First and Kelton Commercial Development
Traffic Impact Analysis

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Executive Summary

This report presents the results of the Traffic Impact Analysis conducted for the proposed new commercial development at the northwest corner of the First Street and Kelton Drive intersection, in the City of Gilroy, California. The project site is currently vacant and is bordered by the South Valley Community Church to the north, Union Bank and The Piazza (an existing office/commercial development) to the west, Kelton Drive to the east, and First Street to the south. The project, as proposed, includes 4,000 square feet (s.f.) of general retail space, two separate 2,500-s.f. fast-food restaurants with drive-through window, and a 3,000-s.f. high-turnover sit-down restaurant. Access to the project site would be provided via the existing driveways along First Street and Kelton Drive, which also provide access to Union Bank and The Piazza. Additionally, the project site also would be accessible from Santa Teresa Boulevard, via the existing driveway providing access to The Piazza. The City of Gilroy land use designation for the project site is General Service Commercial, which is consistent with the proposed project.

Scope of Study

The traffic impact analysis documents the potential traffic impacts to the surrounding transportation network associated with the proposed project. The purpose of the traffic analysis is to satisfy the requirements of the City of Gilroy, the Congestion Management Program (CMP) of the Santa Clara Valley Transportation Authority (VTA), Caltrans, and the California Environmental Quality Act (CEQA).

The study includes the analysis of 12 intersections. The potential impacts of the project on intersections were evaluated in accordance with City of Gilroy level of service standards and impact criteria.

Study Intersections

1. Santa Teresa Boulevard and Mantelli Drive (signalized)
2. Santa Teresa Boulevard and Welburn Avenue (signalized)
3. Santa Teresa Boulevard and First Street/Hecker Pass Highway (signalized) CT
4. Santa Teresa Boulevard and Third Street (roundabout)
5. Kelton Drive and Welburn Avenue (unsignalized)
6. Kern Avenue and Welburn Avenue (unsignalized)
7. Wren Avenue and Welburn Avenue (future signal)
8. Miller Avenue/Wayland Lane and First Street (signalized) CT
9. Wren Avenue and First Street (signalized) CT
10. Kern Avenue and First Street (unsignalized) CT
11. Westwood Drive and First Street (signalized) CT
12. Kelton Drive and First Street (signalized) CT
CT denotes Caltrans intersections

**Study Time Periods**

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of traffic. The weekday AM peak hour of traffic generally falls within the 7:00 to 9:00 AM period and the weekday PM peak hour is typically in the 4:00 to 6:00 PM period. It is during these times that the most congested traffic conditions occur on an average day.

**Study Scenarios**

**Scenario 1:** Existing Conditions. Existing conditions were represented by existing peak-hour traffic volumes on the existing roadway network.

**Scenario 2:** Existing Plus Project Conditions. Existing plus Project conditions represent existing peak-hour traffic volumes on the existing roadway network with the addition of traffic generated by the proposed project if the project was open and operating today.

**Scenario 3:** Background Conditions. Background traffic volumes were estimated by adding to existing peak-hour volumes the projected trips from approved but not yet constructed developments in the City of Gilroy.

**Scenario 4:** Background Plus Project Conditions. Background plus project conditions were estimated by adding to background traffic volumes the trips associated with the proposed project (or project traffic volumes). Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

**Scenario 5:** Cumulative Conditions. Cumulative conditions represent future traffic volumes on the future transportation network that would result from traffic growth projected to occur due to proposed but-not-yet-approved (pending) development projects.

**Project Trip Generation**

The magnitude of traffic generated by the proposed project was estimated by applying to the size of the project the appropriate trip generation rates, as published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 10th Edition, 2017*. The trip generation estimates for the proposed project are based on ITE’s trip generation rates for shopping center (ITE land use code #820), fast-food restaurant with drive-through window (ITE land use code #934), and high-turnover (sit-down) restaurant (ITE land use code #932). Additionally, a 3-percent (%) trip reduction was applied to the project trip generation estimates for internalization between the existing adjacent employment uses (The Piazza) and the proposed commercial uses, as prescribed by VTA guidelines, and a 25% PM peak-hour pass-by reduction was applied to the retail portion of the project.

