This section of the RDEIR evaluates the potential traffic and circulation impacts along the State Route 68 corridor resulting from implementation of the proposed project. The analysis is largely based on a project-specific traffic impact analysis prepared by Higgins Associates (now Hatch Mott MacDonald) in May 2008 under contract with PMC as part of the EIR, as updated in December 2009. The traffic impact analysis analyzes Existing Conditions; Background Conditions; Background Plus Project Conditions; and Cumulative Conditions. The results of this traffic impact analysis are summarized herein. For detailed supporting analysis, the reader is referred to the traffic impact analysis included in **Appendix I**.

3.10.1 ENVIRONMENTAL SETTING

EXISTING ROADWAY SYSTEM

Monterey County's roadway system is a network of 2,274 miles of county roads, State highways and city streets. The 1,278 miles of county roads are the largest component of the roadway network. The major State highways include Highways 1, 68, 101 and 156 providing travel between cities while minor Highways 25, 146, 183, 198 and 218 serve minor arterial functions similar to county roads. The Daily Vehicle Miles of Travel (VMT) and Average Daily Traffic (ADT) have increased steadily since the 1970s, with the highest levels of increase in the State Route 68 corridor between Salinas and Monterey, along Carmel Valley Road and Highway 1.

The roadway system within the project vicinity stretches from the State Route 68 at State Route 218 intersection in the west to the State Route 68 at San Benancio Road intersection in the east. The following is a brief description of each of the roadways in the project vicinity:

State Route 68 (Monterey-Salinas Highway)

State Route 68 is a two-lane rural highway connecting State Route 1 in Monterey and State Route 101 in Salinas. The speed limit on State Route 68 is 55 miles per hour. It serves as a commuter route between the City of Salinas and the Monterey Peninsula, provides access to the low-density developments along it, and functions as a scenic tourist route to the Monterey Peninsula.

State Route 218 (Canyon Del Rey Boulevard)

State Route 218 is a two-lane highway that connects State Route 68 and State Route 1. It provides access to the cities of Del Rey Oaks, Sand City, and Seaside. The intersection of State Route 218 and State Route 68 is signal controlled.

York Road

York Road provides access to some single-family housing developments and a private school, as well as the Laguna Seca Office Park and Ryan Ranch Business Park located to

the north of State Route 68. The speed limit on York Road is 25 miles per hour. The intersection of State Route 68 and York Road is signal controlled.

Pasadera Drive

Pasadera Drive is a private road to the north side of State Route 68 providing access to the Pasadera Country Club and its associated single-family housing development. The speed limit on Pasadera Drive is 25 miles per hour. The intersection of State Route 68 and Pasadera Drive is signal controlled.

Boots Road

Boots Road provides access to a small number of residential developments to the south of State Route 68 at the same intersection where Pasadera Drive serves development to the north. The speed limit on Boots Road is 25 miles per hour. The intersection of State Route 68 and Boots Road is signal controlled.

Laureles Grade Road

Laureles Grade Road is a two-lane north/south County road that connects State Route 68 with Carmel Valley Road. The speed limit on Laureles Grade Road is 45 miles per hour and it also provides access to several residential developments. The intersection of State Route 68 and Laureles Grade Road is signal controlled.

Corral de Tierra Road

Corral de Tierra Road is located to the west of San Benancio Road. It is a two-lane collector street with a speed limit of 35 miles per hour. The intersection of State Route 68 and Corral Del Tierra Road is signal controlled.

San Benancio Road

San Benancio Road is a two-lane collector street with a speed limit of 35 miles per hour and it provides access to several residential developments. The intersection of State Route 68 and San Benancio Road is signal controlled.

Meyer Road

Meyer Road is a two-lane privately maintained road owned by Harper Canyon Realty LLC. The San Benancio Road / Meyer Road intersection is controlled by a stop sign on westbound Meyer Road.

LEVEL OF SERVICE

Performance of the County's roads and highways is evaluated based on level of service (LOS) calculations. There are six levels of service representing varying roadway conditions ranging from ideal, LOS "A" to forced flow, LOS "F." Level of Service A represents free

flow, un-congested traffic conditions. Level of Service F represents highly congested traffic conditions with unacceptable delay to vehicles at intersections. The intermediate Levels of Service represent incremental levels of congestion and delay between these two extremes. The level of service definitions are presented in **Table 3.10-1**, **Level of Service Definitions**.

All of the intersections and road segments that were analyzed are located along State Route 68. Monterey County has established LOS C as the acceptable level of operation for this major thoroughfare. CalTrans has identified this roadway as having a level of service standard of LOS C/D, which is considered to be LOS C, conservatively. Therefore, LOS C was used as the acceptable level of service standard for State Route 68.

TABLE 3.10-1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Description	Signalized Intersection	Roadway Segments
		Average Control Delay Per Vehicle (Seconds)	Average Travel Speed (mph)
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0	> 55
B	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1	50.1-55
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1	45.1-50
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1	40.1-45
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	55.1	25.1-40
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0	≤ 25mph

Source: HatchMott MacDonald 2009

For purposes of the traffic impact analysis, six intersections and five roadway segments listed in **Table 3.10-2, Intersection and Roadway Segments Studied** were evaluated in the traffic impact analysis. These intersections are shown in **Figure 3.10-1, Intersections** with the intersection locations on the figure keyed to the numbering assigned below. Intersections were analyzed for the weekday A.M. (i.e., 7:00 to 9:00 A.M.) and P.M. (i.e.,

4:00 to 6:00 P.M.) peak periods. All intersections are signalized and allow right turns on red (RTOR). Three of the intersections experience high volumes of right-turns on the northbound approach, which include the intersections of State Route 68 with Laureles Grade Road, Corral de Tierra Road, and San Benancio Road.

TABLE 3.10-2
INTERSECTION AND ROADWAY SEGMENTS STUDIED

Intersections	Roadway Segments
1. State Route 218 at State Route 68	State Route 68 between:
2. York Road at State Route 68	1. State Route 218 and York Road
3. Pasadera Drive-Boots Road at State Route 68	2. York Road and Pasadera Drive-Boots Road
4. Laureles Grade at State Route 68	3. Pasadera Drive-Boots Road and Laureles Grade
5. Corral de Tierra Road at State Route 68	4. Laureles Grade and Corral de Tierra Road
6. San Benancio Road at State Route 68	5. Corral de Tierra Road and San Benancio Road

Source: HatchMott MacDonald 2009

The study analyzed traffic conditions under the following development scenarios:

- **Existing Conditions** - Existing volumes obtained from traffic counts.
- **Background Conditions** - Existing peak-hour traffic volumes plus traffic generated from approved, but not yet constructed developments in the larger study area.
- **Background Plus Project Conditions** – Background peak-hour traffic volumes plus traffic generated by the proposed project.
- **Cumulative Conditions** - Existing traffic volumes plus the estimated traffic generated by all approved and cumulative projects in the vicinity of the project site, as well as the proposed project. Cumulative projects are developments that are in the review process but have not yet been approved.

Insert Figure 3.10-1 (Intersections)

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Existing Conditions

Existing conditions analyzes traffic volumes for the study intersections and roadway segments, which were obtained from traffic counts conducted by Higgins Associates in August 2006.

Intersections

Five of the six study intersections currently operate at unacceptable levels of service for Existing Conditions as shown in **Table 3.10-3**, **Intersection Level of Service for Existing Conditions** during the A.M. peak hour. During the P.M. peak hour, four out of six intersections operate at unacceptable levels of service.

TABLE 3.10-3
INTERSECTION LEVEL OF SERVICE FOR EXISTING CONDITIONS

Intersection	LOS Standard	AM Peak Hour		PM Peak Hour	
		Delay (Seconds)	LOS	Delay (Seconds)	LOS
1. State Route 218 at State Route 68	C/D	21.0	C	24.0	C
2. York Road at State Route 68	C/D	63.6	E	76.3	E
3. Pasadera Drive-Boots Road at State Route 68	C/D	36.8	D	29.5	C
4. Laureles Grade at State Route 68	C/D	38.8	D	82.6	F
5. Corral de Tierra Road at State Route 68	C/D	35.5	D	68.2	E
6. San Benancio Road at State Route 68	C/D	71.7	E	116.5	F

Notes: To be conservative, a level of service of LOS C is considered acceptable along State Route 68.

Source: HatchMott MacDonald 2009

Roadway Segments

To determine the existing road segment operating conditions along the State Route 68 corridor, the average travel speed was determined along an approximate 6.5 mile section starting at a point just west of the State Route 68 at State Route 218 intersection and ending at a point just east of the State Route 68 at San Benancio Road intersection. There is no distinct directional flow of traffic during the A.M. and P.M. periods along State Route 68. There are segments of the corridor where the flows are fairly even in both directions during the A.M. and P.M. peak hours.

The LOS standard for the roadway segments is LOS C. During the A.M. peak hour all of the study roadway segments operate at unacceptable levels of service in both the eastbound direction and westbound direction. During the P.M. peak hour, the following State Route roadway segments operate at unacceptable levels of service in the eastbound direction:

- State Route 68 between State Route 218 and York Road
- State Route 68 between York Road and Pasadera Drive/Boots Road
- State Route 68 between Pasadera Drive/Boots Road and Laureles Grade Road
- State Route 68 between Laureles Grade Road and Corral de Tierra Road
- State Route 68 between Corral de Tierra Road and San Benancio Road

In the westbound direction, the following roadway segments operate at unacceptable levels of service during the P.M. peak hour:

- State Route 68 between State Route 218 and York Road
- State Route 68 between Pasadera Drive/Boots Road and Laureles Grade Road
- State Route 68 between Corral de Tierra Road and San Benancio Road

Existing roadway segment operations, during the A.M. and P.M. peak periods summarized in **Table 3.10-4, Roadway Segment Level of Service for Existing Conditions** are briefly discussed below in terms of travel time.

TABLE 3.10-4
ROADWAY SEGMENT LEVEL OF SERVICE FOR EXISTING CONDITIONS

Roadway Segment	Direction	LOS Standard	AM Peak Hour			PM Peak Hour		
			Volume (Veh/hr)	Average Speed[1] (mph)	LOS	Volume (Veh/hr)	Average Speed[1] (mph)	LOS
State Route 68 between:								
1. SR 218 and	EB	C/D	1,432	37.0	E	1,067	39.0	E
York Road	WB	C/D	1,345	34.0	E	1,726	42.0	D
2. York Rd. and	EB	C/D	788	40.0	E	1,133	23.0	F
Pasadera Drive/Boots Road	WB	C/D	1,415	39.0	E	1,205	51.0	B
3. Pasadera Drive/Boots Road and	EB	C/D	772	40.0	E	1,090	11.0	F
Laureles Grade	WB	C/D	1,351	40.0	E	1,102	40.0	E
4. Laureles Grade and	EB	C/D	876	44.0	D	1,309	21.0	F
Corral de Tierra Road	WB	C/D	1,373	35.0	E	1,074	52.0	B
5. Corral de Tierra Road and	EB	C/D	1,020	26.0	E	1,365	21.0	F
San Benancio Road	WB	C/D	1,305	31.0	E	1,149	28.0	E

Notes: 1. Average travel speed obtained from data collection in the field using GPS technology.
SR = State Route
EB = Eastbound
WB = Westbound

Veh/hr = vehicles per hour
Mph = miles per hour

Source: HatchMott MacDonald 2009

Travel Times

AM Peak Period

Eastbound: During the A.M. peak period, the longest travel time for the 6.5 mile section of the corridor was 9 minutes, 36 seconds with the average travel speed ranging between 26 mph (LOS E) and 44 mph (LOS D), in the eastbound travel direction. The most congested sections of the corridor identified were between York Road and San Benancio Road.

