

5. CIRCULATION AND ACCESS

An evaluation of existing traffic conditions was conducted for the Diridon Station Area with the purpose of identifying roadway capacity restrictions for future development. The analysis includes the evaluation of existing level of service conditions at intersections and freeway segments within and surrounding the Diridon Station Area. The evaluation begins by identifying intersections and freeway segments that serve as major gateways to the Diridon Station area and major intersections within the area. The existing transportation system surrounding the Diridon Station is shown in Figure 1. Existing conditions for bicycle and pedestrian facilities were also included. Existing intersection and freeway level of service conditions are listed at the end of the chapter.

Figure 5-1: EXISTING ROADWAY NETWORK (Source: Hexagon Transportation Consultants, Inc.)



5.1 Existing Roadway Network

Regional access to the station area is provided via I-880, I-280, and SR-87. These facilities are described below:

- Interstate-880 is an 8-lane freeway running north-west of downtown San Jose. South of San Jose it becomes SR 17. Access to the Diridon Station area is provided indirectly via interchanges at I-280, Bascom Avenue, The Alameda and Coleman Avenue.
- Interstate-280 connects from US 101 in San Jose to I-80 in San Francisco. It is generally an eight-lane freeway in the vicinity of downtown San Jose. It also has auxiliary lanes between some interchanges. The section of I-280 just north of the Bascom Avenue overcrossing has six mixed-flow lanes and two high-occupancy-vehicle (HOV) lanes. I-280 provides access to the Diridon Station area via its interchange at Bird Avenue. Connections are also available indirectly via an interchange with SR 87.
- State Route 87 connects from SR 85 in south San Jose to US 101 near the San Jose International Airport. It is generally a four-lane freeway with auxiliary lanes near the I-280 interchange. With the SR 87 HOV lane-widening project recently completed, SR 87 provides HOV lanes between Julian Street and SR 85. Connections from SR 87 to the Diridon Station area are provided via a full interchange at Julian Street and partial interchanges at Park Avenue (ramps to/from north only), at Auzerais Avenue (ramps to/from south only), and at Santa Clara Street (northbound off-ramp only).

Roadways providing local access to the Diridon Station area and their configurations in the area of the station are described below:

- Santa Clara Street is a four-lane east-west roadway that provides access from the east and west of the station area. East of US 101, Santa Clara Street becomes Alum Rock Avenue and west of the Caltrain bridge it becomes The Alameda.
- The Alameda (State Route 82) is generally a four-lane north-south arterial that runs from Santa Clara University to the Diridon Station area where it becomes Santa Clara Street.

- **Montgomery Street.** Montgomery Street is a two-lane, one-way arterial street (southbound) that provides a connection from Santa Clara Street to Bird Avenue.
- **Autumn Street.** Autumn Street completes a one-way couplet with Montgomery Street. It is a three-lane, one-way arterial street running northbound from Bird Avenue to Santa Clara Street. North of Santa Clara Street, Autumn Street is a two-way street (one lane in each direction). Autumn Street currently ends just north of Julian Street, but is planned to extend to Coleman Avenue in the San Jose 2020 General Plan.
- **Bird Avenue** is a four-lane north-south arterial that provides access to I-280 and the Diridon Station area. Bird Avenue runs from the Willow Glen Area of San Jose to Park Avenue, where it transitions into the one-way couplet of Autumn and Montgomery Streets.
- **Julian Street** is an east-west arterial that traverses the north edge of downtown San Jose. It provides access to the station area via an interchange with SR-87. East of SR-87 Julian is generally a two-lane one-way street (westbound). The portion of Julian Street between SR-87 and Market Street has been approved for realignment from a curved design to a part of the downtown grid. West of SR-87, Julian Street is a two-lane, two-way street.
- **San Fernando Street** is a four-lane east-west arterial that runs from 17th Street to Montgomery Street. Outside of the downtown area, specifically west of Almaden Boulevard and east of 10th Street, San Fernando Street is a two-lane roadway. It provides access between downtown San Jose and the Diridon train station, where it ends.
- **San Carlos Street** is a four-lane east-west arterial that runs from 4th Street to Bascom Avenue, just east of I-880, at which point it becomes Stevens Creek Boulevard.
- **Cahill Street** is a short local street that connects the Diridon train station to The Alameda.
- **Park Avenue** is a four-lane local street in the downtown area and then transitions to a two-lane designated arterial to the west. Park Avenue provides a connection between the Diridon Station area and the SR87 interchange with Park Avenue.
- **Auzerais Avenue** is a two-lane collector street. It provides a connection between the Diridon Station area and the SR87 interchange at Woz Way.

5.2 Existing Bicycle and Pedestrian Facilities

Pedestrian facilities in the Diridon Station area consist primarily of sidewalks, pedestrian push buttons and signal heads at intersections. With a few exceptions, sidewalks are found along virtually all previously described local roadways in the study area and along the local residential streets and collectors near the sites.

