

September 18, 2017

Ms. Lydia Delis-Schlosser, Project Manager

**Fouts Homes**

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**RE: TRAFFIC IMPACT ASSESSMENT FOR 715 POLE LINE ROAD APARTMENTS  
PROJECT, DAVIS, CALIFORNIA**

Dear Ms. Delis-Schlosser:

Thank you for contacting our firm regarding a 715 Pole Line Road Apartment Project in Davis. As we have discussed, an in-fill residential project could be developed on the west side of Pole Line Road on the site of a vacant senior-care facility. A project under City zoning could propose 49 residential units, and access would occur on Pole Line Road between Fifth Street and Eighth Street roughly 300 feet north of the Diameter Drive access to the Rancho Yolo community.

### **Scope of Traffic Analysis**

You have asked that our firm investigate and summarize the potential traffic impacts of this project. Our work has made use of background information contained in the recent Sterling Apartments EIR traffic analysis in order to provide an up to date view of background traffic conditions, and we have supplemented this data with information collected from the comments received from Rancho Yolo neighbors through that project's review. Our analysis identifies current traffic issues affecting this area of Davis and describes how a 715 Pole Line Road project might affect those issues within the context of conditions created by other approved / pending development projects. Potential solutions to the problems in this area have been identified and evaluated, and the extent to which the 715 Pole Line Road project may participate in implementing these solutions has been noted.

### **Project Description**

**Land Use.** The 715 Pole Line Road site covers 1.9 acres on the west side of Pole Line Road, as noted in Figure 1 (attached). The project we have assessed envisions construction of 49 market rate apartment units that would be targeted to families. A mix of unit types is anticipated (i.e., 10 – 1 bedroom, 24 – 2 bedroom, 15 – 3 or 4 bedroom units). While no formal site plan has been prepared to date, the parcel has two existing driveways on Pole Line Road which we have assumed could still be used. The site was previously occupied by a 128 bed assisted living - senior care facility.

**Trip Generation.** The number of motor vehicle trips generated by this use has been estimated based on trip generation rates accepted by the City of Davis for both the proposed apartments and the prior care use. Table 1 shows the rates that are applicable, and Table 2 presents the resulting forecasts. As shown, over the course of the day the proposed project may generate 48 fewer trips than the site would have generated with the previous assisted living use in operation. The project could generate 7 more trips in the a.m. peak commute hour and 2 more trips in the p.m. peak commute hour. Thus, we can conclude that an apartment project on the site would generate about the same amount of traffic as the care facility that previously operated on the site.

TABLE 1 TRIP GENERATION RATES								
Land Use	Unit	Trips per Unit						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Conventional Apartments	dwelling	5.96	20%	80%	0.51	63%	37%	0.62
Assisted Living	bed	2.66	65%	35%	0.14	44%	56%	0.22

TABLE 2 TRIP GENERATION FORECASTS								
Land Use	Quantity	Trips per Unit						
		Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Conventional Apartments	49 dwellings	292	5	20	25	19	11	30
Assisted Living	128 beds	340	12	6	18	12	16	28
Difference		-48			+7			+2

**Background Traffic Conditions**

We identified background traffic conditions at intersections near the project based on available information from the Sterling Apartments DEIR traffic study.

**Approved Projects.** We assumed the following approved projects will be occupied and operating:

1. **The Villages at Willow Creek** - The project is located in South Davis in the southeast quadrant of Cowell Blvd and Drummond Avenue. It consists of 35 medium density single-family residential units with four units having an accessory dwelling unit;
2. **The Cannery** – The project is located in the old Hunts Cannery along the north side of Covell Blvd, west of J Street. It includes up to 547 residential dwelling units, 40

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accessory dwelling units and up to 171,270 square feet of mixed-use commercial, office and high density residential uses;