Westbound: During the A.M. peak period, the longest travel time for the 6.5 mile section of the corridor was 10 minutes with the average travel speed ranging between 31 mph (LOS E) and 40 mph (LOS E), in the westbound travel direction. The most congested sections of the corridor identified were east of the Corral de Tierra Road and Laureles Grade Road.

PM Peak Period

Eastbound: During the P.M. peak period, the longest travel time for the 6.5 mile section of the corridor was 19 minutes with the average travel speed ranging between 11 mph (LOS F) and 39 mph (LOS E), in the eastbound travel direction. The most congested sections of the corridor identified were between Corral de Tierra Road and Pasadera Drive.

Westbound: During the P.M. peak period, the longest travel time for the 6.5 mile section of the corridor was 9 minutes, 30 seconds with the average travel speed ranging between 28 mph (LOS E) and 52 mph (LOS B), in the westbound travel direction. The most congested sections of the corridor identified were east of Corral de Tierra Road.

Off-Peak Period

Eastbound: During the off-peak period, the longest travel time for the 6.5 mile section of the corridor was 8 minutes, 36 seconds with the average travel speed ranging between 26 mph (LOS E) and 55 mph (LOS A), in the eastbound travel direction. The most congested sections of the corridor identified were between Pasadera Drive and Laureles Grade Road and between Corral de Tierra Road and San Benancio Road.

Westbound: During the off-peak period, the longest travel time for the 6.5 mile section of the corridor was 9 minutes with the average travel speed ranging between 20 mph (LOS F) and 53 mph (LOS A), in the westbound travel direction. The

most congested sections of the corridor identified were east of State Route 218 and west of San Benancio Road.

The results show that congestion is experienced on State Route 68 during both and A.M. and P.M. peak hours, with the most critical congestion occurring in the eastbound direction during the P.M. peak hour. The longest eastbound travel time along the 6.5 mile section of the State Route 68 corridor was 9 minutes 36 seconds during the A.M. peak hour and 19 minutes during the P.M. peak hour.

Recommended Improvements - Existing Conditions

Widening State Route 68

As shown in **Table 3.10-4, Roadway Segment Level of Service for Existing Conditions**, certain segments along State Route 68 currently operate below the LOS C/D standard established by Caltrans. In order to achieve acceptable levels of service for all of the State Route 68 study intersections and road segments under Existing Conditions (and maintain this level of service through the cumulative scenario), the roadway would require widening to four lanes between Toro Park and State Route 1. The widening of State Route 68 has been discussed and debated for several years.

Alternatively, a four-lane freeway parallel to the State Route 68 corridor was considered as part of the Fort Ord Reuse Plan. The County of Monterey and Caltrans have considered this "South Fort Ord Bypass" along an alignment approximately one-half mile north of the existing State Route 68 roadway. However, there are no short or long-term funding sources available for either one of these alternatives.

Furthermore, there are no feasible interim improvements that could be implemented along the corridor that would achieve and maintain the acceptable level of service standards, and widening the entire corridor to a four-lane facility is not feasible at this time.

State Route 68 Improvement Advisory Committee

In 2001, the State Route 68 Improvement Advisory Committee (sponsored by the County of Monterey) identified and prioritized a list of improvements for existing and future traffic conditions that would facilitate a slight reduction in the travel time along the corridor. These improvements included several projects that are either completed, or contained in the Transportation Agency of Monterey County's (TAMC) Regional Development Impact Fee (RDIF) program.

Subsequent to the 2001 State Route 68 Improvement Advisory Committee recommendations, the Transportation Agency for Monterey County (TAMC) prepared a *Nexus Study for a Regional Development Impact Fee* (RDIF) dated May 14, 2004. Most of the Advisory Committee's recommendations for State Route 68 were identified within the project list used to establish the TAMC RDIF.

Regional Impact Fee Nexus Study Update

In March 2008, TAMC updated the *Nexus Study for a Regional Development Impact Fee*. The project list in the *Regional Impact Fee Nexus Study Update* includes a project referred to as "State Route 68 Commuter Improvements," which would widen a 2.3-mile section of State Route 68 to four lanes between the existing 4-lane section adjacent to Toro Park and Corral de Tierra Road. This potential improvement is discussed later in this section.

In addition, TAMC anticipates programming the fee revenue as part of its periodic Regional Transportation Plan update process, which is done every three to five years. The fee program itself will be updated to reflect changes in land use plans or shifts in transportation planning priorities to better mitigate the impacts of future growth. The proposed improvements along State Route 68 will be re-evaluated as part of the update process. This update process will involve the following actions:

- Tracking status of construction, including percent complete and fee expended;
- Updating cost estimate of each project annually;
- Adding or deleting projects as conditions warrant, based on adopted transportation plans;
- Using an adopted travel forecast model to conduct deficiency plan and select link analyses;
- Recalculating maximum fee by zones;
- Recalculating revenue from regional fee program; and
- Assessing potential for adopting a revised fee structure in light of political feasibility and other funding sources.

Other Minor Improvements Recommended

In addition to the Advisory Committee's recommendations, individual study reports for other local projects have also recommended several minor improvements.

1. Re-striping of the San Benancio Road northbound and southbound approaches at the State Route 68/San Benancio Road intersection to provide a left-turn/through lane and a right-turn lane on both approaches.

2. Install a right-turn overlap phase at the traffic signal on the northbound approach of the State Route 68 /San Benancio Road intersection.

3. Install a right-turn overlap phase at the traffic signal on the northbound approach of the State Route 68/Corral de Tierra Road intersection.

4. Install a right-turn overlap phase on the traffic signal on the southbound approach of the State Route 68/State Route 218 intersection.

Transit

Monterey-Salinas Transit (MST) provides fixed-route bus service in Monterey County and Peninsula cities. MST Line 21 provides service between Monterey and Salinas via State Route 68 with stops at various locations along State Route 68. MST has reduced Line 21 service in recent years due to a lack of ridership on the route. In August 2003, weekday mid-day service was eliminated, and on July 30, 2005 service was further reduced to the current schedule which includes only one weekday morning round trip and a single westbound one-way trip on weekday afternoons. According to MST, most passengers traveling between Monterey and Salinas use MST's Line 20, which travels through Marina, due to the poor on-time performance of Line 21.

Pedestrian Facilities and Bicycle Facilities

Pedestrian facilities include sidewalks, crosswalks and pedestrian signals. There is not a significant amount of foot-traffic in the vicinity of the project site and therefore sidewalks are not provided along State Route 68, San Benancio Road or Meyer Road. Crosswalks and pedestrian signal phasing are provided at the signalized study intersections.

There are three basic types of bicycle facilities recognized in the County of Monterey:

- Bike path (Class I) - A completely separate right-of-way designed for the exclusive use of cyclists and pedestrians, with minimal crossings for motorists.

- Bike lane (Class II) - A lane on a regular roadway, separated from the motorized vehicle right-of-way by paint striping, designated for the exclusive or semi-exclusive use of bicycles. Bike lanes allow one-way bike travel. Through travel by motor vehicles or pedestrians is prohibited, but crossing by pedestrians and motorists is permitted.

- Bike route (Class III) - Provides shared use of the roadway, designated by signs or permanent markings and shared with motorists.

In May 2005, the *2005 General Bikeways Plan* was adopted by TAMC. According to the *2005 General Bikeways Plan*, the vicinity of the project site there is a Class III bike route within the Toro Estates subdivision that connects to Toro Regional Park via the Portola Drive interchange. However, the County of Monterey has listed a Class II bike lane along State Route 68 between the City of Salinas and Olmstead Road as a high priority and a Class II bike lane along River Road between the State Route 68 and Arroyo Seco Road as a medium priority.

Background Conditions (Existing Plus Approved Projects)

The assignment of approved project trips combined with existing traffic is used to obtain "Background Conditions" (or "Existing Plus Approved Projects") traffic volumes. This

scenario assesses the proposed project's impact combined with those projects approved but not yet constructed to determine the impact on the roadway network. The timeframe for the inclusion of "approved" projects under "Background Conditions" was determined to be within five years from the date of the preparation of the traffic study.

The list of relevant approved projects was developed in consultation with the County of Monterey Planning and Public Works staff. It is anticipated that the trips generated by the approved projects will affect the surrounding roadway network prior to impacts experienced by the proposed project. It is assumed that the State Route 68 Improvements Advisory Committee's recommended improvements discussed above have been fully funded and in place under "Background Conditions." In addition, it is assumed that the following improvement projects are to be in place under "Background Conditions":

1. York Road / State Route 68 Intersection
   - The addition of a fourth (south) York Road leg (to be implemented by the Monterra Ranch development).
   - A second York Road southbound left-turn lane and eastbound acceleration lane (to be implemented by the Laguna Villas Condominium development).
2. Laureles Grade Road / State Route 68 Intersection
   - A second State Route 68 westbound left-turn lane (State Route 68 Advisory Committee improvement).
   - Extension of the eastbound right-turn lane (State Route 68 Advisory Committee improvement).
3. Corral de Tierra Road / State Route 68 Intersection
   - The addition of a fourth (north) Corral de Tierra Road leg (to be implemented by the Cypress Church access modification).
   - A second State Route 68 westbound left-turn lane (State Route 68 Advisory Committee improvement).
4. San Benancio Road / State Route 68 Intersection
   - A second State Route 68 westbound left-turn lane (State Route 68 Advisory Committee improvement).

The approved projects would generate an estimated total of 173,596 daily trips with 10,411 trips (5,036 in, 5,375 out) during the A.M. peak hour, and 16,314 trips (8,612 in, 7,702 out) during the P.M. peak hour as shown in **Table 3.10-5, Trip Generation for Approved Projects**.