There are several bicycle facilities in the Diridon Station area. Bicycle facilities include striped bike lanes on roadways, bike paths, which are separated from vehicle traffic and shared with pedestrians, and bicycle corridors, which are identified corridors between jurisdictions where it is desirable to implement bicycle facilities. The bicycle facilities are described below and shown on Figure 5-2. Within the vicinity of the Diridon Station area, bike lanes are provided on:

- San Fernando Street, between SR-87 and 10th Street
- Park Avenue, between Naglee Avenue and Race Street
- Coleman Avenue, between Taylor Street and SR-87
- 7th Street (between St. James Street and Empire Street)
- 7th Street (between Hedding Street and Commercial Street)
- Commercial Street (between 1st Street and 10th Street)
- Coleman Avenue, (between Newhall Drive and McKendric)

A bike and pedestrian path is located along the Guadalupe River between I-880 and I-280.

There are also two designated cross-county bicycle corridors in the station vicinity:

- SR 87/Guadalupe LRT cross-county bicycle corridor runs along the extent of SR 87.
- I-880/I-680/SR 17/Vasona Rail/Los Gatos Creek cross-county bicycle corridor runs along San Carlos Street and Santa Clara Street.

Figure 5-2: DIRIDON STATION AREA EXISTING BICYCLE FACILITIES

(Source: VTA Santa Clara Valley Bikeways Map, May 2008)



5.3 Existing Freeway Segment Levels of Service

Traffic volumes on selected freeway segments were obtained from the Congestion Management Program (CMP) Annual Monitoring Report, 2008. This is the latest available report. The results of the analysis are summarized in Table 5-1. The results show that mixed-flow lanes on 17 (plus one HOV segment) out of 18 directional freeway segments analyzed in the Diridon Station area currently operate at an unacceptable LOS F during at least one peak hour.

5.4 Existing Intersection Levels of Service

The near-term traffic information is presented merely to identify possible constraints to transportation improvements in the Diridon Station area. A total of 34 intersections have been identified for evaluation within the Environmental Analysis Phase of the project.

The results of the level of service analysis under existing conditions are summarized in Table 5-2. The results show that all of the study intersections, both local City of San Jose and CMP intersections, currently operate at an acceptable level of service (LOS D or better for local intersections, and LOS E or better for CMP intersections) according to City of San Jose and the CMP level of service standards.

Table 5-1: DIRIDON STATION AREA EXISTING FREEWAY LEVEL OF SERVICE

(Source: Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2008.)

Freeway	Segment	Direction	Peak Hour	Mixed-Flow Lanes					HOV Lane				
				Speed	# of Lanes	Volume	Density	LOS	Speed	# of Lanes	Volume	Density	LOS
SR 87	Curtner to Almaden Expressway	NB	AM	21	2	3,410	81.0	F	22	1	1,740	79.0	F
			PM	66	2	3,670	28.0	D	70	1	910	13.0	B
SR 87	Almaden Expressway to Alma	NB	AM	31	2	3,910	63.0	F	40	1	2,080	52.0	E
			PM	52	2	4,370	42.0	D	70	1	840	12.0	B
SR 87	Alma to I-280	NB	AM	54	2	4,430	41.0	D	64	1	2,050	32.0	D
			PM	66	2	3,670	28.0	D	70	1	700	10.0	A
SR 87	I-280 to Julian	NB	AM	31	2	3,910	63.0	F	45	1	2,160	48.0	E
			PM	67	2	2,130	16.0	B	70	1	350	5.0	A
SR 87	Julian to Coleman	NB	AM	25	2	3,650	73.0	F	46	1	2,170	47.0	E
			PM	66	2	2,910	22.0	C	70	1	140	2.0	A
I-280	I-880 to Meridian	EB	AM	66	4	4,760	24.0	C	67	1	340	5.0	A
			PM	22	4	5,220	79.0	F	40	1	2,240	56.0	E
I-280	Meridian to Bird	EB	AM	58	4	8,820	38.0	D					
			PM	24	4	7,200	75.0	F					
I-280	Bird to SR 87	EB	AM	66	4	5,280	20.0	C					
			PM	24	4	7,200	75.0	F					
I-280	SR 87 to 10th	EB	AM	66	4	5,020	19.0	C					
			PM	20	4	6,640	83.0	F					
I-280	10th to SR 87	WB	AM	19	4	6,460	85.0	F					
			PM	65	4	7,540	29.0	D					
I-280	SR 87 to Bird	WB	AM	7	4	3,700	132.0	F					
			PM	19	4	6,390	84.0	F					
I-280	Bird to Meridian	WB	AM	19	4	6,540	86.0	F					
			PM	43	4	8,430	49.0	E					
I-280	Meridian to I-880	WB	AM	7	4	3,120	131.0	F	66	1	1,850	28.0	D
			PM	62	4	7,380	35.0	D	70	1	1,120	16.0	B
SR 87	Coleman to Julian	SB	AM	66	2	3,440	26.0	C	67	1	140	2.0	A
			PM	32	2	3,910	61.0	F	70	1	1,470	21.0	C
SR 87	Julian to I-280	SB	AM	67	2	1,870	14.0	B	67	1	210	3.0	A
			PM	21	2	3,360	80.0	F	70	1	910	13.0	B
SR 87	I-280 to Alma	SB	AM	67	2	1,870	14.0	B	67	1	340	5.0	A
			PM	15	2	2,850	95.0	F	70	1	1,820	26.0	C
SR 87	Alma to Almaden Expressway	SB	AM	66	2	2,780	21.0	C	67	1	270	4.0	A
			PM	18	2	3,140	87.0	F	70	1	2,520	36.0	D
SR 87	Almaden Expressway to Curtner	SB	AM	67	2	2,400	18.0	B	67	1	410	6.0	A
			PM	24	2	3,560	74.0	F	70	1	1,820	26.0	C

