5. PROJECT CONDITIONS WITH ALTERNATE PROJECT DESCRIPTION

The City of Morgan Hill's General Plan designates a supermarket land use on the east side of US 101 in the vicinity of the project site. This type of land use could be accommodated on the proposed project site with the current land use designation. Therefore, a separate analysis was conducted to evaluate impacts on the surrounding transportation system with an alternate project description (60,000 s.f. supermarket, a 12 position gas station, 530,100 s.f. of retail space, and a 63,200 s.f. movie theater).

Although the current site plan (dated March 10, 2005) shows a 50,000 s.f. supermarket as an alternative lands use, the traffic impact analysis of this alternative assumes a 60,000 s.f. supermarket with correspondingly less floor area for retail uses. The larger square footage for the supermarket was evaluated in accordance with direction from City staff. In addition, since trip generation rates for supermarket land use are substantially higher than for shopping center rate applied to the retail uses, this results in a conservative or reasonable worst-case analysis for this alternative. Additionally, as discussed for the proposed project, the preliminary site plan (dated March 10, 2005) shows the fuel station as an optional use on Pad 2, and shows that the primary proposed use for this pad is 6,000 s.f. of retail space. However, since the 12-position fuel station would generate substantially more traffic than the planned retail space for this location, the traffic analysis is based on development of Pad 2 with a fuel station in order to present a worst-case analysis. In addition, it should be noted that the current site plan dated March 10, 2005 shows a total retail floor area (including garden center) of 588,050 s.f., assuming fuel station use for Pad 2. This is 2,050 s.f. less than the floor area used in this traffic analysis, which was based on a previous version of the site plan. Since the traffic analysis is therefore based on a project size which is approximately 0.4 percent larger than currently proposed, the resulting calculations may be slightly conservative; however, the difference is not great enough to affect the findings, conclusions, or recommendations contained in this analysis.

ALTERNATE PROJECT TRAFFIC ESTIMATES

The amount of traffic generated by the alternate project description was estimated using the process mentioned in the previous chapter. Trip generation rates for "Supermarket" from *Trip Generation* (Institute of Transportation Engineers, 7th Edition) were used to estimate the number of trips generated by the supermarket. A pass-by/diverted link reduction of 25 percent was also applied to the supermarket. To account for the internalization of trips within the site, a 20 percent reduction was applied to peak hour supermaket trip generation.

Table 10 presents the trip generation estimates for the alternate project description. The alternate project is estimated to generate 25,143 net new daily trips, 593 net new AM peak-hour trips (377 inbound/216 outbound), and 2,110 net new PM peak-hour trips (1,054 inbound/1,056 outbound), and 2,631 net new Saturday midday peak-hour trips (1,435 inbound/1,0196 outbound).

Compared to the proposed project description in the previous chapter, the alternate project would generate approximately 3,134 additional daily trips, 60 additional AM peak-hour trips, 241 additional PM peak-hour trips, and 216 additional Saturday midday peak-hour trips.

ALTERNATE PROJECT INTERSECTION LEVELS OF SERVICE

Level of service calculations were conducted for the study intersections to evaluate the potential impacts of the alternate project on the local roadway system. Table 11 contains the intersection level of service results for Background and Project Alternative Conditions.

The intersections of Cochrane Road/US 101 northbound ramps, Cochrane Road/Mission View Drive, and Dunne Road/Monterey Road are projected to operate at unacceptable levels of service during one or more peak hours. The remaining intersections would operate at acceptable levels of service.

ALTERNATE PROJECT INTERSECTION IMPACTS

Based upon the criteria presented in the previous chapter, the alternate project would result in a ***significant impact*** to the three intersections operating at unacceptable levels: Cochrane Road/US 101 northbound ramps, Cochrane Road/Mission View Drive, and Dunne Road/Monterey Road.

ALTERNATE PROJECT INTERSECTION MITIGATION MEASURES

Intersection improvements identified to mitigate alternate project impacts at the three locations mentioned above are discussed in detail below.

US 101 Northbound Ramp/Cochrane Road

The mitigation measure for the proposed project with supermarket includes converting the westbound approach to provide one separate through lane and one shared through-right turn lane. This mitigation would provide LOS D during the Saturday peak hour.

Improvements to this intersection must be approved by Caltrans as well as the City of Moran Hill. Caltrans typically requires submittal of approved plans along with encroachment application and fees before approvals are issued.

Mission View Drive/Cochrane Road

The recommended lane improvements under Project Conditions, would also mitigate the impacts under the Alternate Project Conditions and provide an acceptable level of service.

Dunne Avenue/Monterey Road

The recommended lane improvements under Project Conditions, would also mitigate the impacts under the Alternate Project Conditions and provide an acceptable level of service.