TABLE 3.10-5
TRIP GENERATION FOR APPROVED PROJECTS

Approved Project	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
City of Marina			
Marina Heights Subdivision[2]	598	45	55
Town homes	9,072	711	958

Approved Project	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Single-Family Detached Housing			
CSUMB North Campus Housing[3]	2,627	204	261
CSUMB Students (2010)[3]	2,103	186	186
Reservation Road Condominiums	82	6	7
Paddon Place Subdivisions	144	11	15
249 Carmel	96	8	10
Crescent/Carmel Subdivision	134	11	14
Hotel – 323 Reservation Road[4]	348	26	27
Dunes at Monterey Bay (University Villages) – Phase I[5]	48,241	1,958	4,282
Marina Landing Redevelopment[6]	11,886	357	1,044
3200 Seaside			
Single-Family Detached Housing	163	13	17
Carriage Units	81	6	7
3110 Seacrest	67	5	7
MPC Satelite Campus	840	84	84
FORA Business Park[7]	326	46	45
MST Transit Station[8]	2,793	56	104
Cypress Knolls[9]	5,088	299	396
Marina Station[10]	25,837	2,276	2,605
City of Seaside			
Seaside Resort[11]	5,672	267	362
City Center			
Sit-Down Restaurants	2,678	25	227
Bank	986	49	183
Commercial/Retail[12]	679	20	42
MPC Satelite Campus	480	48	48
The Pointe			
Condominiums	35	3	3
Commercial/Retail[12]	133	4	8
Lexus Service Center[13]	102	15	17
Georis Building (commercial)[12]	176	5	11
Dentistry for Children	175	12	18
First National Bank	773	20	164
Ord Military Housing (RCI)	7,200	536	691
City of Sand City			
Costco Expansion	941	14	85

Approved Project	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
Design Center[14]			
Apartments	202	15	19
Commercial/Retail[12]	886	27	54
Office	220	31	30
City of Del Rey Oaks			
Safeway Supermarket	5,521	176	564
City of Monterey			
Ryan Ranch Business Park			
CHOMP Medical Offices	5,443	343	426
6 & 8 Lower Ragsdale Drive	704	99	95
Del Monte Beach Tract 2 Re-subdivision	163	13	17
St. John the Baptist Greek Orthodox Church	76	6	5
Calvary Chapel Expansion	236	19	17
City of Salinas			
Tynan Village Mixed Use Development[15]	2,758	173	233
Hartnell College Expansion[16]	4,620	420	510
Monte Bella Subdivision	5,264	413	556
Unincorporated Monterey County			
CSUMB East Campus Housing[17]	1,196	94	126
East Garrison[18]	12,391	975	1,315
Monterra Ranch	1,445	113	153
Pasadera	412	32	43
Harper 14 Lots of Record	134	11	14
Oaks Subdivision	105	8	11
Laguna Seca Office Park			
York Road Office Building[19]	220	31	30
Jessen Office Building[20]	345	31	39
Tanimura Family Residential	699	55	74
TOTAL APPROVED PROJECTS	**173,596**	**10,411**	**16,314**

Notes:

1. Traffic volumes are based on trip generation rates quoted by the Institute of Transportation Engineers, Trip Generation , 6th Edition, 1997, and 7th Edition, 2003, unless otherwise noted.

2. Trip generation from Marina Heights Environmental Impact Report Traffic Study, Higgins Associates, April 2003.

3. Trip generation from California State University at Monterey Bay (CSUMB) 2007 Master Plan Update Traffic Impact Study Report, Higgins Associates, November 5, 2007.

4. Trip generation for hotel land use assumes 100% occupancy.

5. Trip generation from Marina University Villages Mixed Use Development Traffic Impact Study Report, Higgins Associates, December 17, 2004.

6. Daily and P.M. peak hour trip generation from Environmental Impact Report For The Proposed Marina Landing Shopping Center Project, Earth Metrics Inc., February 1998. A.M. peak hour trip generation derived based upon same derivation assumptions as utilized in said report.

7. Trip generation takes into account office tenants that would relocate to this new office space from existing office space off of Second Avenue north of Imjin Parkway that would be removed as part of the second phase of the Marina University Villages development.

Approved Project	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips

8. Trip generation for Marina Transit Center from Letter to E. Spencer, "Marina Transit Station Traffic Study, Marina, California – Revised Project Definition, Higgins Associates, September 14, 2006. Project includes upgraded transit facility, commercial space, and apartments.
9. Trip generation from Cypress Knolls Traffic Impact Analysis, Higgins Associates, November 2006.
10. Trip generation from Marina Station Transportation Impact Analysis, Higgins Associates, December 6, 2006. Project includes residential, commercial, office and industrial uses.
11. Trip generation from Transportation Impact Analysis for Seaside Resort, Fehr & Peers, May 2004.
12. ITE does not provide A.M. peak hour trip rates for the "specialty retail" land use. Rates used here are published by San Diego Association of Governments, Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region. , July 1998.
13. ITE does not provide weekday daily trip rates for the "automobile care center" land use. Rates used here are published by San Diego Association of Governments, Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region., July 1998.
14. City of Sand City describes project as 80,000 square feet over 4 floors, with commercial/retail and office space on first two floors. Assumed each floor equal in size.
15. Trip generation from Tynan Village Mixed Use Development Traffic Impact Study Report, Higgins Associates, November 2004.
16. Trip generation from Hartnell College Master Plan TIA, Fehr & Peers, September 2005.
17. Trip generation from CSUMB East Campus Housing Traffic Study, Wilbur Smith Associates, January 2004.
18. Full buildout of East Garrison development will not occur until 2030. Fifty percent of the development is assumed to be constructed by the year 2010. Trip generation represents trips external to the development itself.
19. Size of building unknown – square footage used to derive trip generation is assumed, based upon other buildings within business park.
20. Trip generation from Letter to J. Jessen, "Trip Generation Study for Jessen Office Building Project, Laguna Seca Office Park Lot #13," Higgins Associates, June 6, 2006. Project includes both standard and medical office space.
21. Daily, A.M. peak hour, and P.M. peak hour trip generation for the Laguna Seca Villas project taken from Laguna Seca Villas Initial Study, Monterey County Planning and Building Inspection Department, March 2006. Inbound and outbound distributions derived from ITE's Trip Generation (Source #1), above.

Source: HatchMott MacDonald 2009

Intersections

The traffic that would be generated by the approved projects was combined with the existing traffic volumes to obtain volumes for Background Conditions. Five of the six study intersections (not the State Route 218 at State Route 68 intersection) would operate at unacceptable levels of service for Background Conditions as shown in **Table 3.10-6, Intersection Level of Service for Background Conditions** during both the A.M. and P.M. peak hour.

TABLE 3.10-6
INTERSECTION LEVEL OF SERVICE FOR BACKGROUND CONDITIONS

Intersection	LOS Standard	AM Peak Hour		PM Peak Hour	
		Delay (Seconds)	LOS	Delay (Seconds)	LOS
1. State Route 218 at State Route 68	C/D	22.5	C	32.9	C
2. York Road at State Route 68	C/D	87.5	F	81.7	F
3. Pasadera Drive-Boots Road at State Route 68	C/D	73.8	E	44.4	D
4. Laureles Grade at State Route 68	C/D	60.3	E	91.2	F
5. Corral de Tierra Road at State Route 68	C/D	127.6	F	143.7	F
6. San Benancio Road at State Route 68	C/D	82.5	F	135.2	F

Notes: Assumes improvements completed prior to implementation of the proposed project.

Source: HatchMott MacDonald 2009

Roadway Segments

Those roadway segments along State Route 68 that are currently operating at unacceptable levels of service under Existing Conditions would continue to operate at unacceptable levels of service under Background Conditions. The level of service for the road segments, as well as A.M. and P.M. peak period volumes under Background Conditions are summarized in **Table 3.10-7, Roadway Segment Level of Service for Background Conditions**.

TABLE 3.10-7
ROADWAY SEGMENT LEVEL OF SERVICE FOR BACKGROUND CONDITIONS

Roadway Segment	Direction	LOS Standard	AM Peak Hour			PM Peak Hour		
			Volume (Veh/hr)	Average Speed[1] (mph)	LOS	Volume (Veh/hr)	Average Speed[1] (mph)	LOS
State Route 68 between:								
1. State Route 218 and York Road	EB	C/D	1,612	36.6	E	1,224	38.8	E
	WB	C/D	1,464	33.5	E	1,951	36.8	E
2. York Rd. and Pasadera Drive/Boots Road	EB	C/D	869	39.9	E	1,296	22.2	F
	WB	C/D	1,548	34.1	E	1,323	46.9	C
3. Pasadera Drive/Boots Road and Laureles Grade	EB	C/D	858	41.7	D	1,242	10.9	F
	WB	C/D	1,472	26.8	E	1,223	34.9	E
4. Laureles Grade and Corral de Tierra Road	EB	C/D	976	38.7	E	1,483	15.7	F
	WB	C/D	1,508	28.8	E	1,218	51.6	B
5. Corral de Tierra Road and San Benancio Road	EB	C/D	1,125	36.1	E	1,536	20.3	F
	WB	C/D	1,444	14.9	F	1,296	16.4	F

Notes: *1 Average travel speed calculated in Synchro software.*
EB = Eastbound
WB = Westbound
Veh/hr = vehicles per hour
Mph = miles per hour

Source: HatchMott MacDonald 2009

Recommended Improvements - Background Conditions

As under "Existing Conditions," widening State Route 68 and making associated intersection improvements would improve operations to acceptable levels of service under "Background Conditions" with one exception. As discussed previously, no funds are available for the implementation of the complete widening of State Route 68 to four lanes

or the South Fort Ord Bypass, nor have these improvements been included in any Capital Improvement Program (CIP). Therefore, the improvements are not considered feasible.

3.10.2 Regulatory Setting

COUNTY OF MONTEREY

The County of Monterey has two primary planning documents, the *Monterey County General Plan* (Monterey County 1982), *Toro Area Plan* (Monterey County 1986), that provide goals, objectives and policies related to transportation and circulation.

Monterey County General Plan

Goal 37 To promote a safe, effective, and economical transportation system that will service the existing and future land uses of the county.

Policies

37.2.1 Transportation demands of proposed development shall not exceed an acceptable level of service for existing transportation facilities, unless appropriate increases in capacities are provided for.

37.5.1 The design and location of new development shall consider and incorporate provisions for appropriate transportation modes.

Toro Area Plan

Policies

39.1.1.1 The county shall be encouraged to work with the state, local agencies, and citizens groups to alleviate traffic congestion on, and still maintain the scenic beauty of, State Route 68. With the goal of eventually constructing a scenic four-lane divided highway, the County shall support the following interim measures:

1. extension of Portola Drive through Serra Village in order to alleviate the traffic load on State Route 68 and traffic hazards at the Toro Park intersection;

2. construction of a two-lane bypass in the area north of the present Corral de Tierra/San Benancio State Route 68 intersection within the present plan lines;

3. methods of easing congestion at Toro Regional Park including, but not limited to, relocating entrance facilities, relocating the bus stop, and providing additional parking spaces;

4. construction of a divided four-lane segment between River Road and Torero Drive and a low profile interchange (or other acceptable traffic solutions) at Toro Park; and

5. construction of bus stops, pull-outs, and shelters where needed.

39.1.1.2 Improvement of State Route 68 intersections, replacement of the Toro Creek bridge, construction of alternate passing lanes, public transit roadway improvements, and improved bicycle safety measures should be undertaken at the earliest time that funding becomes available.

39.1.1.3 The County shall require significant financial contributions from each new subdivision in the Toro Planning Area in order to expedite funding and construction of State Route 68.

39.2.2.1 Improvements to Corral de Tierra and San Benancio Roads shall be designed to accommodate bicycles, horses, and people.

39.2.5.1 To minimize traffic safety hazards, creation of new direct access points should be prohibited from single-family residences onto State Route 68 and discouraged onto Laureles Grade, River Road, Corral de Tierra Road, and San Benancio Road.

41.2.3 The County shall encourage a study of the feasibility of increasing the accessibility of Toro residents to mass transit, either through park and ride lots or new bus service, particularly in the Corral de Tierra, San Benancio, and River Road areas.

