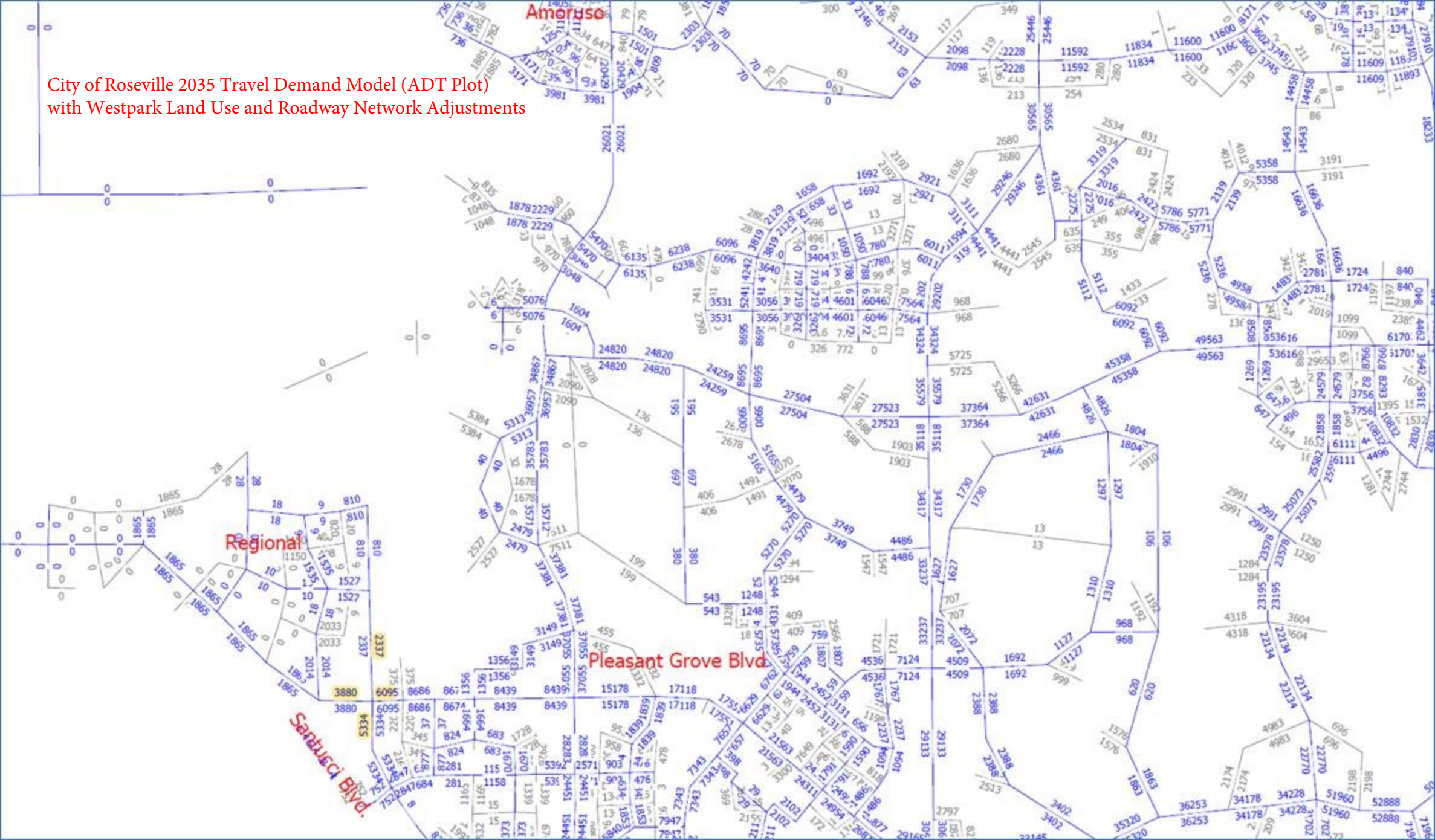


Figure E.7 Shopping Center (820)

Average Pass-By Trip Percentage vs: 1000 Sq. Feet Gross Leasable Area
On a: Weekday, P.M. Peak Period
Number of Studies: 100
Average 1000 Sq. Feet GLA: 329