On the basis of the ITE trip generation rates, and after applying the applicable trip reductions, it is estimated that the proposed project would generate 2,831 net new daily vehicle trips, with 232 trips (121 inbound and 111 outbound) occurring during the AM peak-hour and 197 trips (105 inbound and 92 outbound) occurring during the PM peak-hour.

**Background Plus Project Conditions Analysis**

The results of the intersection level of service analysis under background plus project conditions are discussed below and summarized in Table ES 1.
Signalized Intersections

The results of the level of service analysis indicate that the following signalized study intersections are projected to operate at unacceptable LOS D under background plus project conditions:

3. Santa Teresa Boulevard and First Street (LOS D – PM peak-hour)
7. Wren Avenue and Welburn Avenue (LOS D – PM peak-hour)

However, the addition of project traffic at the above intersections is not sufficient to cause the intersection average delay to increase by more than 2.0 seconds. This typically happens when project traffic volumes are low and/or are added to non-critical movements of the intersection. Therefore, based on City of Gilroy intersection impact criteria, the project would not cause a significant level or service impact at the above two locations.

The remaining signalized study intersections would continue to operate at acceptable levels of service during the peak hours under background plus project conditions.

Unsignalized Intersections

The results of the level of service analysis indicate that all unsignalized study intersections are projected to operate with overall average intersection delays corresponding to acceptable LOS C or better during both the AM and PM peak hours under background plus project conditions.

The unsignalized intersection analysis results also indicate that the following study intersection is projected to operate with average delays corresponding to LOS F on its stop-controlled approach with the highest delay and its traffic volume is high enough to satisfy the peak-hour volume warrant during both peak hours under background plus project conditions:

12. Kelton Drive and First Street (Impact: AM and PM peak hours)

Based on the unsignalized intersection level of service impact criteria, intersections where both the average delay on the stop-controlled approach with the highest delay operates at LOS E or F and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant, are considered to be impacted by the project. Although this condition was met at the above intersection under background conditions (the intersection was identified as being deficient under background conditions), the proposed project would contribute to the projected deficiency at this location, increasing the delay for the approach with the highest delay. Therefore, this is considered a significant project impact.

The remaining unsignalized study intersections would not have traffic volume and level of service conditions that exceed the City of Gilroy level of service standards during the AM and PM peak hours under background plus project conditions.

Roundabout Intersection

The results of the level of service analysis indicate that the study roundabout intersection is projected to operate at unacceptable LOS D and F during the AM and PM peak hours, respectively, under background plus project conditions.

4. Santa Teresa Boulevard and Third Street (Impact: AM and PM peak hours)

The study roundabout intersection also is identified as being deficient under background conditions. The level of service calculations show that the addition of project traffic at the study roundabout intersection would cause the intersection’s average delay to increase by 2 or more seconds from
background conditions. Based on City of Gilroy unsignalized intersection level of service impact criteria, this constitutes a significant project impact.

**Freeway Segment Analysis**

According to CMP Traffic Impact Analysis Guidelines, a freeway level of service analysis is required if the number of project trips added to any freeway segment equals or exceeds one percent of the capacity of the segment. The key freeway segments in the study area were analyzed to determine if the project traffic on each segment would exceed this threshold.

The proposed project consists of a neighborhood-serving commercial project and is not anticipated to generate a measurable amount of traffic from outside of Gilroy. The majority of the project generated traffic is anticipated to originate from the adjacent neighborhoods, without the need to utilize the freeway to access the project site. Since the number of project trips on US 101 is anticipated to be less than the one-percent threshold, the project would not cause a significant increase in traffic on the freeway segments in the study area, and a freeway level of service analysis is not required.