Monterey County Regional Transportation Plan

The Transportation Agency for Monterey County (TAMC) is responsible for periodically completing a long-range transportation planning document known as the Regional Transportation Plan (RTP). The purpose of the RTP is to provide policy guidelines regarding planning and programming of transportation projects in Monterey County for the next twenty years. The RTP identifies existing and future needs, evaluates modes and alternatives, and determines what can be completed with anticipated funding. As required by the California Transportation Commission Guidelines, each Regional Transportation Agency shall develop and update goals, objectives and policies for inclusion in the Policy Element of the RTP.

3.10.3 IMPACTS AND MITIGATION MEASURES

STANDARDS OF SIGNIFICANCE

The following thresholds for measuring a project's environmental impacts are based on CEQA Guidelines and standards used by the County of Monterey. For the purposes of this

EIR, impacts are considered significant if the following could result from implementation of the proposed project:

1) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e. result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);

2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;

3) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;

4) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment);

5) Result in inadequate emergency access;

6) Result in inadequate parking capacity; or

7) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks).

In accordance with the California Environmental Quality Act (CEQA) and agency and professional standards, specific impact criteria have been applied to the study intersections and road segments to determine if a significant impact would occur due to the implementation of the proposed project. According to the Monterey County Public Works Department's policies and professional standards, a significant impact is defined to occur under the following scenarios:

Signalized Study Intersection:

- The addition of project traffic causes operations to deteriorate from an acceptable level of service (in this case LOS C or better) to an unacceptable level (LOS D, LOS E or LOS F), or

- The addition of project traffic increases the critical movement's volume-to-capacity ratio by 0.01 or more at intersections operating at LOS D or LOS E, or

- The proposed project adds any traffic (one vehicle) to an intersection operating at LOS F.

Un-signalized Study Intersection:

- The addition of project traffic causes any traffic movement to operate at LOS F, or any traffic signal warrant to be met.

Study Roadway Segment:

- The addition of project traffic causes a roadway segment operating at LOS A through LOS E to degrade to a lower level of service of LOS D, E or F, or

- The addition of one project trip to a segment already operating at LOS F.

The thresholds of significance listed above are recognized by Monterey County and are consistent with the County's analysis methods. It should be noted, however, that Caltrans uses a Corridor Management System Approach to develop the best solutions(s) that address congestion issues on State Route 68 and regional network facilities in general. Caltrans, TAMC, and Monterey County are currently exploring more meaningful methods by which to analyze regional corridors such as State Route 68, and to evaluate them in the context of corridor-wide effects rather than a series of impacts to individual roadway segments and intersections. Using this methodology, TAMC established a Regional Development Impact Fee (RDIF) for their 2005 Regional Transportation Plan (and 2010 update).

Monterey County recognizes that State Route 68 from Salinas to Monterey operates as a roadway corridor that is part of the larger regional transportation system. In addition, Monterey County recognizes that State Route 68 will not be widened to four lanes in its entirety for various reasons; and therefore, is not likely to fully operate at acceptable levels of service at all locations into the future. For this reason, this analysis includes a study of travel time, delay and recommendations to reduce travel delay along the corridor. Although conventional thresholds of significance are recognized and used in this report, the County considers the delay study to be an important discussion with respect to understanding corridor operations, and the relative net effect of the Harper Canyon/Encina Hills project on those operations.

METHODOLOGY

Intersection Methodologies

Intersection traffic operations were evaluated based on the Level of Service (LOS) concept. Quantitative Level of Service (LOS) analyses were performed for the study intersections, based on the *2000 Highway Capacity Manual* methodologies using the Synchro analysis software. A saturation flow rate of 1,600 vehicles per lane per hour was used for the eastbound and westbound through movements along State Route 68 per Caltrans District 5 recommendations.

Road Segment Methodologies

In the traffic impact analysis, quantitative Level of Service (LOS) analyses were performed for the study road segments and study corridor based on the latest Geographic Positioning System (GPS) and Geographic Information Systems (GIS) based technology. The GPS approach to determine travel speed, travel time, and delay along State Route 68 provided a more accurate sense of the existing traffic operations along State Route 68 than the other methodologies previously mentioned. The collected data is then used to determine the travel speed, travel time, and delays along the corridor. The GPS data obtained under Existing Conditions was used to calibrate the Synchro traffic analysis software in order to assess the roadway segment operations under background, project and Cumulative Conditions.

Safety Issues Evaluation

To evaluate safety issues at the San Benancio Road/Meyer Road intersection the following tasks were performed: San Benancio Road/Meyer Road intersection analysis; San Benancio Road traffic operation analysis; and Meyer Road traffic operations evaluation. These tasks included evaluation of sight distance; traffic volumes and level of service; and accident analysis.

Site Reconnaissance

To establish existing traffic flow conditions, intersection traffic counts were collected during the weekday A.M. (7:00 A.M. – 9:00 A.M.) and P.M. (4:00 P.M. – 6:00 P.M.) peak hours at the six study intersections. The traffic counts were conducted between August 15, 2006 and August 29, 2006. The traffic count dates are shown in **Table 3.10-8, Dates of Manual Traffic Counts at Study Intersections**. From the peak period traffic counts, the A.M. and P.M. peak hour turning movement volumes were identified.

TABLE 3.10-8
DATES OF MANUAL TRAFFIC COUNTS AT STUDY INTERSECTIONS

Intersection	Count Date
State Route 218 / State Route 68	August 15, 2006
York Road / State Route 68	August 16, 2006
Boots Road-Pasadera Drive / State Route 68	August 16, 2006
Laureles Grade / State Route 68	August 16, 2006 and August 29, 2006
Corral de Tierra Road / State Route 68	August 22, 2006
San Benancio Road / State Route 68	August 16, 2006

Source: HatchMott MacDonald 2009

PROJECT IMPACTS AND MITIGATION MEASURES

Level of Service Project-Level Impacts

Intersections

Impact 3.10-1a Under Background Plus Project Conditions, five of the six study intersections would continue to operate at unacceptable levels of service (LOS E or worse) during the A.M. and/or P.M. peak hour. However, only four the intersections would continue to operate at LOS F. The proposed project would contribute at least one traffic trip the four intersections operating at LOS F, which would be considered a **significant impact** at the following intersections: York Road /State Route 68 Intersection; Laureles Grade/State Route 68 Intersection; Corral de Tierra Road and State Route 68 Intersection; and San Benancio Road and State Route 68 Intersection.

The proposed project would generate an estimated 163 daily trips, with 13 trips generated during the A.M. peak hour (3 in, 10 out) and 17 trips generated during the P.M. peak hour (11 in, 6 out).

The traffic generated by the proposed project was combined with the background traffic volumes to obtain Background Plus Project Conditions. The A.M. and P.M. peak hour project trips and intersection levels of service are summarized in **Table 3.10-9, Intersection Level of Service for Background Plus Project Conditions.**

TABLE 3.10-9
INTERSECTION LEVEL OF SERVICE FOR BACKGROUND PLUS PROJECT CONDITIONS

Intersection	LOS Standard	AM Peak Hour		PM Peak Hour	
		Delay (Seconds)	LOS	Delay (Seconds)	LOS
1. State Route 218 at State Route 68	C/D	23.1	C	33.0	C
2. York Road at State Route 68	C/D	88.4	F	82.1	F
3. Pasadera Drive-Boots Road at State Route 68	C/D	74.8	E	44.9	D
4. Laureles Grade at State Route 68	C/D	60.9	E	91.9	F
5. Corral de Tierra Road at State Route 68	C/D	128.5	F	145.2	F
6. San Benancio Road at State Route 68	C/D	84.6	F	137.1	F

Notes: Assumes that recommended improvements assumed under Background Conditions completed prior to implementation of the proposed project.

Source: HatchMott MacDonald 2009

As shown in **Table 3.10-9**, **Intersection Level of Service for Project Conditions,** five of the six study intersections would continue to operate at unacceptable levels of service (LOS D

or worse) under Background Plus Project Conditions. The proposed project would not, however, degrade the operations of any of the study intersections when compared to levels of service under Background Conditions. In fact, compared to Background Conditions, the worst increase in delay caused by the project (Intersection #6) is only 2.1 seconds. However, the project will contribute at least one trip to four intersections that currently operate at LOS F. Based on the Monterey County's standards of significance this increase would be considered significant. A brief description of the operations at each signalized intersection that would operate with deficiencies under Background Plus Project Conditions is provided below.

York Road and State Route 68, Intersection #2 (Signalized) would continue to operate at LOS F during the weekday A.M. and P.M. peak hours (average delay of 88.4 and 82.1 seconds, respectively). Since this intersection operates at LOS F during both weekday A.M. and P.M. peak hours, the addition of one trip to this signalized intersection during the weekday A.M. or P.M. peak hours would be considered a significant impact.

Pasadera Drive/Boots Road and State Route 68, Intersection #3 (Signalized) would continue to operate at LOS E during the weekday A.M. peak hour and LOS D during the P.M. peak hour (average delay of 74.8 and 44.9 seconds, respectively). The volume-to-capacity ratio of this signalized intersection would remain 1.10 during weekday A.M. peak hour and 1.00 during the weekday P.M. peak hour under both background and Background Plus Project Conditions. Since volume-to-capacity ratio would not increase by 0.01 or more, the addition of traffic to this intersection would be considered less than significant.

Laureles Grade and State Route 68, Intersection #4 (Signalized) would continue to operate at LOS E during the weekday A.M. peak hour and LOS F during the P.M. peak hour (average delay of 60.9 and 91.9 seconds, respectively). The volume-to-capacity ratio of this signalized intersection would remain 0.84 during the weekday A.M. peak hour under both background and Background Plus Project Conditions. Therefore, the addition of traffic to this intersection during the A.M. peak hour would be considered less than significant. However, the intersection operates at LOS F during the weekday P.M. peak hour. Therefore, the addition of one trip to this signalized intersection during the weekday P.M. peak hour would be considered a significant impact.

Corral de Tierra Road and State Route 68, Intersection #5 (Signalized) would continue to operate at LOS F during the weekday A.M. and P.M. peak hours (average delay of 128.5 and 145.2 seconds, respectively). Since this intersection operates at LOS F during both A.M. and P.M. peak hours, the addition of one trip to this signalized intersection during the weekday A.M. or P.M. peak hours would be considered a significant impact.

San Benancio Road and State Route 68, Intersection #6 (Signalized) would operate at LOS F during the weekday A.M. and P.M. peak hours (average delay of 84.6 and 137.1 seconds, respectively). Since this intersection operates at LOS F during both A.M. and P.M.

peak hours, the addition of one trip to this signalized intersection during the weekday A.M. or P.M. peak hours would be considered a significant impact.

As described in detail above, trips generated under Background Plus Project Conditions would exacerbate an unacceptable LOS F operating condition at the following four study intersections: York Road /State Route 68 Intersection; Laureles Grade/State Route 68 Intersection; Corral de Tierra Road and State Route 68 Intersection; and San Benancio Road and State Route 68 Intersection. This would be considered a **significant impact**, based on the "one trip" standard.

