

II. EXISTING CONDITIONS

Roadway System

The major roadways in the vicinity of the proposed project site are listed below.

- *State Route 113* – A four-lane north/south freeway connecting Interstate 80 (I-80) in Davis to Interstate 5 (I-5) in Woodland.
- *Hutchison Drive* – An arterial east/west roadway that traverses the entire length of the UC Davis campus; the portion of the roadway east of Bioletti Way and west of A Street is restricted to University-related traffic by radio-operated gates; some segments are two lanes and some are four lanes.
- *La Rue Road* – An arterial loop road around the west and south sides of the Central Campus; the north/south segment along the west side is four lanes and the east-west segment along the south side is two lanes.
- *Health Sciences Drive* – A two-lane loop road serving the Health Sciences District southwest of the Central Campus.
- *Extension Center Drive* – A two-lane local road serving satellite offices, laboratories, experimental fields, and a student apartment complex.
- *Dairy Drive* – A two-lane local road serving miscellaneous agricultural laboratories, student residence halls, and the University power plant.
- *Kleiber Hall Drive* – A two-lane local road serving classrooms, academic offices, and the University Police and Fire Stations.
- *Bioletti Way* – A two-lane collector road serving classrooms, academic offices, residence halls, and miscellaneous academic uses; a gated access point between Hutchison Drive and La Rue Road prohibits non-University-related traffic access between the northern segment and the southern segment of Bioletti Way, though both segments can be reached by alternate routes.