**Intersection Operations Analysis**

The operations analysis results are summarized in Tables ES 2.

The existing maximum queue length for all of the study turn-movements is estimated to be able to accommodate within the available queue storage capacity for each of the movements during the peak hours, with the exception of the following two movements. However, the proposed project would not have an impact on the projected maximum queue lengths for any of the high-demand turn-movements analyzed.

9. **Wren Avenue and First Street – Northbound left-turn movement**

The maximum queue length for the northbound left-turn movement at the Wren Avenue/First Street intersection is estimated to be 8 vehicles (or 200 feet) during the PM peak-hour under existing conditions. This exceeds the existing storage capacity of approximately 150 feet (or 6 vehicles) for this movement. The addition of approved (background) traffic to this movement would cause the projected queue length to increase by 1 vehicle (to 9 vehicles, or 225 feet) during the PM peak hour under background conditions. However, it is projected that project traffic would not have an effect on the projected vehicle queue for this movement under background plus project conditions. Therefore, the proposed project would not have an impact on the projected vehicle queue length for this movement.

12. **Kelton Drive and First Street – Southbound left-turn movement**

The maximum queue length for the southbound left-turn movement at the Kelton Drive/First Street intersection is estimated to be 2 vehicles (or 50 feet) during both peak hours under existing conditions. The existing queue length can be accommodated within the existing storage capacity of approximately 150 feet (or 6 vehicles) for this movement. The addition of approved (background) traffic to this intersection would result in slightly longer wait times for this movement, causing the projected queue length to increase by 2 vehicles (to 4 vehicles, or 100 feet) during the PM peak hour under background conditions. The addition of project traffic to this turn movement would cause the projected 95th percentile vehicle queue to increase by 6 vehicles (from 4 to 10 vehicles, or 250 feet) during the PM peak-hour under background plus project conditions, exceeding the existing storage capacity by approximately 4 vehicles (or 100 feet). Addition of project traffic that results in the projected 95th percentile vehicle queue to exceed the available queue storage capacity is considered a significant project impact, according to the City of Gilroy definition of significant traffic operations impacts.

The projected queue lengths for the southbound left-turn movement at the intersection of Kelton Drive and First Street would be the result of southbound left-turning traffic from Kelton Drive waiting for a gap
in traffic along First Street to complete the turn. With the installation of a traffic signal at this intersection, the 95th percentile queue length for the southbound left-turn movement would be able to accommodate within the existing turn pocket.

Parking Analysis

Based on the City of Gilroy adopted parking rates, the proposed project must provide a total of 102 parking spaces on-site to satisfy the City’s requirements. The project is proposing to provide a total of 63 parking spaces on site, which is 39 spaces less than the number of parking spaces required based on City of Gilroy parking requirements. Therefore, the estimated shortage of on-site parking to serve the projected parking demand constitutes a significant project impact, according to the City of Gilroy definition of significant parking impacts.

To satisfy the City of Gilroy parking requirements, the project applicant is proposing to implement a shared parking program between the proposed project and The Piazza. There are a total of 187 parking spaces on-site to serve The Piazza, while based on the City of Gilroy parking requirements, a total of 186 parking spaces are required to serve The Piazza. A shared parking study was completed in September 2017 where it was determined that the existing parking supply serving The Piazza is currently under utilized. The parking counts showed that no more than 66% and 78% of the available parking spaces were occupied during The Piazza’s weekday and weekend peak parking demand, respectively, with occupancy at The Piazza at what would be considered fully occupied (approximately 98% occupied, based on information provided by The Piazza). The results also show that the actual parking demand at The Piazza is approximately 64 parking spaces (42 parking spaces on Sunday) less than the required number of parking spaces based on the City off-street parking code, and the measured excess parking supply at The Piazza could be utilized to satisfy the projected parking demand for the proposed project. The shared-parking study concluded that combining the existing Piazza and proposed project parking spaces would provide sufficient parking to serve the projected demand from both The Piazza and the proposed commercial project. The study also made the recommendation to designate the farthest parking stalls from the proposed shopping center (parking spaces along the east side of The Piazza) as employee parking. This will reduce parking activity within The Piazza and will provide the nearest parking spaces to the proposed commercial development customers.

