

## 2.2 Residential Street Level of Service

Worsening traffic congestion on arterial roadways continues to divert traffic onto residential streets. Exhibit 1 describes the Level of Service at intersections along major roadways in terms of the efficient movement of large volumes of traffic. Although each lane of a residential street could carry from 1,000 to 1,600 vehicles per hour, the quality of life along a residential street is impacted at far lower traffic levels. Table III-I of the General Plan entitled “Desirable Level of Service Volumes” includes the following:

**Table 5 – General Plan 2-lane Street Desirable Level of Service Volumes**

Roadway Type	Per Lane Per Hour	Two-Way Average Daily Traffic
Two-lane local streets	-	500
Two-lane neighborhood streets	-	2,000-3,000
Two-lane collector streets	-	6,000-9,000
Two-lane arterial streets	850	15,000

Staff has formulated the Residential Street Level of Service categories shown in Exhibit 4 based on this table in the General Plan and staff’s experience with residents complaining about quality of life issues along residential streets. These peak hour volume, average daily traffic volume and vehicle speed thresholds closely match the degree of concern expressed to staff regarding the quality of life along residential streets and the relative need for traffic calming under these conditions.

This Residential Street Level of Service standard also closely parallels General Plan Program 6.5 on page III-3, “Particular sensitivity should be given to new development on streets which are projected to carry more than 2,000 average daily trips, and with existing houses which front such streets.”

Table 6 uses these residential LOS standards to classify the Quality of Life LOS along 38 local residential streets based on recent traffic counts. An additional 37 residential street have been listed as residential collector streets. There is no clear line as to where a street stops being a local residential street and begins operating as a residential collector street. Most residential streets “collect” some amount of traffic from adjacent blocks and nearby streets. For the purpose of monitoring Existing, Existing plus Approved, and Buildout impacts on residential collector streets, the 2003 Baseline Report assumes that if a residential street is experiencing LOS D traffic volumes and speeds, it is either an LOS D local residential street or an LOS A residential collector street. LOS E or worse residential streets have been classified as LOS B through F residential collector streets based on the amount of traffic using each street. If a street shown in Table 6 as a collector street should instead be designated as a local residential street, measures will have to be taken to reduce existing traffic volume and/or speeds to meet the LOS D standard for such streets.

#### **Exhibit 4 - Local Residential Street Level of Service (LOS) Descriptions**

**LOS A** describes living conditions where a residential street only carries traffic from the adjacent residences. It is very easy to walk across the street, ride bicycles and enter or exit residential driveways. Typical motor vehicle speeds are 25 MPH or less. During the peak traffic hour, one car passes down the street every two minutes. The typical traffic volume is under 300 vehicles per day with only 30 vehicles during the peak travel hour.

**LOS B** describes living conditions where a residential street carries traffic from two residential blocks. It is easy to walk across the street, ride bicycles and enter or exit residential driveways. Often residents are concerned about vehicle speeds that have increased to 25-30 MPH. During the peak traffic hour, one car passes down the street every minute. The typical traffic volume is under 600 vehicles per day with 60 vehicles during the peak travel hour.

**LOS C** describes living conditions where a residential street carries traffic from four residential blocks. It is relatively easy to walk across the street, ride bicycles and enter or exit residential driveways. Residents are concerned about vehicle speeds that have increased to over 30 MPH. Residents are also uncomfortable with vehicle volumes that have risen to 1,200 vehicles per day with 120 vehicles during the peak travel hour. During the peak traffic hour, one car passes down the street every 30 seconds.

**LOS D** describes living conditions where a residential street carries traffic from six residential blocks. Increased caution is necessary when walking across the street, riding bicycles and entering or exiting residential driveways. Residents are very concerned about vehicle speeds that have increased to up to 35 MPH. Residents perceive that commuters are shortcutting on their street due to vehicle volumes up to 1,800 vehicles per day with 180 vehicles during the peak travel hour. During the peak traffic hour, one car passes down the street every 20 seconds.

**LOS E** describes living conditions where a residential street carries traffic from eight residential blocks. Due to elevated vehicle speeds and volumes, a high level of caution is necessary when walking across the street, riding bicycles and entering or exiting residential driveways. Vehicle speeds have increased to 35 MPH or more. There is significant commuter shortcutting with up to 2,400 vehicles per day and 240 vehicles during the peak travel hour. It is increasingly difficult to exit driveways during the peak traffic hour with one car passing down the street every 15 seconds.

**LOS F** describes living conditions where a residential street carries traffic from significantly more than eight residential blocks. Due to elevated vehicle speeds and volumes, a high level of caution is necessary when walking across the street, riding bicycles and entering or exiting residential driveways. Vehicle speeds have increased to 35 MPH or more. There is significant commuter shortcutting with over 2,400 vehicles per day and 240 vehicles during the peak travel hour. Exiting and entering driveways is difficult and requires approaching vehicles to stop for driveway traffic.

In either case, existing and future traffic volumes on local residential streets and residential collector streets are measured using this Quality of Life LOS standard rather than a roadway capacity LOS standard. In this way, land development traffic impacts and arterial roadway congestion diversion impacts can be identified under various development and roadway network scenarios with appropriate mitigation measures required to maintain reasonable Quality of Life conditions on residential streets throughout Pleasanton. Based on this criteria:

- 12 Local Residential Streets are currently at LOS D
- 1 Residential Collector Street is currently at LOS F
- 1 Residential Collector Streets are currently at LOS E
- 6 Residential Collector Streets are currently at LOS D

Mitigation measures necessary to restore LOS D conditions along each of these residential collectors are identified in Section 2.6 this report. Table 6 does not include every residential street in the City. The residential streets that have been identified with the highest traffic volumes are included in the exhibit. The exhibit also includes a few LOS A – C streets as examples of how this standard would apply to less busy residential streets. This table will continue to be refined over time as a more thorough analysis is performed on these and other 2-lane City streets.