A series of intersection safety improvements along State Route 68 are included in the *Regional Transportation Plan* (TAMC 2005) including: adding a second State Route 68 westbound left-turn lane at the Laureles Grade Road/State Route 68 intersection; adding a fourth (north) Corral de Tierra Road leg and a second State Route 68 westbound left-turn lane at the Corral de Tierra Road/State Route 68 intersection; and adding a second State Route 68 westbound left-turn lane at the San Benancio Road/State Route 68 intersection. These improvements are assumed to be fully funded and in place under Background Conditions, and therefore are not identified as mitigation required by this project. These safety improvements will be beneficial to the State Route 68 corridor, but will not resolve existing intersection LOS deficiencies to which the project will contribute traffic.

The major improvements previously discussed under Existing and Background Conditions (4-laning the entire State Route 68 corridor) would improve the operations at the study intersections to acceptable levels of service under Background Plus Project Conditions. However, no funding is available for the implementation of the widening of State Route 68 to four lanes, or implementation of the South Fort Ord Bypass, nor have any of these improvements been included in the *Regional Transportation Plan*. Therefore, these improvements are not considered feasible mitigation under CEQA.

Implementation of mitigation measure **MM 3.10-1** as described below would require contribution towards the "State Route 68 Commuter Improvements," which would widen 2.3-miles of State Route 68 to four lanes from the existing 4-lane section (adjacent to Toro Park) to Corral de Tierra Road. Implementation of the "State Route 68 Commuter Improvements" would improve operation of two impacted intersections to acceptable levels of service. Upon implementation of the "State Route 68 Commuter Improvements," both the State Route 68/Corral de Tierra and the State Route 68/San Benancio Road intersections would operate at LOS C during both the A.M. and P.M. peak hours under Background Plus Project Conditions, as capacity would be increased at these locations. As an additional benefit, the "State Route 68 Commuter Improvements" project would reduce the length of the queue on westbound State Route 68 east of San Benancio Road during the weekday A.M. peak hour. Contribution towards these planned improvements through payment of the adopted TAMC fee would reduce direct, project-related impacts to the State Route 68/Corral de Tierra Intersection and State Route 68/San Benancio Road Intersection to a **less than significant** level. No further mitigation measures would be necessary at these two intersections.

However, with or without the implementation and/or contribution towards the "State Route 68 Commuter Improvements," two of the study intersections, the Laureles Grade/State Route 68 and York Road/State Route 68 intersections, would continue to operate at LOS F. Adding a second eastbound and/or westbound through lane(s) at either intersection is not feasible. Therefore, the project trips generated at the **Laureles Grade/State Route 68 Intersection** and **York Road/State Route 68 Intersection** would be considered a direct **significant and unavoidable impact**. No further mitigation measures are feasible.

Roadway Segments

Impact 3.10-1b Under Background Plus Project Conditions, all five of the study roadway segments along State Route 68 would continue to operate at unacceptable levels of service (LOS E or worse) in the A.M. and/or P.M. peak hour. Four of the five roadway segment would operate at LOS F in either the A.M. or P.M. peak hour. The proposed project would contribute of at least one traffic trip the four roadway segments operating at LOS F, which would directly affect the levels of service at all but one roadway segment. This would be considered a **significant impact.**

The road segment levels of service under Background Plus Project Conditions, as well as A.M. and P.M. peak hour volumes on the study road segments, are summarized in **Table 3.10-10, Roadway Segment Level of Service for Background Plus Project Conditions**.

TABLE 3.10-10
ROADWAY SEGMENT LEVEL OF SERVICE FOR BACKGROUND PLUS PROJECT CONDITIONS

Roadway Segment	Direction	LOS Standard	AM Peak Hour			PM Peak Hour		
			Volume (Veh/hr)	Average Speed[1] (mph)	LOS	Volume (Veh/hr)	Average Speed[1] (mph)	LOS
State Route 68 between:								
1. State Route 218 and	EB	C/D	1,613	36.6	E	1,228	38.8	E
York Road	WB	C/D	1,468	32.9	E	1,953	36.7	E
2. York Road and	EB	C/D	870	40.1	D	1,300	22.2	F
Pasadera Drive/Boots Road	WB	C/D	1,552	33.9	E	1,325	46.9	C
3. Pasadera Drive/Boots Road and	EB	C/D	859	41.7	D	1,245	10.8	F
Laureles Grade	WB	C/D	1,476	28.8	E	1,225	34.8	E
4. Laureles Grade and	EB	C/D	977	38.0	E	1,487	15.6	F
Corral de Tierra Road	WB	C/D	1,512	28.6	E	1,220	51.5	B
5. Corral de Tierra Road and	EB	C/D	1,126	35.5	E	1,540	19.9	F
San Benancio Road	WB	C/D	1,448	14.5	F	1,298	15.4	F

Notes: 1 Average travel speed calculated in Synchro software.

EB = Eastbound
WB = Westbound
Veh/hr = vehicles per hour
Mph miles per hour

Source: HatchMott MacDonald 2009

As shown in **Table 3.10-10, Roadway Segment Level of Service for Project Conditions** each study roadway segment on State Route 68, eastbound and westbound, would continue to operate below LOS C during both the A.M. or P.M. peak periods, as they would under existing and Background Conditions. A brief description of the operations along each roadway segment that would operate with deficiencies under Background Plus Project Conditions is provided below.

State Route 68 between State Route 218 and York Road (Roadway Segment #1) would continue to operate at LOS E in both the eastbound and westbound directions during the weekday A.M. peak hour (average speeds of 36.6 and 32.9 mph, respectively); and LOS E in both the eastbound and westbound directions during the weekday P.M. peak hour (average speeds of 38.8 and 36.7 mph, respectively). The level of service would not degrade when compared to Background Plus Project Conditions. Therefore, the addition of trips generated by the proposed project would be considered a less than significant impact.

State Route 68 between York Road and Pasadera Drive/Boots Road (Roadway Segment #2) would continue to operate at LOS D in the eastbound direction and LOS E in the westbound direction during the weekday A.M. peak hour (average speeds of 40.1 and 33.9 mph, respectively); and LOS F in the eastbound direction and LOS C in the westbound direction during the weekday P.M. peak hour (average speeds of 22.2 and 46.9 mph, respectively). Since this roadway segment operates at LOS F in the eastbound direction during the weekday P.M. peak hour, one additional trip to eastbound State Route 68 between York Road and Pasadera Drive/Boots Road during the weekday P.M. peak hour would be considered a significant impact.

State Route 68 between Pasadera Drive/Boots Road and Laureles Grade Road (Roadway Segment #3) would continue to operate at LOS D in the eastbound direction and LOS E in the westbound direction during the weekday A.M. peak hour (average speeds of 41.7 and 28.8 mph, respectively); and LOS F in the eastbound direction and LOS E in the westbound direction during the weekday P.M. peak hour (average speeds of 10.8 and 34.8 mph, respectively). Since this roadway segment operates at LOS F in the eastbound direction during the weekday P.M. peak hour, one additional trip to eastbound State Route 68 between Pasadera Drive/Boots Road and Laureles Grade Road during the weekday P.M. peak hour would be considered a significant impact.

State Route 68 between Laureles Grade Road and Corral de Tierra (Roadway Segment #4) would continue to operate at LOS E in the eastbound and westbound directions during the weekday A.M. peak hour (average speeds of 38.0 and 28.6 mph, respectively); and

LOS F in the eastbound direction and LOS B in the westbound direction during the weekday P.M. peak hour (average speeds of 15.6 and 51.5 mph, respectively). Since this roadway segment operates at LOS F in the eastbound direction during the weekday P.M. peak hour, one additional trip to eastbound State Route 68 between Laureles Grade Road and Corral de Tierra during the weekday P.M. peak hour would be considered a significant impact.

State Route 68 between Corral de Tierra and San Benancio Road (Roadway Segment #5) would continue to operate at LOS E in the eastbound direction and LOS F in the westbound during the weekday A.M. peak hour (average speeds of 35.5 and 14.5 mph, respectively); and LOS F in the eastbound and westbound directions during the weekday P.M. peak hour (average speeds of 19.9 and 15.4 mph, respectively). Since this roadway segment operates at LOS F in the westbound direction during the weekday A.M. peak hour and in the eastbound direction during the weekday A.M. and P.M. peak hours, one additional trip to eastbound State Route 68 between Corral de Tierra and San Benancio Road during the weekday A.M. or P.M. peak hour or westbound State Route 68 between Corral de Tierra and San Benancio Road during the weekday A.M. peak hour would be considered a significant impact.

As described in detail above, project trips generated under Background Plus Project Conditions would exacerbate an unacceptable LOS F operating condition at the following four roadway segments: State Route 68 between York Road and Pasadera Drive/Boots Road; State Route 68 between Pasadera Drive/Boots Road and Laureles Grade Road; State Route 68 between Laureles Grade Road and Corral de Tierra; and State Route 68 between Corral de Tierra and San Benancio Road. This would be considered a **significant impact**.

As identified previously, to operate at acceptable levels of service, State Route 68 would require widening to accommodate an additional eastbound and westbound lanes for the entire length evaluated. Alternatively, implementation of the South Fort Ord Bypass has been identified as an alternative to widening State Route 68 as part of the recommended Advisory Committee list of improvements. Either of these improvements would improve the operating conditions along the corridor to acceptable levels of service, but are not considered feasible mitigation at this time.

TAMC put into effect the Regional Development Impact Fee in August 2008. As discussed above, the *Regional Impact Fee Nexus Study Update* includes a project referred to as the "State Route 68 Commuter Improvements," which would widen 2.3-miles of State Route 68 to four lanes from the existing 4-lane section (adjacent to Toro Regional Park) to Corral de Tierra Road. The geometric design details of this improvement are not known at this time.

In consultation with Monterey County Public Works, Higgins Associates (now Hatch Mott MacDonald) evaluated a portion, or shorter version of, the "State Route 68 Commuter Improvements" project that would result in a reduction in travel time along the corridor. The project evaluated would construct a 1.1-mile extension of four lane freeway from

where the freeway currently ends to the west end of Toro Park Estates. This 1.1-mile freeway extension would provide several benefits to the State Route 68 corridor. One benefit would be a reduction in the travel time on State Route 68 in both directions. The freeway extension would reduce the combined eastbound and westbound travel time through the State Route 68 corridor by approximately 286 seconds (4.7 minutes) during the weekday A.M. and P.M. peak hours. The traffic generated by the proposed project would increase the combined eastbound and westbound travel time through the State Route 68 corridor by approximately 32 seconds. Therefore, implementation of the freeway extension would more than offset the increase in travel time caused by the proposed project. Furthermore, although a shorter version of the planned "State Route 68 Commuter Improvements" was evaluated, it is logical that improving a longer section of the roadway (2.3-miles instead of 1.1-miles) as a four lane freeway would reduce the travel time through the State Route 68 corridor by more than 286 seconds (4.7 minutes) during both the weekday A.M. and P.M. peak hours. The calculations, which used the Synchro arterial analysis reports, estimate the reduction in travel time with the freeway extension and are shown in Appendix O of the Traffic Impact Analysis included in **Appendix I** of the EIR. They are based on the average travel speeds through the State Route 68 corridor.