Emergency Access Evaluation

With up to three access points, the project site provides adequate emergency vehicle access.

A site plan prepared by RJA Engineers and dated October 30, 2017 shows the wheel travel path of a 24.5-foot fire engine entering, traveling through, and exiting the project site. This travel path evaluation demonstrates that a fire engine would be able to access and circulate the project site via both project driveways on Kelton Drive and First Street. Therefore, it can be concluded that the proposed project site layout and driveway width and locations would provide adequate emergency vehicular access and circulation.

Recommended Mitigation Measures under Background Plus Project Conditions

Described below are the recommended mitigation measures necessary to maintain the level of service standard and intersection operations under background plus project conditions.

4. Santa Teresa Boulevard and Third Street (City of Gilroy Intersection)

Impact: This roundabout intersection is projected to operate at an unacceptable LOS D and F during the AM and PM peak hours, respectively, under background conditions. The addition of project traffic would cause the intersection’s average delay to increase by 2
seconds or more. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a significant project impact.

**Mitigation:** The project impact to this intersection could be mitigated by widening the roundabout from a one-lane to a two-lane roundabout. This improvement can be accomplished by converting the existing northbound/southbound right-turn lanes to shared right-and-through lanes. Additionally, a second receiving lane in both the northbound and southbound directions (Santa Teresa Boulevard) would be required, requiring the widening of Santa Teresa Boulevard from 2 to 4 lanes, including the widening of the bridge structure south of Third Street. Implementation of the above improvements would improve the intersection level of service to acceptable LOS B or better during the AM and PM peak hours under background plus project conditions.

The roundabout improvement, as well as the widening of Santa Teresa Boulevard to four lanes and the widening of the bridge structure south of Third Street, are included in the City’s Traffic Circulation Master Plan (TCMP) and Traffic Impact Fee (TIF) Program. However, due to the magnitude of the necessary improvements, it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements. Thus, to mitigate the project impact at this location, the developer will be required to pay the applicable TIF fee as a fair-share contribution toward the above improvements. With implementation of this mitigation measure, this impact would be less-than-significant.

12. Kelton Drive and First Street (Caltrans Intersection)

**Impact:** This unsignalized intersection is projected to operate with delays on the highest-delay approach equivalent to an unacceptable LOS F during the peak hours under background plus project conditions and the traffic volume levels at the intersection would be high enough to satisfy the peak-hour volume traffic signal warrant. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a significant project impact.

**Mitigation:** The project impact to this intersection could be mitigated with the installation of a traffic signal. With implementation of the above improvements, the intersection level of service would improve to LOS B during the AM and PM peak hours under background plus project conditions, and the impact would be less-than-significant.

First Street through its intersection with Kelton Drive is under the jurisdiction of Caltrans. Therefore, the installation of a signal at this intersection must be reviewed and approved by Caltrans. Should Caltrans deem the proposed traffic signal undesirable, the intersection would need to be designed to restrict some, or all, left-turn access at the intersection.

12. Kelton Drive and First Street – Southbound Left-Turn Queue

**Impact:** The addition of project traffic to the southbound left-turn movement at this intersection would cause the projected 95th percentile vehicle queue to increase by six vehicles (from 4 to 10 vehicles, or 250 feet) from background to background plus project conditions. This exceeds the existing storage capacity of approximately 150 feet. Based on City of Gilroy definition of significant traffic operations impacts, this constitutes a significant project impact.