TABLE 10

ALTERNATE PROJECT (WITH SUPERMARKET)

TRIP GENERATION ESTIMATES

Item	Weekday	AM Peak Hour			PM Peak Hour			Sat Peak Hour		
	Total	In	Out	Total	In	Out	Total	In	Out	Total
Trip Rates										
Shopping Center (ksf)	37.88	0.63	0.40	1.03	1.70	1.85	3.55	2.51	2.32	4.83
Supermarket (ksf)	102.24	1.98	1.27	3.25	5.33	5.12	10.45	5.49	5.27	10.76
Gas-Service Station (Fueling Position)	152.84	5.43	5.21	10.64	6.67	6.67	13.33	9.44	9.07	18.50
Movie Theater (screen)	292.50	0.0	0.0	0.0	13.81	9.21	23.02	14.38	5.59	19.97
Trip Estimates										
Shopping Center (530.1 ksf)	20,080	333	213	546	903	979	1,882	1,331	1,228	2,559
Supermarket (60 ksf)	6,134	119	76	195	320	307	627	329	317	646
Gas-Service Station (12 Fueling Positions)	1,834	65	63	128	80	80	160	113	109	222
Movie Theater (14 screens)	4,095	0	0	0	193	129	322	201	79	280
Gross Project Trips	*32,143*	*517*	*352*	*869*	*1,496*	*1,495*	*2,991*	*1,974*	*1,733*	*3,707*
Shopping Center Pass-by/Diverted Trip Reduction[2]	-4,016	-69	-68	-137	-236	-235	-471	-320	-320	-640
Supermarket Pass-by/Diverted Trip Reduction[2]	-1,227	-25	-24	-49	-79	-78	-157	-81	-81	-162
Gas-Service Station Pass-by/Diverted Trip Reduction (40%)	-734	-26	-25	-51	-32	-32	-64	-45	-44	-89
Theater Internalization[3]	-410	0	0	0	-32	-32	-64	-65	-64	-129
Supermarket Internalization[3]	-613	-20	-19	-39	-63	-62	-125	-65	-64	-129
Net New Project Trips	**25,143**	**377**	**216**	**593**	**1,054**	**1,056**	**2,110**	**1,435**	**1,196**	**2,631**

Notes:

1 Trip rates are expressed as trips per 1,000 s.f. (ksf) or per screen.

2 Pass-by/Diverted trip reduction 20 percent daily and 25 percent during peak hour.

3 Internalization trip reduction 10 percent daily and 20 percent during peak hour.

Source: *Trip Generation* (Institute of Transportation Engineers, 7th Edition).

TABLE 11
BACKGROUND AND ALTERNATE PROJECT INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour[1]	Background		Alternate Project (with Supermarket)			
		Delay[2]	LOS[3]	Delay	LOS	Δ in Crit. V/C[4]	Δ in Crit. Delay[5]
1. Cochrane Road/Monterey Road	AM	20.5	C+	20.7	C+	+0.013	+0.2
	PM	25.7	C	25.4	C	+0.050	-0.1
	SAT	24.4	C	26.5	C	+0.139	+0.3
2. Cochrane Road/Butterfield Boulevard	AM	13.2	B	13.4	B	+0.033	+0.5
	PM	12.3	B	13.7	B	+0.127	+2.4
	SAT	10.9	B+	12.8	B	+0.152	+3.0
3. Cochrane Road/Sutter Boulevard	AM	20.6	C+	20.7	C+	+0.024	+0.3
	PM	15.4	B	16.4	B	+0.090	+1.2
	SAT	13.6	B	13.4	B	+0.088	-0.6
4. Cochrane Road/Cochrane Plaza	AM	18.7	B-	18.6	B-	+0.020	+0.2
	PM	28.1	C	26.8	C	+0.085	-0.5
	SAT	23.4	C	22.8	C+	+0.082	+0.1
5. Cochrane Road/SB US 101 Ramp	AM	13.3	B	14.3	B	+0.071	+1.0
	PM	14.6	B	27.8	C	+0.265	+21.7
	SAT	19.9	B-	26.6	C	+0.373	+7.7
6. Cochrane Road/NB US 101 Ramp	AM	11.3	B+	13.7	B	+0.184	+3.0
	PM	10.9	B+	36.8	D+	+0.656	+31.1
	SAT	10.8	B+	**91.7**	**F**	**+0.922**	**>100**
7. Cochrane Road/DePaul Drive[6]	AM	12.0	B	16.6	B	NA	NA
	PM	12.6	B	23.9	C	NA	NA
	SAT	11.2	B	34.7	C-	NA	NA
8. Cochrane Road/Mission View Drive[7]	AM	16.9	C	**>100**	**F**	NA	NA
	PM	12.7	B	**>100**	**F**	NA	NA
	SAT	12.3	B	**>100**	**F**	NA	NA
9. Main Avenue/Monterey Road	AM	27.8	C	27.8	C	+0.003	+0.0
	PM	24.3	C	24.8	C	+0.045	+0.9
	SAT	22.0	C+	22.5	C+	+0.057	+1.0
10. Main Avenue/Butterfield Boulevard	AM	38.2	D+	38.5	D+	+0.014	+0.5
	PM	37.5	D+	37.7	D+	+0.048	+0.6
	SAT	31.9	C	32.3	C-	+0.064	+1.0
11. Main Avenue/Condit Road	AM	12.3	B	12.9	B	+0.023	+0.5
	PM	9.8	A	11.5	B+	+0.101	+2.4
	SAT	9.9	A	11.2	B+	+0.107	+1.8
12. Dunne Avenue/Monterey Road	AM	37.9	D+	38.3	D+	+0.013	+0.7
	PM	**39.5**	**D**	**40.9**	**D**	**+0.050**	**-0.1**
	SAT	30.9	C	32.1	C-	+0.062	+1.1
13. Dunne Avenue/Butterfield Boulevard	AM	35.3	D+	35.4	D+	+0.008	+0.4
	PM	37.6	D+	38.5	D+	+0.005	-2.1
	SAT	30.3	C	30.7	C	+0.026	-0.2
14. Dunne Avenue/ NB US 101 Ramp	AM	15.5	B	15.5	B	+0.001	-0.0
	PM	12.8	B	12.7	B	+0.003	-0.1
	SAT	9.9	A	9.8	A	+0.006	-0.1
15. Tennant Avenue/NB US 101 Ramp	AM	25.5	C	26.9	C	+0.028	+1.8
	PM	22.0	C+	23.9	C	+0.077	+2.3
	SAT	19.9	B-	22.9	C+	+0.107	+3.5