3. **Chiles Ranch** – The project is located along E. 8<sup>th</sup> Street east of Pole Line Road and includes a total of 107 homes plus 21 accessory dwelling units. Of the 107 homes, 30 are attached units and 77 are detached;
4. **Del Rio Live-Work** – The project is located in the northwest quadrant of the Pena Drive/ Del Rio Place intersection. It includes 16 office spaces on the ground floor with 16 living units on the second and third floors;
5. **Life in 3D** – The project is an expansion of the existing Trokanski Dance Studio located on Del Rio Place. The project includes a 174 seat live theater, dance and rehearsal rooms totaling about 3,300 square feet, a 1,400 square foot restaurant, a visual arts studio totaling about 1,500 square feet, an 1,800± square foot yoga studio and a 1,700± square foot wellness center;
6. **Creekside Apartments** – The project is located at 2990 5<sup>th</sup> Street. It is a high density affordable apartment project with 90 multi-family residential units. The resident population will include extremely low income, very low income and lower income households. Forty percent of the units will be prioritized for individuals who are disabled and / or currently homeless; and
7. **Sterling Apartments** – This project is located on Fifth Street east of Pole Line Road. It was approved as a 540-bed student apartment with another 38 affordable apartment units.

**Traffic Volume Forecasts and Background Levels of Service.** The trips associated with approved projects were superimposed onto background conditions, and the results are presented in Figure 2 (attached).

The Levels of Service occurring at local intersections are noted in Table 3. Level of Service (LOS) is a quantitative measure of the quality of traffic flow whereby a letter grade (A-F) is assigned to an intersection or street. These grades are based on the length of delays experienced by motorists waiting at an intersection. The City of Davis has adopted significance criteria to evaluate the impacts of development projects that reflect their minimum standard for Level of Service (i.e., LOS E) as well as the amount of additional delay that could be acceptable when background conditions exceed the standard.

These calculations reflect the recent improvements made by the City of Davis and partially funded by the Sterling Apartments project:

- *Reconfigure the Pole Line Road / Eighth Street intersection* to provide separated eastbound and westbound phases (i.e., “split phasing”). This change allowed westbound traffic to proceed without conflicting with opposing eastbound traffic that was previously approaching at the same time.
- *Restripe Pole Line Road at Diameter Drive.* This change eliminated sources of potential conflicts between northbound traffic and existing Rancho Yolo residents.

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As noted in Table 3, even with traffic from approved projects the background Levels of Service will satisfy the City's minimum LOS E Standard.

**Other Neighbor Concerns.** While these intersections will operate acceptably based on the Level of Service metric, Rancho Yolo community member expressed concerns regarding conditions at their Diameter Drive access when the Sterling Apartments project DEIR was reviewed by the City, and this location was given additional review at the time to identify the causes of their concerns and to identify possible solutions.

Pole Line Road is a relatively wide street, and the distance from curb to the center Two-Way Left-Turn (TWLT) lane is about 34 feet. This width may have inhibited drivers from initiating turns from Diameter Drive because they must observe high speed traffic and find an adequate gap in traffic to cross this wide road.

Identifying a gap in traffic is linked to the available sight distance, which is tied to the alignment of the road and obstacles such as parked cars. With a recent east side "No Parking" zone at Diameter Drive a southbound vehicle on Pole Line Road comes into view when it is 500 feet away when looking around cars that may be parked legally on Pole Line Road. This view can, however, be affected by vehicles parked illegally on the east side of the street, and before recent restriping Rancho Yolo residents may have had difficult identifying and adequate gap in traffic as they waited to determine if it was safe to enter Pole Line Road. The recent restriping allows residents to move farther into the intersection before turning, which improved the sight distance. The City has also committed to regular enforcement of the new "no parking" zone north of the intersection.

Other measures to improve the operation of this location were considered and evaluated by the City of Davis when the Sterling Apartments was reviewed. Traffic controls such as an all-way stop or traffic signal were considered but were rejected due to the traffic volume on each approach and the short distance to the traffic signal at 5<sup>th</sup> Street intersection. Because the volume on Diameter Drive is low, background traffic volumes do not reach the level that satisfy national guidelines based on warrants for a traffic signal or an all-way stop that are published in the manual of Uniform Traffic Control Devices (MUTCD). Those guidelines help the City choose legally defensible traffic controls that best serve the community as a whole. Operationally with a signal or an all-way stop would likely result in excessive northbound queues that extend back to the 5<sup>th</sup> Street intersection during peak hours and could block traffic at this intersection. For all of these reasons the City has chosen to keep the existing side-street stop sign control at Diameter Drive.