**Mitigation:** The project impact to the southbound left-turn movement at this intersection could be mitigated with the installation of a traffic signal. Implementation of a traffic signal at this
location also has been identified as an improvement to mitigate a level of service impact. With implementation of the traffic signal, projected maximum queue lengths at the intersection would be able to accommodate within the existing queue storage capacity during the AM and PM peak hours under background plus project conditions, and the project impact would be less-than-significant.

Parking

Impact: Based on the recommended City of Gilroy parking rates, the size of the proposed project, and assumptions and recommendations from the applicant, the proposed project is required to provide a minimum of 102 on-site parking spaces. The project is proposing to provide a total of 63 parking spaces on-site, which is 39 spaces less than the recommended number of parking spaces based on City of Gilroy parking requirements. Based on City of Gilroy definition of significant parking impacts, the shortage of on-site parking constitutes a significant project impact.

Mitigation: The project impact to the parking requirements could be mitigated with the implementation of a Parking Management Plan (shared-parking) between the project and The Piazza. It was estimated that the proposed project is proposing to provide 39 on-site parking spaces less than the number of parking spaces required based on City of Gilroy parking requirements. Based on a shared-parking analysis that was completed for the proposed project and The Piazza, it was determined that The Piazza currently provides more on-site parking than its full-occupancy demand, and that the observed excess parking supply at The Piazza (approximately 42 to 64 parking spaces) could be utilized to satisfy the projected parking demand for the proposed project. The shared-parking study concluded that implementing a shared-parking program would result in sufficient parking to serve the projected demand from both The Piazza and the proposed commercial project. The study also made the recommendation to designate the farthest parking stalls from the proposed shopping center (parking spaces along the east side of The Piazza) as employee parking. This will reduce parking activity within The Piazza and will provide the nearest parking spaces to the proposed commercial development customers.

A parking agreement between the proposed project and The Piazza establishing the shared-parking program shall be developed and implemented prior to occupancy of the proposed project. With implementation of an acceptable shared-parking program, the project impact would be less-than-significant.

Cumulative Plus Project Conditions Analyses

The results of the intersection level of service analysis under cumulative plus project conditions are discussed below and summarized in Table ES 1.

Signalized Intersections

The results of the level of service analysis indicate that the following signalized study intersections are projected to operate at unacceptable LOS D under cumulative and cumulative plus project conditions:

3. Santa Teresa Boulevard and First Street (LOS D – PM peak-hour)
7. Wren Avenue and Welburn Avenue (LOS D – AM and PM, Impact: PM peak-hour)
9. Wren Avenue and First Street (LOS D – PM peak-hour)
The level of service calculations show that the addition of project traffic at the intersection of Wren Avenue and Welburn Avenue (intersection #7) would cause the intersection average delay to increase by more than 2.0 seconds during the PM peak-hour. This constitutes a cumulative project impact, based on City of Gilroy signalized intersection level of service impact criteria.

The remaining signalized study intersections would continue to operate at acceptable levels of service during the peak hours under cumulative plus project conditions.

**Unsignalized Intersections**

The results of the level of service analysis indicate that all unsignalized study intersections are projected to operate with overall average intersection delays corresponding to acceptable LOS C or better during both the AM and PM peak hours under cumulative plus project conditions.

The unsignalized intersection analysis results also indicate that the following study intersection is projected to operate with average delays corresponding to LOS F on its stop-controlled approach with the highest delay and its traffic volume is high enough to satisfy the peak-hour volume warrant during both peak hours under cumulative plus project conditions:

12. Kelton Drive and First Street *(Impact: AM and PM peak hours)*

Based on the unsignalized intersection level of service impact criteria, intersections where both the average delay on the stop-controlled approach with the highest delay operates at LOS E or F and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant, are considered to be impacted by the project. Although this condition was met at the above intersection under cumulative conditions, the proposed project would contribute to the projected deficiency at this location, increasing the delay for the approach with the highest delay. Therefore, this is considered a cumulative project impact.