Notes:
1 AM = Morning peak-hour, PM = Evening peak-hour, SAT = Saturday midday peak-hour.
2 Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections using methodology described in the *2000 Highway Capacity Manual,* with adjusted saturation flow rates to reflect Santa Clara County Conditions. For two-way stop controlled unsignalized intersections, total control delay for the worst movement/approach, expressed in seconds per vehicle, is presented. LOS calculations conducted using the TRAFFIX level of service analysis software package.
3 LOS = Level of service
4 Change in critical movement delay between Background and Project Conditions. A decrease in the critical delay indicates project trips were added to movements with low delays thus causing a decrease in the overall critical delay.
5 Change in the critical volume-to-capacity ratio (V/C) between Background and Project Conditions.
6 Intersection is analyzed as unsignalized under Background Conditions, and with a traffic signal and additional lanes under Project Conditions.
7 Intersection is analyzed as unsignalized under Background, and with additional lanes under Project Conditions.
Significant impacts are designated in **bold** type.

ALTERNATE PROJECT PARKING

A parking analysis was conducted for the alternate project description following the same methodology as described in Chapter 4. Please note that the size of the supermarket for the parking analysis is assumed to be 50,000 s.f. of space as shown on the preliminary site plan. The results of this analysis are presented in Appendix F. The number of parking spaces provided on the preliminary site plan is 3,025 stalls. (This total applies to both the retail and fuel station alternatives for Pad 2, which both show 12 spaces.)

Required Supply Based on City Code

As discussed in the corresponding discussion of parking for the proposed project, the ITE peak parking rate for the 'shopping center' was used to calculate the city parking requirement for retail and restaurant space. The peak rate is 3.21 spaces per 1,000 s.f. of space, which was then increased by ten percent to account for a circulation factor (i.e., to allow vehicles to park without having to circulate through the project site and wait for a space to become available). This results in a required parking rate of 3.53 spaces per 1,000 s.f, or 1 space/283 s.f. (It should be noted that municipal parking rates typically incorporate a similar 10 percent circulation factor within their required parking rates, although this is not usually stated.)

For movie theatre space, the City of Morgan Hill code requires 1 space for every 3.5 seats or 1 space per 32 s.f. of usable seating area (whichever is greater). The rate of 1 space per 3.5 seats was used in this analysis to estimate the movie theater parking supply because the exact size of usable movie theater space is unknown at this time.

For the alternative supermarket land use presented under this alternative, the City code requires 1 parking space per 250 s.f. of floor area.

These rates result in a required supply of 2,979 spaces (i.e., 544,050 s.f. retail space at 1 space/283 s.f. = 1,922 spaces; 3,000 seats at 1 space/3.5 seats = 857 spaces; and 50,000 s.f. supermarket space at 1 space/250 s.f. = 200 spaces). Therefore, the proposed parking supply of 3,025 spaces shown on the preliminary site plan exceeds the supply requirement by 46 spaces indicated under this methodology.