While not directly related to Pole line Road, Rancho Yolo residents identified concerns regarding their 8<sup>th</sup> Street access as well. The Chiles Ranch project is making a contribution to the cost of traffic calming on Eighth Street, and these measures may improve Rancho Yolo access by slowing through traffic.

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**TABLE 3  
 PEAK HOUR INTERSECTION LEVELS OF SERVICE**

Intersection	Control	AM Peak Hour				PM Peak Hour				Traffic Signal Warrants Met?
		Background		Plus 715 Pole Line Rd		Background		Plus 715 Pole Line Rd		
		Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	Average Delay (sec/veh)	LOS	
Pole Line Rd / Eighth Street	Signal	22	C	22	C	31	C	31	C	Not Applicable
Pole Line Rd / 715 Access	Eastbound Stop	-	-	14	B	-	-	15	B	No
Pole Line Rd / Diameter Dr	Westbound Stop	15	C	15	C	18	C	18	C	No
Pole Line Rd / Fifth Street	Signal	23	C	23	C	34	C	35	C	Not applicable

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## **Potential Impacts from 715 Pole Line Road Project**

**Levels of Service.** To determine how a 715 Pole Line Road project might affect traffic circulation intersection Levels of Service were recalculated assuming the trips generated by a project were added to the background volumes, as noted in Figure 2. As was shown in Table 3, the amount of traffic added by the project volume would be too small to have a quantifiable impact on the operation of these intersections. The average delays at each location would be the same or may increase slightly, but the Levels of Service do not change. From the standpoint of the City's traffic study guidelines, a 715 Pole Line Road project's traffic impact would not be significant.

**Pedestrians / Bicycles.** The project will add pedestrians and bicyclists to the area street system, although the numbers added by a project of this size would not be appreciable. Based on the modal split information maintained by the City of Davis, a residential project of this size could add 8 bicyclists during peak traffic hours. A few more pedestrians are also likely, particularly between the site and the existing Unitrans stops on Fifth Street, as City statistics suggest that 5% of the trips made by residents could be made by transit.

While the project does not directly create the need for specific improvements, it could contribute towards mitigating its cumulative impact to these alternative transportation modes. A comprehensive plan for bicycle improvements on Pole Line Road was created when the Sterling Apartments project was approved (Figure 3). That work was partially implemented on the east side by the City, but the final elements and west side improvements remain to be installed. Sterling Apartments is conditioned to particulate in the cost of east side work, and a 715 Pole Line Road project could install any remaining work on the west side.

**Safety Issues.** The amount of traffic added by a 715 Pole Line Road project would be too small to have an effect on the City's consideration of the feasibility of an all-way stop or traffic signal at the Pole Line Road / Diameter Drive intersection. The side-street stop sign should remain.

Rancho Yolo residents may ask whether the addition of project trips could create additional conflicts between turning vehicles near their Diameter Drive access to Pole Line Road, and this issue has been investigated. Turning conflicts are unlikely due to the distances involved. The existing access to 715 Pole Line Road is north of the Rancho Yolo access, with the more southerly driveway about 295 feet from Diameter Drive and the northern driveway another 180 feet further north. In comparison, the existing driveways serving the Carriage House apartments are closer to the Rancho Yolo access, with one about 230 feet north of Diameter Drive and the other 80 feet to the south.

To handle the turning requirements on existing residences the TWLT area on Pole Line Road is striped to create bay tapers that separate individual northbound and southbound left turn lanes. The turn lane for Rancho Yolo is about 80 feet long and is preceded by a 90 foot long bay taper. That same taper is the beginning of the northbound turn lane for the Carriage House driveway

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and for the 715 Pole Line Road driveway. The California Vehicle Code (CVC) limits the distance a motorists can drive in a TWLT lane to 200 feet. As a result, a driver turning into the 715 Pole Line Road site will begin to do so beyond the turn lane for Rancho Yolo, and conflicts between northbound and southbound left turns should not result.