The remaining unsignalized study intersections would not have traffic volume and level of service conditions that exceed the City of Gilroy level of service standards during the AM and PM peak hours under cumulative plus project conditions.

**Roundabout Intersection**

The results of the level of service analysis indicate that the study roundabout intersection is projected to operate at unacceptable LOS E and F during the AM and PM peak hours, respectively, under cumulative and cumulative plus project conditions.

4. Santa Teresa Boulevard and Third Street *(Impact: AM and PM peak hours)*

The level of service calculations show that the addition of project traffic at the study roundabout intersection would cause the intersection’s average delay to increase by 2 or more seconds from cumulative conditions. Based on City of Gilroy unsignalized intersection level of service impact criteria, this constitutes a cumulative project impact.

**Recommended Mitigation Measures under Cumulative Plus Project Conditions**

Described below are the recommended mitigation measures necessary to maintain the level of service standard and intersection operations under cumulative plus project conditions.

4. Santa Teresa Boulevard and Third Street *(City of Gilroy Intersection)*

**Impact:** This roundabout intersection is projected to operate at an unacceptable LOS E and F during the AM and PM peak hours, respectively, under cumulative conditions. The addition of project traffic would cause the intersection’s average delay to increase by 2
seconds or more. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a cumulative project impact.

**Mitigation:** The project impact to this intersection could be mitigated by widening the roundabout from a one-lane to a two-lane roundabout. This improvement can be accomplished by converting the existing northbound/southbound right-turn lanes to shared right-and-through lanes. Additionally, a second receiving lane in both the northbound and southbound directions (Santa Teresa Boulevard) would be required. Implementation of the above improvements would improve the intersection level of service to acceptable LOS B during the AM and PM peak hours under cumulative plus project conditions.

The roundabout improvement, as well as the widening of Santa Teresa Boulevard to four lanes and the widening of the bridge structure south of Third Street, are included in the City’s Traffic Circulation Master Plan (TCMP) and Traffic Impact Fee (TIF) Program. However, due to the magnitude of the necessary improvements, it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements. Thus, to mitigate the project impact at this location, the developer will be required to pay the applicable TIF fee as a fair-share contribution toward the above improvements. With implementation of this mitigation measure, this cumulative impact would be less-than-significant.

7. Wren Avenue and Welburn Avenue (City of Gilroy Intersection)

**Impact:** This future signalized intersection is projected to operate at an unacceptable LOS D during the AM and PM peak hours under cumulative and cumulative plus project conditions. The addition of project traffic would cause the intersection’s average delay to increase by 2 seconds or more during the PM peak-hour. Based on City of Gilroy level of service impact criteria for signalized intersections, this constitutes a cumulative project impact.

**Mitigation:** The project impact to this intersection could be mitigated with the addition of a separate westbound left-turn lane, or with the addition of a separate eastbound right-turn lane. Both of these improvements would require the removal of on-street parking along Welburn Avenue to accommodate the additional lane. Implementation of either of the above improvements would improve the intersection level of service to acceptable LOS C during the AM and PM peak hours under cumulative plus project conditions.

The above improvements are planned in the City’s TCMP and are included in the City’s TIF Program. The developer will be required to pay the applicable TIF fee as a fair-share contribution toward improvements at this intersection. With implementation of this mitigation measure, this cumulative impact would be less-than-significant.

12. Kelton Drive and First Street (Caltrans Intersection)

**Impact:** This unsignalized intersection is projected to operate with delays on the highest-delay approach equivalent to an unacceptable LOS F during the peak hours under cumulative plus project conditions and the traffic volume levels at the intersection would be high enough to satisfy the peak-hour volume traffic signal warrant. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a cumulative project impact.

**Mitigation:** The project impact to this intersection could be mitigated with the installation of a traffic signal. With implementation of the above improvements, the intersection level of service
would improve to LOS B during the AM and PM peak hours under cumulative plus project conditions, and this cumulative impact would be less-than-significant.