According to the *Regional Impact Fee Nexus Study Update*, even upon implementation of the "State Route 68 Commuter Improvements," the State Route 68 roadway segments between Laureles Grade Road and Corral De Tierra Road and between Corral de Tierra and Portola Drive would continue to operate at an unacceptable level of service of LOS F in Year 2030. These deficiencies were previously disclosed as part of the environmental review process for adoption of the fee program. However, the "State Route 68 Commuter Improvements" project as proposed would serve to improve operations by reducing the travel time along the corridor. Extending the freeway in this location would also reduce the length of the queue on westbound State Route 68 east of San Benancio Road during the weekday A.M. peak hour, which is currently up to 2.5 miles long. Safety would also be improved, as the state-wide accident rates on four lane freeways are about half of those on two lane highways.

At the local, neighborhood level, the "State Route 68 Commuter Improvements" project would have other immediate beneficial effects. The improvement project would eliminate the observed phenomenon of drivers exiting westbound State Route 68 at the Portola Drive interchange to cut through the neighborhoods in Toro Park Estates. Drivers do this to get ahead of traffic by re-entering the State Route 68 traffic stream at Torero Drive. This phenomenon, which occurs daily during the weekday A.M. peak hour, was evident in the data collection and was confirmed through discussions with Monterey County staff.

If this improvement was to be implemented, a design decision would have to be made regarding the existing intersection on State Route 68 at Torero Drive. There would be several options, including the closure of the intersection for use only as an emergency access (in which case existing traffic would be diverted to the Portola Drive interchange). Another option would be to convert the intersection to right-in, right-out access only, in which case the road segment would operate more as an expressway than a freeway. Other

options could also be explored, such as allowing eastbound State Route 68 left-turns onto Torero Drive, but prohibiting southbound Torero Drive left-turns onto State Route 68.

Reducing the travel time through the State Route 68 corridor and the length of the queue on westbound State Route 68 east of San Benancio Road would reduce the proposed project's impact on the corridor. Implementation of the following mitigation measure would ensure that the proposed project contributes their fair share towards the "State Route 68 Commuter Improvements" in order to improve operations on State Route 68 and reduce the proposed project's impact to the intersections and roadway segments within the corridor.

Mitigation Measure

MM 3.10-1 Prior to issuance of building permits, the project applicant shall comply with one of the following actions to improve operations at intersections and roadway segments along State Route 68:

a. Upon issuance of each building permit for proposed development on the project site, each applicant shall contribute their proportionate fair share, as calculated by the County, towards the "State Route 68 Commuter Improvements" through payment of the TAMC Regional Development Impact Fee (RDIF) in effect at that time, as required under mitigation measure **MM 3.10-6**. The TAMC RDIF payment will be earmarked for completion of the Caltrans Project Study Report (PSR) for the 2.3-mile "State Route 68 Commuter Improvements" project identified within the TAMC RDIF. or;

b. Prior to the issuance of the first building permit for proposed development on the project site, the applicant shall pay the entire fair share for all 17 single family residential units towards the "State Route 68 Commuter Improvements" through payment of the TAMC RDIF, as required under mitigation measure **MM 3.10-6**. or;

c. The project applicant shall fund, initiate and complete a Caltrans Project Study Report (PSR) process for the 2.3-mile "State Route 68 Commuter Improvements" project identified within the TAMC RDIF. The PSR process will identify the total roadway improvement costs, as well as each project applicant's proportionate fair share of those costs. If the cost of the PSR for the "State Route 68 Commuter Improvements" exceeds the project's proportionate fair share of the TAMC RDIF obligation, the applicant shall be reimbursed the amount in excess of their proportionate fair share. Monterey County will enter into a reimbursement agreement with the project applicant to refund the costs in excess of their proportionate fair share of the

TAMC RDIF as additional fees are collected from other applicants and sources.

Implementation of the above mitigation measure would ensure that the project applicant(s) contribute their fair share to the planned "State Route 68 Commuter Improvements." Once the "State Route 68 Commuter Improvements" are constructed, these improvements would shorten the travel time on State Route 68 in both directions; improve intersection operations at two locations from unacceptable to acceptable levels, reduce the length of the queue on westbound State Route 68 east of San Benancio Road during the weekday A.M. peak hour; improve safety along State Route 68; and eliminate the observed trend of drivers cutting through Toro Park Estates to re-enter State Route 68 at Torero Drive during the weekday A.M. peak hour.

Implementation of the "State Route 68 Commuter Improvements" project, a component of the TAMC RDIF, would effectively mitigate project impacts to the following intersections and roadway segments to a less than significant level:

- State Route 68/Corral de Tierra intersection
- State Route 68/San Benancio Road intersection
- State Route 68 segment between Corral de Tierra and San Benancio Road

Intersections and roadway segments impacted by the project that are not currently included in the RDIF would remain impacted. These facilities include:

- State Route 68/Laureles Grade intersection
- State Route 68/York Road intersection
- State Route 68 segment between York Road and Pasadera Drive
- State Route 68 segment between Pasadera Drive and Laureles Grade
- State Route 68 segment between Laureles Grade and Corral de Tierra

The facilities listed above that are not mitigated by the State Route 68 Commuter Improvements project will remain a **significant and unavoidable impact** of the project.

For purposes of CEQA and based on the significance thresholds used in this report, the project will have "unavoidable" effects as listed above. These conclusions are based upon a very conservative analysis and conservative (sensitive) significance threshold of "one traffic trip" entering an existing facility of LOS F. With 13 A.M. and 17 P.M. peak hour trips generated by the project, the actual driving delays experienced by motorists would be minimal. The worst increase delay (experienced at the State Route 68/San Benancio intersection) would be 2.1 seconds. Nonetheless, based on the standards used by Monterey County, the impact remains significant.

Increased Accident Potential Along San Benancio Road

Impact 3.10-2 The traffic generated by the proposed project may indirectly result in an increase in the accident potential along San Benancio Road. This would be considered a **less than significant impact**.

San Benancio Road between State Route 68 and Harper Canyon Road has a traffic volume of approximately 5,700 vehicles per day and currently operates at LOS B. According to Higgins Associates, the proposed project would add approximately 163 daily trips on San Benancio Road, which represents a three percent increase in traffic on this roadway. This would not affect the level of service along this roadway; however the increased traffic would create additional safety hazards along this local roadway as it would increase the potential for accidents.

Between January 2001 and March 2006 there were five collisions on San Benancio Road between State Route 68 and Harper Canyon Road. This represents an accident rate of 0.481 accidents per million vehicle miles, which is well below the state average accident rate of 1.24 accidents per million vehicle miles. All of the collisions involved property damage with no injuries or fatalities. Even with an elevated average speed of 46 miles per hour (mph) above the posted speed limit of 35 mph and increased traffic volumes over the years the accident rate has remained relatively low. Therefore, the increased traffic associated with the proposed project would have a **less than significant impact** to the accident rate along Benancio Road. No mitigation measures are necessary.

Increased Safety Hazards Along Meyer Road

Impact 3.10-3 Traffic generated by the proposed project would result in increased trips on Meyer Road, which currently does not meet the standards for a tertiary private road and therefore may result in direct safety hazards along this roadway. This would be considered a **potentially significant impact**.

Meyer Road is a two-lane privately maintained road owned by Harper Canyon Realty LLC. Meyer Road is classified as a tertiary road as it provides access to no more than 100 tributary dwelling units. The San Benancio Road / Meyer Road intersection is controlled by a stop sign on westbound Meyer Road. The level of service is anticipated to operate at acceptable levels due to the limited number of trips by the proposed project on this roadway. However, Meyer Road currently does not meet Monterey County's standard for tertiary private roads, which requires that the roadway be a minimum of 20 feet wide. This limits the ability for two cars to pass each other on Meyer Road. Meyer Road currently varies in width from 10 to 13 feet prior to turning into an unimproved road. Physical and topographic constraints limit Meyer Road from meeting Monterey County's standard for tertiary private roads. However, according to Higgins Associates, the roadway should at a minimum meet the standard for a cul-de-sac private road, which requires a minimum width of 18 feet. Increased traffic associated with the proposed project would further exacerbate the need for a wider roadway in order to ensure that the proposed project would not

increase safety hazards. Therefore, this would be considered a **potentially significant impact.**

Mitigation Measure

MM 3.10-3 Prior to approval of final improvement plans, the project applicant shall contract with a registered engineer to design roadway improvements to widen and resurface Meyer Road per the County of Monterey standards for a cul-de-sac private road (e.g. 18-foot wide roadbed). The roadway improvement plans shall be subject to review and approval by the County of Monterey and shall be constructed prior to occupancy of any of the residential units at the project site.

Implementation of the above mitigation measure will require that the project applicant widen and resurface Meyer Road to improve operations. Widening the road will require improvement and construction activity on one or both sides of the existing roadway, typically involving grading, surfacing and some vegetation removal. As this improvement is directly related to implementation of the project, other measures contained within this EIR that mitigate construction impacts (grading, noise, vegetation, drainage) are also applicable to this aspect of the project. Therefore, the impact to operations (and construction activities) on Meyer Road would be reduced to a **less than significant** level.

Project Access and Sight Distance at the Meyer Road/San Benancio Road Intersection

Impact 3.10-4 Implementation of the proposed project would result in an increase in vehicle access at the Meyer Road/San Benancio Road intersection, which currently does not meet the American Association of State Highway and Transportation Officials (AASHTO) sight distance standards. This would be considered a **potentially significant impact**.

Localized access to the project site would be provided by Meyer Road via San Benancio Road, which would increase the traffic volumes at the Meyer Road/San Benancio Road intersection. There are several contributing factors that limit sight distance at the Meyer Road/San Benancio Road intersection including but not limited to the following: the intersection is not stop or signal controlled; the average travel speed is 45 to 46 mph on San Benancio Road which is significantly over the posted speed limit over 35 mph; and the vertical curvature of San Benancio Road. Currently, the sight distance at this intersection is approximately 240 feet north of the Meyer Road and about 250 feet south of Meyer Road, which is considered substandard sight distances per AASHTO standards. According to Higgins Associates, the minimum sight distance should be 423 feet to the south of Meyer Road and 436 feet to the north of Meyer Road to provide safe operation conditions at this intersection. The proposed project would add approximately 163 daily trips on San Benancio Road. This increase in traffic associated with the proposed project will further exacerbate the need for sight distance improvements at the Meyer Road/San Benancio

Road intersection, which would be considered a **potentially significant impact**. The following mitigation measures would reduce this impact.

Mitigation Measures

MM 3.10-4a Prior to approval of final improvement plans, the Monterey County Public Works Department shall require that the project applicant contract with a registered engineer to prepare a sight distance improvement plan at the Meyer Road/San Benancio Road intersection. The improvement plan shall include but not be limited to the following: trimming the vegetation and grading the embankment in the vicinity of the intersection and installing right turn tapers into and out of Meyer Road. The design of all intersection improvements shall be subject to review and approval by the County of Monterey Public Works Department. All improvements shall be completed prior to occupancy of any residential units.

MM 3.10-4b Prior to approval of final improvement plans, the Monterey County Public Works Department shall require that the project applicant shall design and construct a southbound San Benancio Road left-turn lane at the Meyer Road/San Benancio Road intersection in accordance with the Monterey County Public Works Department standards and guidelines.