**Table 6 - Local and Collector Residential Street Level of Service**

<b>Residential Local Street Quality of Life Level of Service</b>			<b>Residential Collector Street Quality of Life Level of Service</b>		
<b>Street</b>	<b>Daily Traffic</b>	<b>Peak Hour</b>	<b>Street</b>	<b>Daily Traffic</b>	<b>Peak Hour</b>
<b>LOS D (up to 1 car every 20 seconds)</b>			<b>LOS F (&gt; 1 car every 4 seconds)</b>		
Rose w/o Augustine	1,695	155	Division St s/o Del Valle	9,800	
Kamp Dr at Kamp Court	1,664	157	<b>LOS E (up to 1 car every 4 seconds)</b>		
Camino Segura	1,549	152	Vineyard e/o First	7,300	
Kottinger w/o Bernal	1,400		<b>LOS D (up to 1 car every 5 seconds)</b>		
Parkside Drive e/o Hopyard	1,338	134	Ray e/o Main	7,200	
Mirador s/o Kottinger	1,316	174	Vine St	6,403	648
Hansen w/o Hopyard	1,276	117	Dorman n/o W Las Positas	6,400	
Neal w/o Mirador	1,099	<b>123</b>	Black e/o Hopyard	6,200	
Gulfstream s/o Fairlands	1,077	116	Stanley e/o Main	6,000	
Nevis w/o Santa Rita	965	<b>144</b>	St Mary w/o Main	5,600	
Cottonwood w/o Muirwood	868	<b>126</b>	<b>LOS C (up to 1 car every 7 seconds)</b>		
Olive w/o Muirwood	715	<b>136</b>	Vineyard w/o Bernal	5,100	
<b>LOS C (up to 1 car every 30 seconds)</b>			Laurel Creek e/o Foothill	4,900	403
Angela e/o First	886	87	Del Valle e/o Hopyard	4,200	
Dolores Drive	1,023	105	Junipero e/o Sunol	4,200	
Golden w/o Hopyard	1,041	110	Foothill s/o Castlewood	4,000	
W Angela e/o Pleasanton Ave	988	116	Greenwood s/o Alameda	3,650	
Highland Oaks w/o Drywood	980	115	Muirwood s/o Clovewood	3,483	<b>364</b>
Windmill Way n/o Bernal	923	96	Tawny w/o Touriga	3,230	<b>407</b>
Sonoma n/o Junipero	710	80	Case at PMS	2,501	<b>450</b>
Newton Way s/o Glen Isle	980	112	<b>LOS B (up to 1 car every 10 seconds)</b>		
Montevino s/o Vineyard	770	80	Paseo Santa Cruz @ Camino Segura	3,549	336
Mohr e/o Kamp	975	98	Palomino e/o Bernal	3,200	
Laurel Creek s/o Dublin Cyn	906	105	Hearst e/o Bernal	2,767	215
E Angela w/o Whiting	780	75	Touriga s/o Vineyard	2,412	279
Chardonnay E/o Touriga	797	87	Grapevine	2,264	202
Harrison s/o W Angela	681	78	Neal e/o Third	2,122	203
Angela w/o Mirador	597	<b>69</b>	Pleasanton Ave s/o Division St	2,192	239
Martin n/o Mohr (1997)	520	<b>74</b>	Kottinger w/o Adams	2,175	280
Cameron e/o Kamp	686	73	Fairlands @ Gulfstream	2,151	185
<b>LOS B (up to 1 car every minute)</b>			Junipero e/o Sonoma	2,116	222
Abbie w/o Mirador	467	44	Kolln s/o Dundalk	2,099	174
Crestablanca	402	44	Palomino @ Concord	2,076	209
Sauterne s/o Vineyard	203	<b>31</b>	Independence s/o Bernal	2,000	
Helen w/o Kamp	280	33	Muirwood s/o W Las Positas	1,929	209
Sylvaner s/o Chardonnay	346	44	Concord @ Palomino	1,889	238
<b>LOS A (up to 1 car every 2 minutes)</b>					
El Capitan n/o Vineyard	213	28			
Legar Ct e/o Newton	164	22			
Glen Isle w/o Newton	168	23			

### Division Street

Traffic volumes on Division Street south of Del Valle Parkway would need to be reduced by about 300 vehicles per hour during the evening peak hour to provide LOS D residential collector conditions. Reducing congestion along Valley Avenue between Hopyard Road and Santa Rita Road may help to reduce traffic along Division Street and Black Avenue.

### Black Avenue

Traffic volumes on Black Avenue west of Santa Rita Road border on LOS D/E conditions for a residential collector. Black Avenue at Santa Rita Road is at LOS F in the morning. Reducing congestion along Valley Avenue between Hopyard Road and Santa Rita Road may help to reduce traffic along Black Avenue and Division Street.

### Vineyard Avenue

Traffic volumes on Vineyard Avenue east of First Street border on LOS D/E conditions for a residential collector. The new traffic signal at the intersection of Vineyard/Tawny/Bernal may help to reduce this traffic volume somewhat. Constructing the Del Valle Parkway extension between Bernal Avenue and First Street would also help to reduce traffic volumes along this section of Vineyard Avenue.