Data Plot

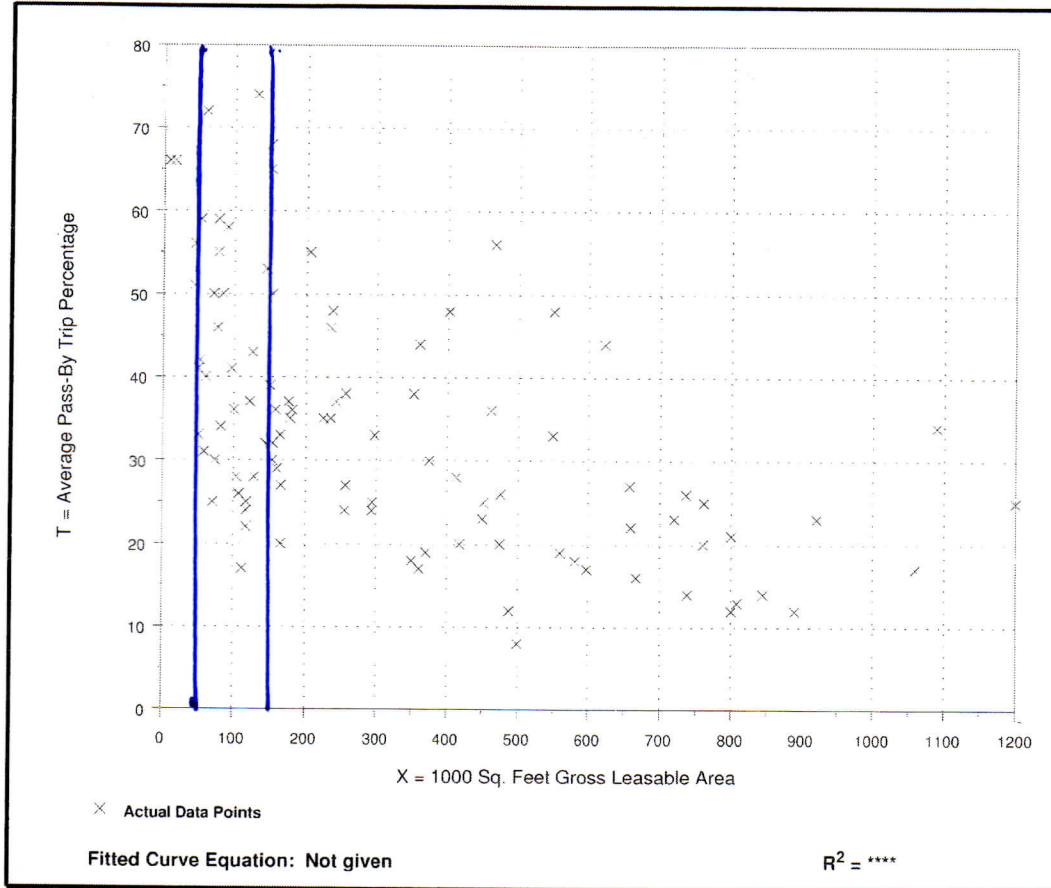