Existing Traffic Volumes

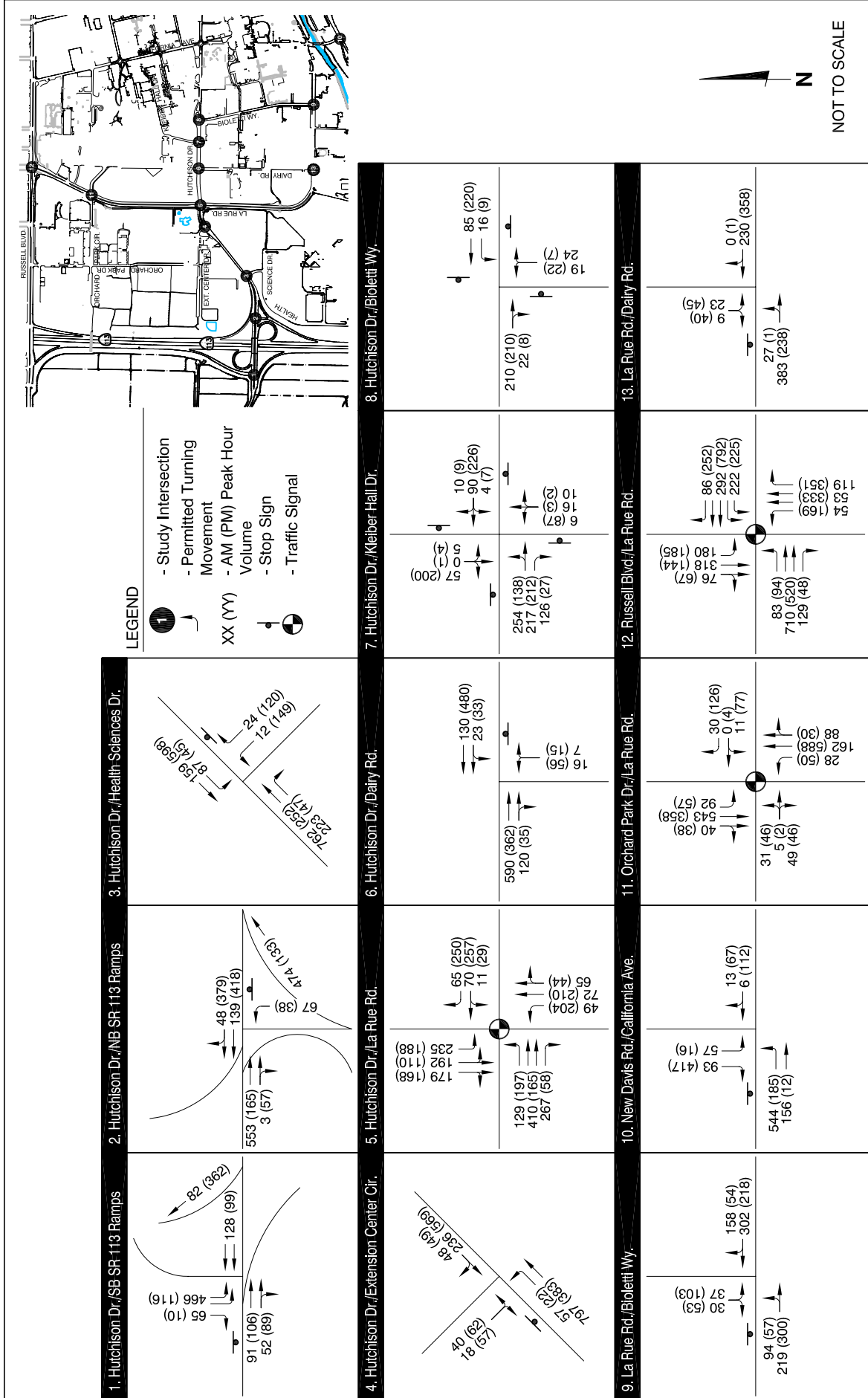
Study Intersections

Morning (a.m.) and evening (p.m.) peak hour traffic counts were conducted at the thirteen study intersections during Tuesday, Wednesday, and Thursday, March 6-8, 2001. The thirteen intersections are listed below and their traffic volumes are shown on Figure 2.

1. Hutchison Drive/SB SR 113 Ramps
2. Hutchison Drive/NB SR 113 Ramps
3. Hutchison Drive/Health Sciences Drive
4. Hutchison Drive/Extension Center Drive
5. Hutchison Drive/La Rue Road
6. Hutchison Drive/Dairy Road
7. Hutchison Drive/Kleiber Hall Drive
8. Hutchison Drive/Bioletti Way
9. La Rue Road/Bioletti Way
10. New Davis Road/California Avenue
11. Orchard Park Drive/La Rue Road
12. Russell Boulevard/La Rue Road
13. La Rue Road/Dairy Road

SR 113/Hutchison Drive Interchange

Peak hour traffic counts were collected on SR 113 south of Hutchison Drive in November 2001 during the a.m. and p.m. peak hours. Intersection counts conducted on Hutchison Drive at the SR 113 northbound and southbound ramps were used to determine the peak hour ramp volumes. SR 113 carries approximately 3,735 vehicles during the a.m. peak hour and 3,730 vehicles (in both directions) during the p.m. peak hour south of Hutchison Drive.



PEAK HOUR TRAFFIC VOLUMES AND LANE CONFIGURATIONS - EXISTING CONDITIONS

FIGURE 2

Existing Traffic Operations

Study Intersections

The a.m. and p.m. peak hour traffic volumes displayed in Figure 2 were used to analyze the study intersections. Table 4 summarizes the intersection traffic operations during the a.m. and p.m. peak hours². As shown, the study intersections operate acceptably during the a.m. and p.m. peak hours except for the Hutchison Drive/Kleiber Hall Drive intersection, which operates at LOS E during the p.m. peak hour.

Location	Control	Delay – LOS ¹			
		AM Peak Hour		PM Peak Hour	
		Worst-Case Movement	Overall Intersection	Worst-Case Movement	Overall Intersection
1. Hutchison Dr./SB SR 113 Ramps	TWSC ²	17.5 – C	8.9 – A	10.7 – B	2.8 – A
2. Hutchison Dr./NB SR 113 Ramps	TWSC	26.5 – D	2.2 – A	13.7 – B	0.5 – A
3. Hutchison Dr./Health Sciences Dr.	TWSC	33.1 – D	1.5 – A	> 50.0 – F	15.3 – C
4. Hutchison Dr./Extension Center Dr.	TWSC	24.8 – C	1.6 – A	38.7 – E	4.2 – A
5. Hutchison Dr./La Rue Rd.	Signal ³	n.a.	32.1 – C	n.a.	38.7 – D
6. Dairy Rd./Hutchison Dr.	TWSC	19.5 – C	0.8 – A	30.9 – D	2.6 – A
7. Hutchison Dr./Kleiber Hall Dr.	AWSC ⁴	n.a.	33.4 – D	n.a.	36.7 – E
8. Hutchison Dr./Bioletti Way	AWSC	n.a.	9.0 – A	n.a.	12.5 – B
9. La Rue Rd./Bioletti Way	TWSC	19.2 – C	2.9 – A	25.4 – D	5.9 – A
10. New Davis Rd./California Avenue	TWSC	> 50.0 – F	34.9 – D	18.8 – C	12.0 – B
11. Orchard Park Dr./La Rue Rd.	Signal	n.a.	14.4 – B	n.a.	23.2 – C
12. Russell Blvd./La Rue Rd.	Signal	n.a.	24.3 – C	n.a.	43.0 – D
13. La Rue Rd./Dairy Rd.	TWSC	20.0 – C	1.5 – A	19.3 – C	2.4 – A