Implementation of the above mitigation measure **MM 3.10-5a** and **MM 3.10-5b** would remove impediments to sight distance and provide better right-turn and left-turn movement at the Meyer Road/San Benancio Road intersection, which would improve sight distance at the Meyer Road/San Benancio Road intersection. In addition, implementation of mitigation measure **MM 3.10-4**, which requires that Meyer Road be resurfaced to raise the elevation, which would also improve sight distance. As these improvements are directly related to project implementation and will involve construction (based on ultimate design), all other measures related to construction impacts within this EIR also apply (grading, vegetation, noise, drainage). With implementation of the measures identified, this impact would be reduced to a **less than significant** level.

Inadequate Emergency Access

Impact 3.10-5 Implementation of the proposed project would result in residential development requiring emergency vehicle access. This would be considered a **less than significant impact**.

Implementation of the proposed project will include construction of 17 residential units that may require emergency vehicles to access the project site. The proposed project will be constructed according to the Monterey County Public Works Department roadway standards and shall be subject to Salinas Rural Fire Protection District's approval. There are a few unimproved roads located on the project site that would remain as access roads for utility service to the project site. These roadways may also be used as additional access

points for emergency vehicles in time of need. In addition, during the review of the final roadway plans, Salinas Rural Fire Protection District will ensure that roadways are designed to accommodate their vehicles and that fire lanes are designated. Therefore, the impact to emergency access is considered **less than significant**. No mitigation measures are necessary.

Parking Capacity

Monterey County Zoning Ordinance 21.58 requires that the proposed project provide two parking spaces per single-family residential unit. The proposed project would be required to design each residential lot in accordance with Monterey County Zoning Ordinance 21.58. Therefore, adequate parking would be provided and there would be **no impact** associated with inadequate parking capacity.

Conflict with adopted policies, plan or programs supporting alternative transportation

There is not a significant amount of foot-traffic in the vicinity of the proposed project and therefore sidewalks are not provided along State Route 68, Meyer Road, or San Benancio Road. However, crosswalks and pedestrian signal phasing are provided at the signalized study intersections. No bicycle facilities are located in the vicinity of the proposed project. Although, the proposed project would result in a slight increase in population, the proposed project would not conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks).

CUMULATIVE IMPACTS AND MITIGATION MEASURES

Cumulative Adverse Impact on Level of Service

Impact 3.10-6 Implementation of the proposed project would contribute to a cumulative increase in traffic volumes that would indirectly result in or exacerbate unacceptable levels of service on the regional roadway network. This would be considered a **significant cumulative impact**.

A number of other projects have been proposed within the geographical study area that have not yet been approved or even formally submitted for evaluation. The extensive list of cumulative projects relevant to this traffic study was developed in consultation with the County of Monterey Planning and Public Works staff and is included in Appendix G of the Traffic Impact Analysis in **Appendix I** of this EIR. The geographic reach of the projects considered within the cumulative analysis encompasses a regional large area, including all Monterey Peninsula cities and large areas of unincorporated Monterey County territory.

The proposed project, combined with the approved and cumulative relevant projects, would generate an estimated 358,002 daily trips within this regional planning area, with 22,952 trips (12,812 in, 10,140 out) during the A.M. peak hour and 34,258 trips (16,362 in, 17,896 out) during the P.M. peak hour. The Harper Canyon subdivision would contribute approximately 0.045 percent of total volume towards the cumulative daily trips,

as measured regionally. Approximately five percent of the total cumulative trips generated during the A.M. peak hour and approximately four percent of the total cumulative trips generated during the P.M. peak hour find their way onto State Route 68.

Intersections

Intersection levels of service for Cumulative Conditions are summarized in **Table 3.10-11, Intersection Level of Service for Cumulative Project Conditions**.

TABLE 3.10-11
INTERSECTION LEVEL OF SERVICE FOR CUMULATIVE PROJECT CONDITIONS

Intersection	LOS Standard	AM Peak Hour		PM Peak Hour	
		Delay (Seconds)	LOS	Delay (Seconds)	LOS
1. State Route 218 at State Route 68	C/D	63.9	E	111.4	F
2. York Road at State Route 68	C/D	178.5	F	180.5	F
3. Pasadera Drive-Boots Road at State Route 68	C/D	189.9	F	184.6	F
4. Laureles Grade at State Route 68	C/D	173.0	F	226.5	F
5. Corral de Tierra Road at State Route 68	C/D	>300	F	>300	F
6. San Benancio Road at State Route 68	C/D	264.1	F	>300	F

Source: HatchMott MacDonald 2009

All six study intersections would operate at unacceptable levels of service under Cumulative Conditions. Similar to Background Plus Project Conditions, all six study intersections would be impacted by the project because of LOS F operating conditions. Each signalized intersection operating deficiently under Cumulative Conditions is described below.

State Route 218/State Route 68, Intersection #1 (Signalized) would operate at LOS E during the weekday A.M. peak hour and LOS F during the weekday P.M. peak hour (average delay of 63.9 and 111.4 seconds, respectively). This would be considered a significant impact. Widening and re-striping the northbound approach to include one left-turn lane, one through lane, and one right-turn lane; widening and re-striping the eastbound approach to include two left-turn lanes, one through lane and one shared through/right-turn lane; and installing southbound right-turn overlap phasing at this intersection would improve operations to acceptable LOS C during the A.M. and P.M. peak hours.

York Drive/State Route 68, Intersection #2 (Signalized) would operate at LOS F during the weekday A.M. and P.M. peak hours (average delay of 178.5 and 180.5 seconds, respectively). Since this signalized intersection operates at LOS F, the addition of one trip to this intersection during the A.M. or P.M. peak hours would be considered a significant

impact. The addition of a second eastbound through lane in conjunction with the addition of a second westbound through lane as recommended under Existing Conditions would improve operations at this intersection to an acceptable LOS C during the A.M. and P.M. peak hours.

Pasadera Drive-Boots Road/State Route 68, Intersection #3 (Signalized) would operate at LOS F during the both the weekday A.M. and P.M. peak hours (average delay of 189.9 and 184.6 seconds, respectively). During the A.M. peak hour, this signalized intersection would degrade from LOS E with a volume-to-capacity ratio of 1.10 under Background Plus Project Conditions to LOS F with a volume-to-capacity ratio of 1.52 under Cumulative Conditions. During the P.M. peak hour, this intersection would degrade from LOS D with a volume-to-capacity ratio of 1.00 under Background Plus Project Conditions to LOS F with a volume-to-capacity ratio of 1.35 under Cumulative Conditions. Since the level of service would degrade from LOS E to LOS F and the volume-to-capacity ratio would increase by 0.42 during the A.M. peak hour, and the level of service would degrade from LOS D to LOS F and the volume-to-capacity ratio would increase by 0.35 during the P.M. peak hour this would be considered a significant cumulative impact. The addition of a second eastbound through lane in addition to the addition of a second westbound through lane recommended under Existing Conditions, would improve operations at this intersection to an acceptable LOS B during the A.M. and P.M. peak hours.

Laureles Grade/State Route 68, Intersection #4 (Signalized) would operate at LOS F during the weekday A.M. and P.M. peak hours (average delay of 173.0 and 226.5 seconds, respectively). During the A.M. peak hour, this signalized intersection would degrade from LOS E with a volume-to-capacity ratio of 1.11 under Background Plus Project Conditions to LOS F with a volume-to-capacity ratio of 1.49 under Cumulative Conditions. Since the level of service would degrade from LOS E to LOS F and the volume-to-capacity ratio would increase by 0.38 during the A.M. peak hour and the level of service is LOS F during the P.M. peak hour, the addition of one trip to this intersection during either the A.M. or P.M. peak hour would be considered a significant impact. Converting the northbound right-turn to right-turn overlap phasing in conjunction with the addition of a second eastbound through lane and a second westbound through lane as recommended under Existing Conditions, would improve operations at this intersection to an acceptable LOS B during the A.M. peak hour and LOS C during the P.M. peak hour.

Corral de Tierra Road / State Route 68 (Intersection #5) would operate at LOS F during the weekday A.M. and P.M. peak hours (average delay greater than 300 seconds, respectively). Since this signalized intersection operates at LOS F during both the A.M. and P.M. peak hours, the addition of one trip would be considered a significant impact. Converting the northbound right turn to right-turn overlap phasing in conjunction with the addition of a second eastbound through lane and a second westbound through lane as recommended under Existing Conditions, would improve operations at this intersection to an acceptable LOS C during the A.M. and P.M. peak hours.

San Benancio Road / State Route 68 (Intersection #6) would operate at LOS F during the weekday A.M. and P.M. peak hours (average delay of 264.1 and greater than 300 seconds, respectively). Since this signalized intersection operates at LOS F during both the A.M. and P.M. peak hours, the addition of one trip would be considered a significant impact. The addition of a second eastbound through lane and a second westbound through lane as recommended under Existing Conditions, would improve operations at this intersection to an acceptable LOS C during the A.M. and P.M. peak hours.

Roadway Segments

Cumulative traffic conditions for road segment levels of service, as well as A.M. and P.M. peak hour volumes on the study road segments, are summarized in **Table 3.10-12, Roadway Segment Level of Service for Cumulative Project Conditions.**

TABLE 3.10-12
ROADWAY SEGMENT LEVEL OF SERVICE FOR CUMULATIVE PROJECT CONDITIONS

Roadway Segment	Direction	LOS Standard	AM Peak Hour			PM Peak Hour		
			Volume (Veh/hr)	Average Speed[1] (mph)	LOS	Volume (Veh/hr)	Average Speed[1] (mph)	LOS
State Route 68 between:								
1. State Route 218 and York Road	EB	C/D	2,010	39.0	E	1,594	38.5	E
	WB	C/D	1,862	14.9	F	2,353	15.6	F
2. York Road and Pasadera Drive/Boots Road	EB	C/D	1,261	33.5	E	1,757	14.2	F
	WB	C/D	2,069	20.6	F	1,779	36.2	E
3. Pasadera Drive/Boots Road and Laureles Grade	EB	C/D	1,236	25.8	E	1,694	7.6	F
	WB	C/D	2,003	13.7	F	1,673	15.9	F
4. Laureles Grade and Corral de Tierra Road	EB	C/D	1,366	19.3	F	1,976	10.8	F
	WB	C/D	2,034	15.6	F	1,640	33.8	E
5. Corral de Tierra Road and an Benancio Road	EB	C/D	1,556	13.2	F	2,065	12.0	F
	WB	C/D	1,985	7.8	F	1,791	5.0	F

Notes: 1 Average travel speed calculated in Synchro software.
EB = Eastbound
WB = Westbound
Veh/hr = vehicles per hour
Mph = miles per hour

Source: HatchMott MacDonald 2009

As shown in **Table 3.10-11, Roadway Segment Level of Service for Cumulative Project Conditions** each study roadway segment, eastbound and westbound on State Route 68, would continue to operate below LOS D during both the A.M. or P.M. peak hours as they would under existing, background, and Background Plus Project Conditions. Similar to

Background Plus Project Conditions, the addition of one vehicle to the LOS F conditions along four of the study segments and the degradation of the level of service on westbound State Route 68 between State Route 218 and York Road would result in the project having a significant cumulative impact. A brief description of the operations along each roadway segment that would operate with deficiencies under Background Plus Project Conditions is provided below.