### **Conclusions**

1. The amount of traffic generated by an apartment project on the 715 Pole Line Road site is relatively small. On a daily basis this new use would generate less traffic than would have occurred with the assisted living center that was previously on the site.
2. Background traffic conditions at intersections near the site will continue to satisfy the City of Davis' minimum requirements for Level of Service with the addition of trips caused by other approved projects as well as a new apartment project on this site.
3. The City has implemented improvements to the area in response to the approval of the Sterling Apartments, including changes to the Pole Line Road / Eighth Street intersection that were requested by Rancho Yolo residents.
4. Planned bicycle lane enhancements remain to be made along the west side of Pole Line road opposite Diameter Drive, and these improvements could be funded by a project proposed on the 715 Pole Line Road site as cumulative mitigation. The combination of recent and planned improvements, along with enforcement of no parking zones will improve Rancho Yolo access.

Again, thank you for considering our firm for your project. Please feel free to call me if you have any questions.

Sincerely yours,

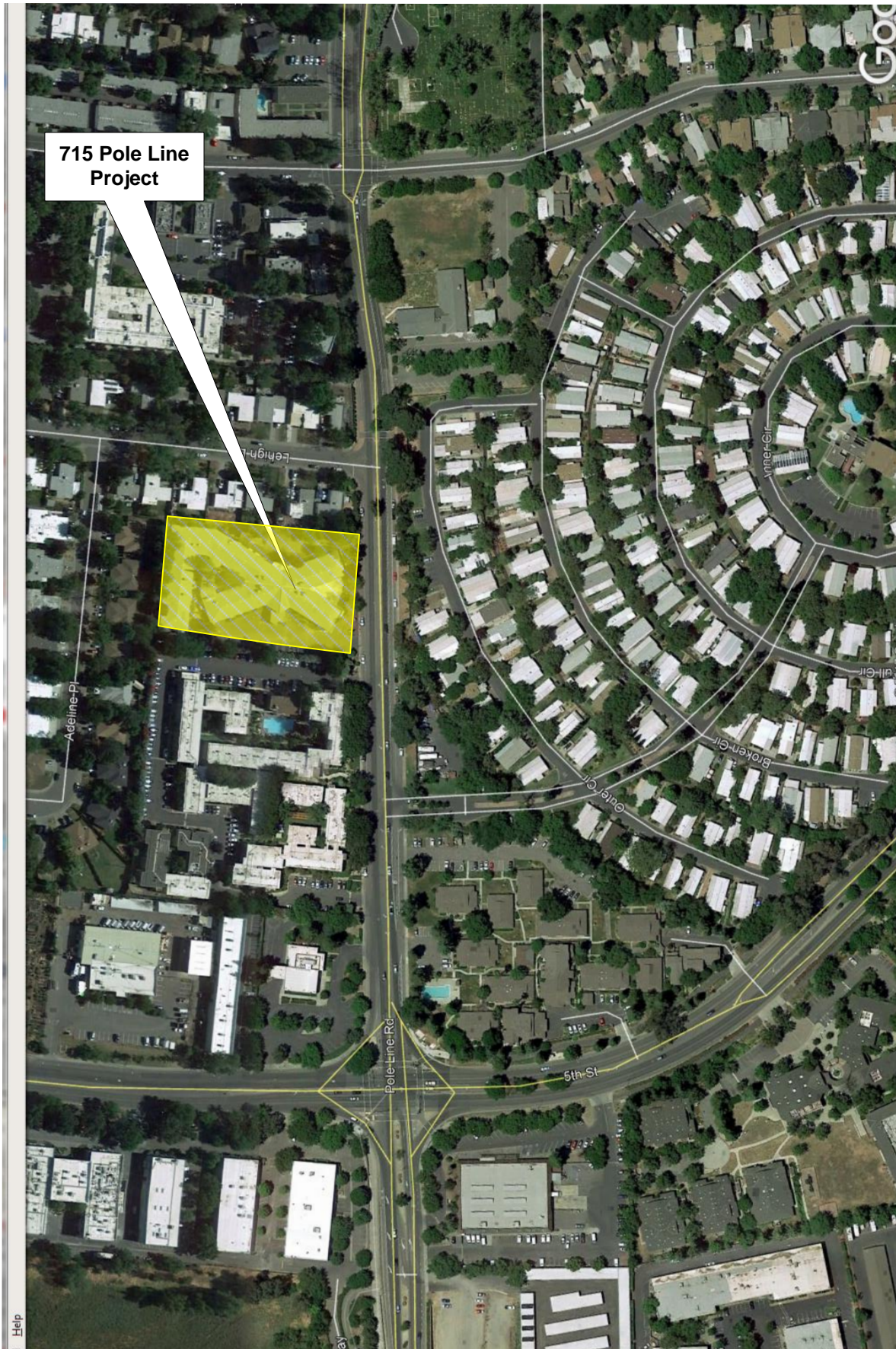
**KD Anderson & Associates, Inc.**



Kenneth D. Anderson, P.E.  
President

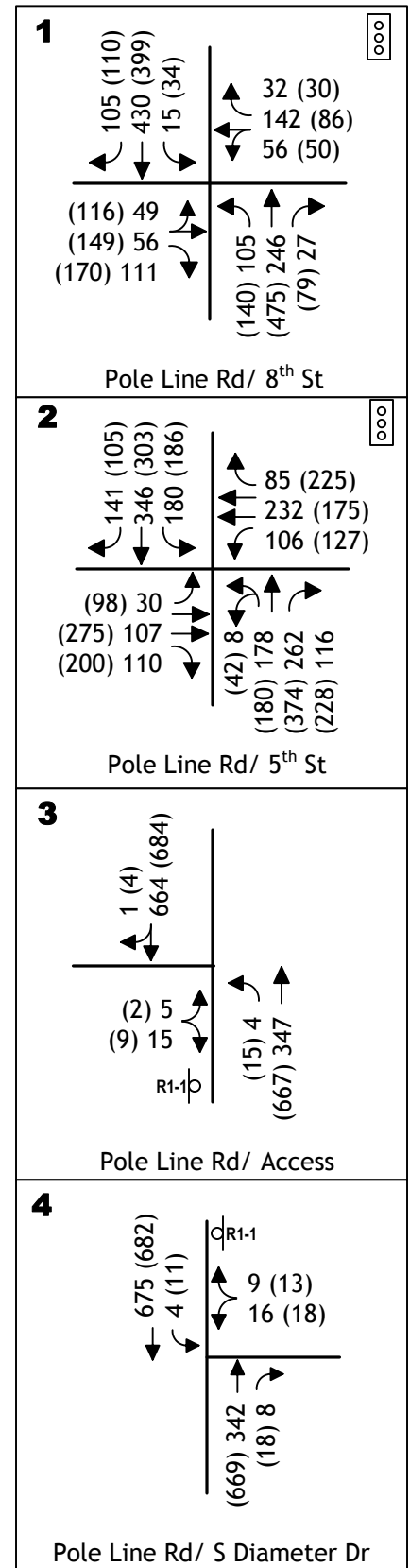
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## VICINITY MAP