Table 5-2: DIRIDON STATION AREA EXISTING INTERSECTION LEVEL OF SERVICE

Study Number	Intersection	Peak Hour	Count Date	Existing	
				Avg. Delay ¹	LOS
1	The Alameda and Hedding Street*	AM	9/17/2008	41	D
		PM	9/17/2008	32	C
2	The Alameda and Taylor Street / Naglee Avenue*	AM	9/17/2008	41	D
		PM	9/17/2008	40	D
3	Race Street and The Alameda*	AM	9/24/2008	42	D
		PM	9/24/2008	37	D
4	Montgomery Street and Santa Clara Street*	AM	9/24/2008	16	B
		PM	9/24/2008	18	B
5	Autumn Street and Santa Clara Street*	AM	9/24/2008	24	C
		PM	9/24/2008	22	C
6	SR 87 and Santa Clara Street*	AM	9/17/2008	18	B
		PM	9/17/2008	16	B
7	Almaden Boulevard and Santa Clara Street	AM	3/11/2008	5	A
		PM	3/11/2008	11	B
8	Notre Dame Street and Santa Clara Street	AM	3/12/2008	24	C
		PM	3/12/2008	21	C
9	Market Street and Santa Clara Street	AM	9/27/2005	23	C
		PM	9/27/2005	21	C
10	Meridian Avenue and San Carlos Street	AM	3/7/2007	36	D
		PM	3/7/2007	46	D
11	Race Street and San Carlos Street	AM	1/4/2006	30	C
		PM	1/4/2006	34	C
12	Lincoln Avenue and San Carlos Street	AM	1/4/2006	33	C
		PM	1/4/2006	43	D
13	Bird Avenue and San Carlos Street*	AM	9/16/2008	30	C
		PM	9/16/2008	38	D
14	Delmas Avenue and San Carlos Street	AM	9/27/2005	13	B
		PM	9/27/2005	21	B
15	Woz Way and San Carlos Street	AM	5/23/2002	24	C
		PM	5/23/2002	24	C
16	Almaden Boulevard and San Carlos Street*	AM	9/30/2008	38	D
		PM	9/30/2008	41	D
17	Market Street and San Carlos Street*	AM		32	C
		PM	10/9/2008	37	D
18	Race Street and Park Avenue	AM	9/21/2005	12	B
		PM	9/21/2005	12	B
19	Montgomery Street and Park Avenue	AM	4/29/2008	28	C
		PM	4/29/2008	28	C
20	Delmas Avenue and Park Avenue	AM	4/29/2008	26	C
		PM	4/29/2008	27	C
21	Woz Way and Park Avenue	AM	4/29/2008	15	B
		PM	4/29/2008	20	C

Study Number	Intersection	Peak Hour	Count Date	Existing	
				Avg. Delay ¹	LOS
22	Almaden Boulevard and Park Avenue	AM	9/27/2005	32	C
		PM	9/27/2005	36	C
23	SR 87 (W) and Julian Street*	AM	9/17/2008	16	B
		PM	9/17/2008	15	B
24	SR 87 (E) and Julian Street*	AM	9/17/2008	57	E
		PM	9/17/2008	42	D
25	Almaden Boulevard and San Fernando Street	AM	9/27/2005	13	B
		PM	9/27/2005	21	C
26	Bird Avenue and Auzerais Avenue	AM	9/14/2005	20	C
		PM	9/14/2005	24	C
27	Bird Avenue and I-280 (N)*	AM	9/16/2008	27	C
		PM	9/16/2008	29	C
28	Bird Avenue and I-280 (S)*	AM	9/16/2008	26	C
		PM	9/16/2008	30	C
29	Delmas Avenue and Auzerais Avenue	AM	9/28/2005	18	B
		PM	9/28/2005	13	B
30	Woz Way and Auzerais Avenue	AM	2/26/2002	18	B
		PM	2/26/2002	27	C
31	Woz Way and SR 87	AM	3/11/2008	10	B
		PM	3/11/2008	10	A
32	Autumn Street and Julian Street	AM	5/18/2006	19	B
		PM	5/18/2006	17	B
33	Montgomery Street and Julian Street	AM	3/6/2008	11	B
		PM	3/6/2008	12	B
34	Cahill Street and Santa Clara Street	AM	10/25/2005	9	A
		PM	10/25/2005	13	A

Notes

1. Whole intersection weighted average control delay expressed in seconds per vehicle.

* Indicates CMP designated intersection

Box indicates intersections projected to operate at unacceptable levels of service (LOS E or F for local intersections or LOS F for CMP intersections).