State Route 68 between State Route 218 and York Road (Roadway Segment #1) would operate at LOS E in the eastbound direction and LOS F in the westbound directions during the weekday A.M. peak hour (average speeds of 39.0 and 14.9 mph, respectively); and would operate at LOS E in the eastbound direction and LOS F in the westbound direction during the weekday P.M. peak hour (average speeds of 38.5 and 15.6 mph, respectively). The level of service on westbound State Route 68 would degrade from LOS E under Background Plus Project Conditions to LOS F under Cumulative Conditions during the P.M. peak hour. Therefore, the project trips combined with cumulative traffic volumes generated during either the A.M. or P.M. peak hours on westbound State Route 68 between State Route 218 and York Road would be considered a significant cumulative impact.

State Route 68 between York Road and Pasadera Drive/Boots Road (Roadway Segment #2) would operate at LOS E in the eastbound direction and LOS F in the westbound direction during the weekday A.M. peak hour (average speeds of 33.5 and 20.6 mph, respectively); and LOS F in the eastbound direction and LOS E in the westbound direction during the weekday P.M. peak hour (average speeds of 14.2 and 36.2 mph, respectively). During the weekday A.M. peak hour, eastbound State Route 68 between York Road and Pasadera Drive/Boots Road would degrade from LOS D under Background Plus Project Conditions to LOS E under Cumulative Conditions and eastbound State Route 68 between York Road and Pasadera Drive/Boots Road would degrade from LOS E under Background Plus Project Conditions to LOS F under Cumulative Conditions. During the P.M. peak hour, eastbound State Route 68 between York Road and Pasadera Drive/Boots Road would continue to operation at LOS F and the westbound direction would degrade from LOS C under Background Plus Project Conditions to LOS E under Cumulative Conditions. Therefore, the project trips combined with cumulative traffic volumes generated during during either the A.M. or P.M. peak hours on State Route 68 between York Road and Pasadera Drive/Boots Road would be considered a significant cumulative impact.

State Route 68 between Pasadera Drive/Boots Road and Laureles Grade Road (Roadway Segment #3) would operate at LOS E in the eastbound direction and LOS F in the westbound direction during the weekday A.M. peak hour (average speeds of 25.8 and 13.7 mph, respectively); and LOS F in both the eastbound and westbound directions during the weekday P.M. peak hour (average speeds of 7.6 and 15.9 mph, respectively). During the weekday A.M. peak hour, State Route 68 between York Road and Pasadera Drive/Boots Road would degrade from LOS D under Background Plus Project Conditions to LOS E under Cumulative Conditions in the eastbound direction and would degrade from LOS E under Background Plus Project Conditions to LOS F under Cumulative Conditions in the

westbound direction. During the weekday P.M. peak hour, State Route 68 between York Road and Pasadera Drive/Boots Road would continue to operate at LOS F in the eastbound direction and would degrade from LOS E under Background Plus Project Conditions to LOS E under Cumulative Conditions in the westbound direction. Therefore, the project trips combined with cumulative traffic volumes generated during either the A.M. or P.M. peak hours on westbound State Route 68 between York Road and Pasadera Drive/Boots Road would be considered a significant cumulative impact.

State Route 68 between Laureles Grade Road and Corral de Tierra (Roadway Segment #4) would operate at LOS F in both the eastbound and westbound directions during the weekday A.M. peak hour (average speeds of 19.3 and 15.6 mph, respectively); and LOS F in the eastbound direction and LOS E in the westbound direction during the weekday P.M. peak hour (average speeds of 10.8 and 33.8 mph, respectively). During the weekday A.M. peak hour, State Route 68 between Laureles Grade Road and Corral de Tierra would degrade from LOS E under Background Plus Project Conditions to LOS F under Cumulative Conditions in both the eastbound and westbound directions. During the weekday P.M. peak hour, State Route 68 between Laureles Grade Road and Corral de Tierra would continue to operate at LOS F under Cumulative Conditions in the eastbound direction and would degrade from LOS B under Background Plus Project Conditions to LOS E under Cumulative Condition in the westbound direction. Therefore, the project trips combined with cumulative traffic volumes generated during either the A.M. or P.M. peak hours on State Route 68 between Laureles Grade Road and Corral de Tierra during would be considered a significant cumulative impact.

State Route 68 between Corral de Tierra and San Benancio Road (Roadway Segment #5) would operate at LOS F in the eastbound and westbound directions during the weekday A.M. peak hour (average speeds of 13.2 and 7.8 mph, respectively); and LOS F in the eastbound and westbound directions during the weekday P.M. peak hour (average speeds of 12.0 and 5.0 mph, respectively). During A.M. peak hour operations, State Route 68 between Corral de Tierra and San Benancio Road would degrade from LOS E under Background Plus Project Conditions to LOS F under Cumulative Conditions in the eastbound direction and would continue to operate at LOS F in the westbound direction. During the weekday P.M. peak hour, eastbound and westbound State Route 68 between Corral de Tierra and San Benancio Road would continue to operate at LOS F under Cumulative Conditions. Therefore, the project trips combined with cumulative traffic volumes generated during either the A.M. or P.M. peak hours on State Route 68 between Corral de Tierra and San Benancio Road would be considered a significant cumulative impact.

Cumulative Impact Summary

The cumulative trips associated with the proposed project and other development would degrade the levels of service or would exacerbate existing unacceptable levels of service at all six study intersections and all five study roadway segments. This would be considered a **significant cumulative impact**. Implementation of mitigation measure **MM 3.10-1** requires

the applicant to contribute specifically toward implementation of the "State Route 68 Commuter Improvements," a programmed project within the TAMC RDIF program. Implementation of this improvement would improve intersection and roadway segment operations under Cumulative Conditions**.** As under Background Plus Project Conditions, implementation of the "State Route 68 Commuter Improvements" would also improve operations at two study intersections under Cumulative Conditions (i.e., Corral de Tierra/SR 68 and San Benancio/SR 68). In order to improve operations at the Corral de Tierra Road/State Route 68 intersection to acceptable levels of service under Cumulative Conditions, the traffic analysis for the proposed project also identified the need for the following improvement:

- At the Corral de Tierra Road/State Route 68 intersection, convert the northbound right-turn to right-turn overlap phasing. Implementation of this improvement would improve operations at this intersection to LOS C during both the A.M. and P.M. peak hours under Cumulative Conditions. Implementation of mitigation measure **MM 3.10-1** would result in the widening of State Route 68 to four lanes at this intersection, which would necessitate traffic signal modifications. The northbound right-turn phasing at this intersection could be converted to right-turn overlap phasing as part of the signal modifications. This improvement is recommended to be included in the "State Route 68 Commuter Improvements," which is included in the TAMC Regional Development Impact Fee program. Although this improvement is only triggered under Cumulative Conditions, this minor signal phasing modification is assumed to be implemented with mitigation measure **MM 3.10-1**.

In addition to implementation of intersection improvements associated with the widening of State Route 68, as recommended under Existing Conditions, other regional improvements would be required under Cumulative Conditions. The traffic analysis for the proposed project identified the need for additional intersection improvements along the State Route 68 corridor under the Cumulative Conditions. These recommended improvements include:

- Widen and restripe the northbound approach of the State Route 218/State Route 68 intersection to include one left-turn lane, one through lane, and one right-turn lane. Widen and restripe the eastbound approach to include two left-turn lanes, one through lane, and one shared through/right-turn lane. Install southbound right turn overlap phasing at this location. Implementation of this improvement would improve operations at this intersection to LOS C during both the A.M. and P.M. peak hours under Cumulative Conditions. However, these improvements are not currently included in any Capital Improvement Program (CIP).

- At the Laureles Grade/State Route 68 intersection, convert the northbound right-turn to right-turn overlap phasing. Implementation of this improvement, in addition to adding second eastbound and westbound through lanes

(recommended under Existing Conditions), would improve operations at this intersection to LOS B during the A.M. peak hour and LOS C during the P.M. peak hour under Cumulative Conditions. However, these improvements are not currently included in any CIP.

- At the York Road/State Route 68 intersection, add a second eastbound through lane and a second eastbound left-turn lane. Implementation of this improvement, in addition to adding a second westbound through lane (recommended under Existing Conditions), would improve operations at this intersection to LOS C during both the A.M. and P.M. peak hours under Cumulative Conditions. However, these improvements are not currently included in any CIP.

- At the Pasadera Drive/State Route 68 intersection, add a second eastbound through lane. Implementation of this improvement, in addition to adding a second westbound through lane (recommended under Existing Conditions), would improve operations at this intersection to LOS B during both the A.M. and P.M. peak hours under Cumulative Conditions. However, this improvement is not currently included in any CIP.

Although the above improvements are recommended in the traffic analysis and would improve operations, these improvements are not included in any CIP; therefore, are not considered feasible.

The proposed project would address cumulative traffic impacts through contribution towards other previously identified regional improvements, which is consistent with the County and TAMC's methodology. The following mitigation measure would require that the project applicant contribute their fair share towards all traffic impact fees, including the TAMC Regional Development Impact Fee (also referred to as the TAMC RDIF), to help fund all regional improvements in the County and reduce the proposed project's cumulative impact to affected intersections and roadway segments.

Mitigation Measure

MM 3.10-6 The Monterey County Resource Management Agency shall require the project applicant to pay any traffic impact fees in effect at the time of building permit applications for future development on the project site. Such fees include, but are not limited to, the TAMC Regional Development Impact Fee (RDIF). Payment of the TAMC RDIF may be done so under the options listed in mitigation measure **MM 3.10-1**. The funds contributed toward the "State Route 68 Commuter Improvements" project as required under mitigation measure **MM 3.10-1** shall be credited towards their total proportionate fair share of the TAMC RDIF, as they will be contributing their fair share towards regional improvements identified within the TAMC *Regional Improvement Nexus Study Update*.

If implementation of mitigation measure **MM 3.10-1** requires the project applicant(s) to contribute towards the "State Route 68 Commuter Improvements" in an amount greater than their fair share identified in the PSR and/or their total fair share of the TAMC RDIF, the project applicant shall be reimbursed as additional funds are collected by other applicants or sources. Payment of the RDIF is considered appropriate and sufficient mitigation for cumulative traffic impacts.

Implementation of the above mitigation measure would require the proposed project to contribute their fair share towards all regional traffic impact fees in effect at the time of issuance of building permit (or sooner if mitigation measure **MM 3.10-1b** is selected by the project applicant), including but not limited to the TAMC RDIF. Through the payment of the regional traffic impact fees, the proposed project would directly contribute to future improvements, which would help off-set any cumulative traffic impacts on regional roadways caused by increased trip volume associated with the proposed project. Payment of all regional impact fees will mitigate the proposed project's cumulative traffic impacts to the regional roadway network. Therefore, the proposed project's cumulative impact on traffic operations under Cumulative Conditions would be reduced to a **less than significant** level.

REFERENCES/DOCUMENTATION

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