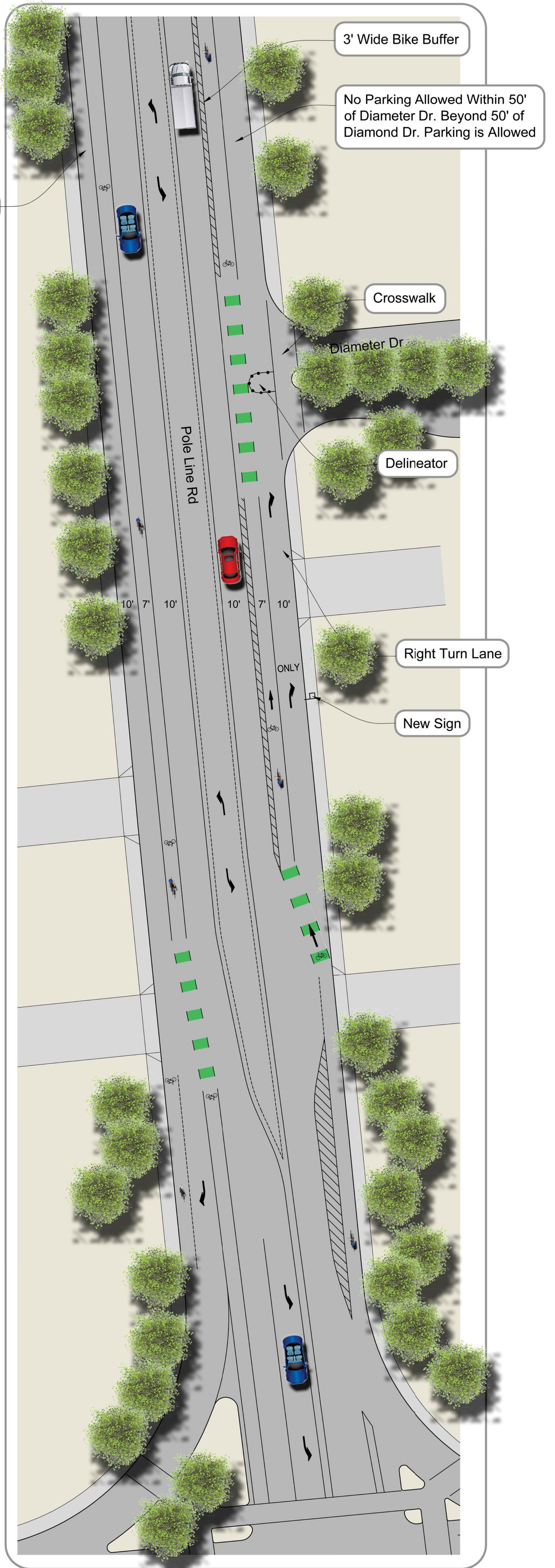
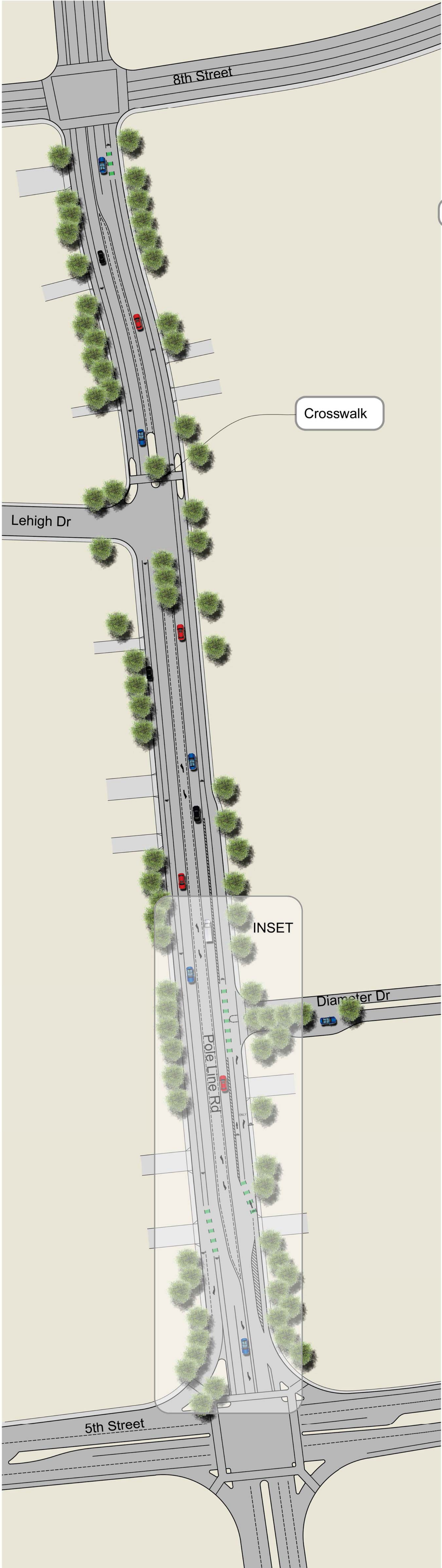




**EXISTING PLUS APPROVED PROJECTS  
AND 715 POLE LINE ROAD  
TRAFFIC VOLUMES AND LANE CONFIGURATIONS**



INSET



POLE LINE ROAD RESTRIPIING CONCEPT FROM 5TH STREET TO EAST 8TH STREET  
DAVIS, CALIFORNIA

FIGURE 3