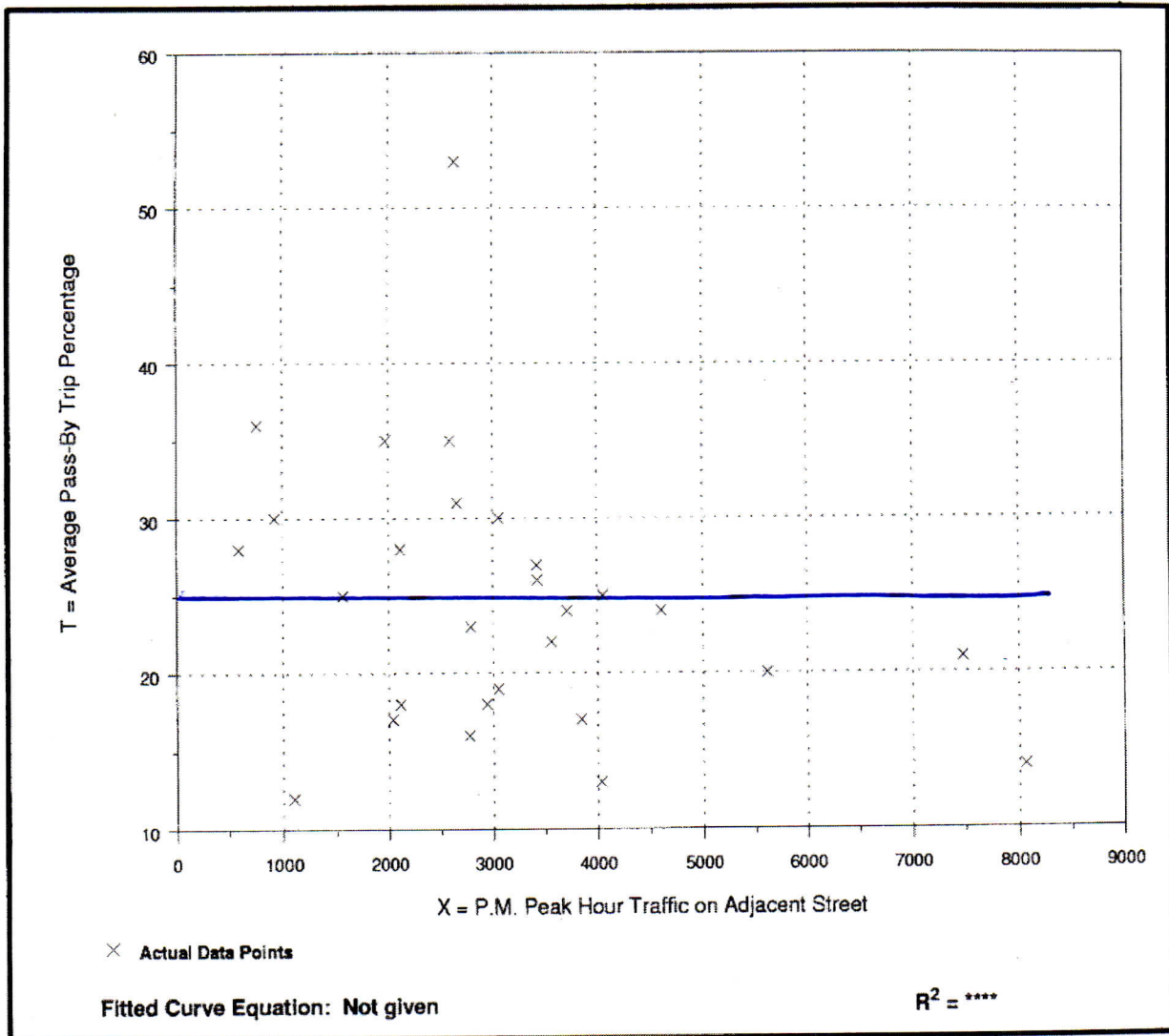