Shared Parking Analysis

As with the parking evaluation for the proposed project, this parking analysis for the alternative land use included a second study based on a methodology using the ITE rates for shared parking.

The shared parking analysis for the weekend day shows that the projected peak parking demand would be 2,831 spaces at 1:00 PM. This overall demand includes a ten percent circulation factor, as was applied under the first methodology above. The proposed supply of 3,025 spaces shown on the preliminary project site plan would meet the peak weekend parking requirement by 194 spaces indicated through application of this methodology.

The results of the weekday shared parking analysis show that the expected peak demand would be 1,866 spaces at 1:00 PM. This demand also includes a ten percent circulation factor. Therefore, the proposed supply of 3,025 spaces indicated on the project site plan would meet the peak weekday parking requirement of 1,866 spaces indicated under this methodology.

A further calculation was conducted to determine the amount of restaurant space that could be allowed with the proposed supply (3,025 spaces). Using the shared parking methodology including the supermarket, it was determined that 18,000 s.f. of sit-down restaurant space could be accommodated. Since sit-down restaurant space has a higher parking demand (13.5 spaces/1,000 s.f.) than fast food space (9.5 spaces/1,000 s.f.) a mix of the two restaurant types would allow for a slightly higher total. For example, if the ratio of sit-down to fast food restaurant was roughly 60% to 40%, it is estimated that approximately 20,000 s.f. of restaurant space would be able to be accommodated in the project site with the proposed supply of 3,025 parking spaces.

Impact Assessment

Potential Parking Impacts

As discussed in detail in the previous analysis of parking for the proposed project, both of the above methodologies could underestimate actual parking demand for the alternative land use depending on the mix of tenants. This is because both methods use the ITE shopping center rates to encompass both retail and restaurant uses. This is a valid approach since the ITE shopping center rate does include some provision for restaurants, although the proportion of restaurants assumed in the rate is unknown. It is also a necessary approach since the proportion of restaurant space to be included in the project has not yet been determined. However, it is reasonable to conclude that the proportion of restaurants contemplated in the ITE shopping center rate is minor given that the parking demand rates for all types of restaurants are substantially higher than the shopping center rate. As such, the above calculations of parking demand would only be valid if the actual amount of restaurant space ultimately proposed is also minor. If a substantial proportion of the project is occupied by restaurants, the project could potentially face a parking deficiency unless the parking supply is increased.

Environmental documents prepared under CEQA, including supporting technical reports on traffic and parking impacts, are to assume reasonable worst-case conditions in the absence of specific project information. In the case of the alternative land use, there is a likelihood that a parking deficiency of undetermined magnitude will occur if more than a minor amount of restaurant space is included in the project. This represents a potentially significant impact associated with this alternative.

Mitigation Measure

If the alternative land use plan is selected for the project, the following mitigation measure is identified to ensure that the overall number of parking spaces provided will meet the aggregate parking demand of the various land uses proposed within the project.

At the time of subsequent discretionary approval (e.g., use permit, design review) for each individual restaurant building pad, parcel, or other unit of incremental development, the parking supply provided for each such development unit shall meet the peak parking demand for the specific type of restaurant proposed (e.g., sit-down or fast food), as determined through either the applicable City parking requirement, or through application of the ITE shared parking rates for 1 PM on a weekend day (plus 10 percent). After the center is 75 percent built-out on the basis of floor area (assuming the cinemas have been completed), the calculation of parking requirements for new restaurant uses may be adjusted based on the results of physical parking surveys conducted at the center by a qualified transportation consultant during the peak usage period. If the cinemas have not been completed upon 75 percent project completion, then the buildout threshold for such calculations shall be 85 percent of project buildout. As a guide to the approximate maximum floor area of restaurant that can be constructed without resulting in a parking deficiency for the project, the maximum floor area can range from 25,000 square feet (assuming 100 percent sit-down restaurant) to 41,000 square feet (assuming 100 percent fast-food restaurant), although the actual maximum will fall between these numbers if

the project ultimately includes a mix of the two restaurant types. (These maximum figures assume floor areas for all other project uses will remain as proposed on the May 2, 2005 project site plan.)

OTHER ALTERNATE PROJECT IMPACTS

The freeway segments for the Alternate Project Conditions analysis would provide higher densities. Therefore, the same impact to the northbound segment of US 101 between Tennant Avenue and Dunne Avenue during the AM peak hour would occur. The mitigation measure for this impact is to implement the "Immediate Actions" list discussed under Project Conditions. As noted under Project Conditions, even after implementation of mitigation measures, this impact would be **significant and unavoidable**. No additional impacts were identified for the Alternate Project Conditions scenario.