Notes:
 Shaded boxes indicate unacceptable LOS.
 n.a. = Not Applicable. Worst-case movement delay not calculated for AWSC or signalized intersections.
¹ Delay = Average control delay in seconds per vehicle; LOS = Level of Service.
² TWSC = Two Way Stop Controlled intersection. Results shown in delay and LOS for worst-case movement and average delay and LOS for overall intersection.
³ Signal = Intersection controlled by traffic signal. Results shown in overall intersection average delay and LOS.
⁴ AWSC = All Way Stop Controlled intersection. Results shown in overall intersection average delay and LOS.
 Source: Fehr & Peers Associates, 2002.

2 Detailed technical calculations are included in the separately bound technical appendix for each study intersection under existing and Year 2005 conditions with and without the proposed WEPS.

SR 113/Hutchison Drive Interchange

Table 5 summarizes the ramp junction operations during the a.m. and p.m. peak hours³. These results are based on the following assumptions:

- A peak hour factor of 0.90 for the mainline and ramps;
- A heavy vehicle percentage of 6 percent on SR 113 and 5 percent on ramps based on *Truck Traffic on California State Highways*, Caltrans, 2000; and
- One travel lane on each on/off-ramp.

Table 5				
Ramp Junction Levels of Service – Existing Conditions				
SR 113/Hutchison Drive Interchange				
Location	Mainline (VPH)¹	On/Off- Ramp (VPH)¹	Density (pc/mi/ln)²	LOS
	AM Peak Hour			
Northbound Off-Ramp	1,722	541	6.7	A
Northbound Loop On-Ramp	1,181	3	8.8	A
Northbound Diagonal On-Ramp	1,184	48	9.0	A
Southbound Off-Ramp	2,409	531	10.9	B
Southbound Loop On-Ramp	1,878	82	9.2	A
Southbound Diagonal On-Ramp	1,960	52	13.1	B
PM Peak Hour				
Northbound Off-Ramp	2,016	171	7.7	A
Northbound Loop On-Ramp	1,845	57	15.2	B
Northbound Diagonal On-Ramp	1,902	379	16.2	B
Southbound Off-Ramp	1,390	126	3.6	A
Southbound Loop On-Ramp	1,264	362	8.2	A
Southbound Diagonal On-Ramp	1,626	89	11.7	B
Notes:				
¹ Vehicles per hour.				
² Passenger cars per mile per lane.				
Source: Fehr & Peers Associates, 2002.				

As shown, the ramp junctions operate acceptably during the a.m. and p.m. peak hours according to Caltrans standards.

³ Detailed technical calculations for the ramp junction analysis are included in the separately bound technical appendix under existing and cumulative (Year 2025) conditions with and without the proposed WEPS.

Transit System

The Unitrans bus service, a joint operation of the Associated Students of University of California, Davis and the City of Davis, operates bus lines based from two stations on the UC Davis campus. One of these stations, the Silo Station, uses Hutchison Drive as its primary access. Consequently, a heavy volume of buses use La Rue Road and Hutchison Drive. Most routes operate on approximately 30-minute headways, with most traffic focused at the top and bottom of each hour, reflecting the daily schedule of classes at UC Davis.

Special accommodation for buses has been made at the Hutchison Drive/La Rue Road intersection by striping the southbound approach with an exclusive left-turn lane, a shared left-turn/through lane, and a shared through/right-turn lane. The shared left-turn/through lane allows buses to make a wider left-turn, resulting in safer and more comfortable operations.

Bicycle and Pedestrian System

The UC Davis campus and the City of Davis have an extensive system of on-street bike lanes and off-street bike paths, which are heavily used by the University-related population of the campus and City. The following bike paths are located in the vicinity of the proposed project site:

- A bike path on the north side of Hutchison Drive from La Rue Road to Kleiber Hall Drive;
- A bike path on the west side of La Rue Road from Hutchison Drive to Russell Boulevard;
- A north-south bike path extending north from Hutchison Drive opposite Dairy Road; and
- A bike path on the west side of Bioletti Way from Hutchison Drive south to the Tercero student housing complex.

Sidewalks are located on Hutchison Drive east of La Rue Road. West of La Rue Road, Hutchison Drive has sidewalks on the SR 113 Bridge. Sidewalks are also located on both sides of La Rue Road and Bioletti Way.