Figure E.8 Shopping Center (820)

Average Pass-By Trip Percentage vs: **PM Peak Hour Traffic on Adjacent Street**
 On a: **Weekday, PM Peak Period**
 Number of Studies: 28
 Average PM Peak Hr. Traf. On Adj. Street: 3,122

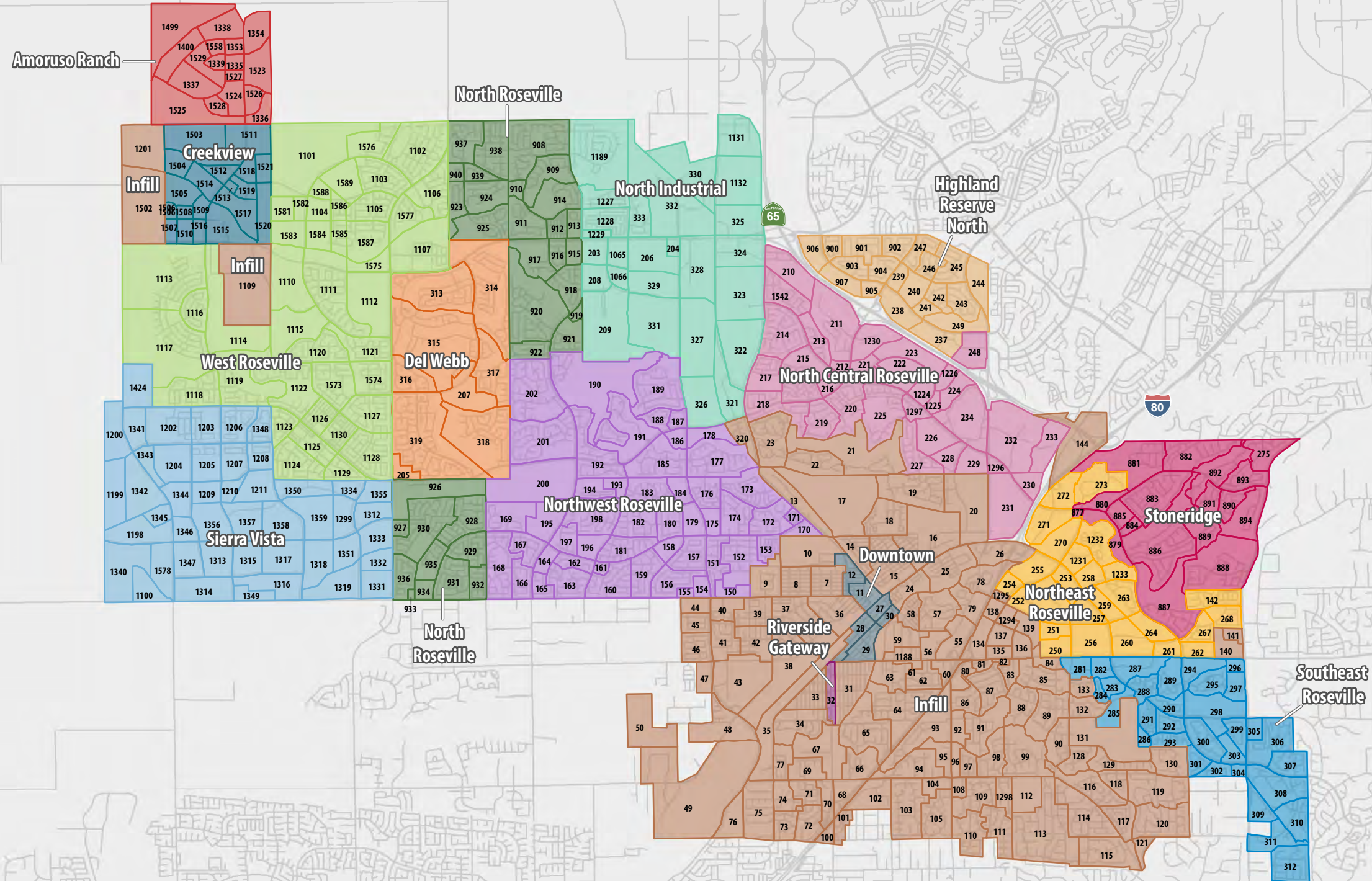
Data Plot



SUMMARY OF TAZs WITHIN ROSEVILLE THAT HAVE BETWEEN 80 and 140 KSF OF RETAIL

TAZ	JURISD	SUBAREA	RET (KSF)	Location
11	ROSEVILLE	Downtown	101	Adjacent to Washington Blvd and Main St, and Sierra Blvd.
27	ROSEVILLE	Downtown	102	Along Vernon and Lincoln St in Downtown
32	ROSEVILLE	Riverside Gateway	121	Along Riverside Ave north of Cirby Way
67	ROSEVILLE	Infill	105	Along Riverside Ave north of Cirby Way
96	ROSEVILLE	Infill	91	Located at Sunrise and Cirby
102	ROSEVILLE	Infill	122	Along Orlando Way - Highway Commercial and Entertainment Uses
135	ROSEVILLE	Infill	117	Along Douglas Blvd. east of I-80
144	ROSEVILLE	Infill	119	Along Taylor Road. Primarily auto repair and related uses
154	ROSEVILLE	Northwest	128	Located at Foothills and Baseline
175	ROSEVILLE	Northwest	93	Located at Foothills and Junction
201	ROSEVILLE	Northwest	89	Located at Woodcreek Oaks and Pleasant Grove Blvd.
210	ROSEVILLE	North Cen	89	Located at Blue Oaks Blvd and Washington Blvd.
216	ROSEVILLE	North Cen	128	Located along Pleasant Grove Blvd.
239	ROSEVILLE	Highlands	134	Located at Fairway Dr. and Pleasant Grove Blvd.
253	ROSEVILLE	Northeast	105	Located at Eureka Road and N. Sunrise Ave.
885	ROSEVILLE	Stoneridg	120	Located along East Roseville Parkway
915	ROSEVILLE	North Ros	81	Located at Blue Oaks Blvd and Woodcreek Oaks Blvd.

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- Amoruso Ranch
- Downtown
- North Central Roseville
- Northeast Roseville
- Sierra Vista
- West Roseville
- Creekview
- Highland Reserve North
- North Industrial
- Northwest Roseville
- Southeast Roseville
- Infill
- North Roseville
- Riverside Gateway
- Stoneridge
- TAZ Number



Figure 3

City of Roseville Traffic Analysis Zones (TAZ) and Subareas