First Street through its intersection with Kelton Drive is under the jurisdiction of Caltrans. Therefore, the installation of a signal at this intersection must be reviewed and approved by Caltrans. Should Caltrans deem the proposed traffic signal undesirable, the intersection would need to be designed to restrict some, or all, left-turn access at the intersection.

Other Transportation Issues

Bicycle Circulation

Various bicycle facilities exist in the vicinity of the project site, including the Uvas Creek Trail and bike lanes along Santa Teresa, Mantelli Drive, Welburn Avenue, Third Street, Westwood Drive, and Wren Avenue. In addition, the Bicycle Transportation Plan contained in the City of Gilroy General Plan, the City of Gilroy Bicycle/Pedestrian Transportation Plan, and the City of Gilroy Trails Master Plan indicate that a variety of bicycle facilities are planned in the City of Gilroy, some of which would serve the study area.

Project’s Effect on Bicycle Facilities

The proposed project would increase the demand on bicycle facilities in the vicinity of the project site. The potential demand could be served by the various bicycle facilities available in the immediate vicinity of the project site. With implementation of the planned bicycle facilities, in addition to the existing facilities, the project site would be served directly by numerous bicycle facilities.

Recommended Bicycle Facility Improvements

The following recommendations are made to promote non-auto modes of transportation in the City and to accommodate bicycle travel near the project site:

Install Bicycle Parking Facilities. It is recommended that the proposed project provide adequate bicycle parking supply on site, based on VTA’s recommends bicycle-parking rates, to serve the potential demand of the project. Based on VTA’s bicycle parking supply recommendations, the proposed project should provide 1 Class I (bicycle locker) and 4 Class II (bicycle rack) bicycle parking spaces.

Pedestrian Circulation

Pedestrian facilities in the project area consist primarily of sidewalks along residential streets in the study area. Although most developed areas in the vicinity of the project site have sidewalks along both sides of the street, some streets within the project area have missing sidewalks along one or both sides of the street, including Kelton Drive (along the proposed project site frontage), First Street (along the south side of the street), and Santa Teresa Boulevard (along the west side of the street).

The approved project at the southeast corner of the Santa Teresa Boulevard/First Street intersection will be required to install sidewalks along its project frontage on Santa Teresa Boulevard (east side of the street, south of First Street) and First Street (south side of the street), providing a complete sidewalk network along First Street and improving the existing pedestrian facilities along Santa Teresa Boulevard. The proposed project also would install sidewalks along its frontage on Kelton Drive (west side of the street), closing the existing gap in the sidewalks along this street.
Project’s Effect on Pedestrian Facilities

It can be expected that new pedestrian traffic would be generated by the proposed project. The project site is located within what would be considered a walking distance (less than half one mile) from various surrounding neighborhoods, in particular those immediately north of the project site. Existing pedestrian facilities are current available between the neighborhoods north of First Street and the project site. Additionally, with the implementation of a traffic signal at the intersection of Kelton Drive and First Street (required to mitigate a project impact at this intersection), a direct pedestrian connection between the proposed project and the approved project located across from the project site would be provided, facilitating pedestrian access between the two sites.

Based on the existing and planned pedestrian facilities, sufficient pedestrian facilities will be available providing a connection between the project site and the surrounding residential neighborhoods.

Recommended Pedestrian Circulation Improvements

The following recommendations are made to promote pedestrian travel to and from the project site:

Installation of Crosswalks. Crosswalks and pedestrian phases should be planned along all legs of the proposed new signalized intersection of Kelton Drive and First Street.

Transit Service

Currently, the project site is not served directly by any of the existing bus routes in Gilroy. The nearest bus route to the project site is Community Bus Route 19, which provides service between the Gilroy Transit Center and First Street/Kern Avenue and includes a stop at the intersection of Kern Avenue and First Street, less than one half mile walking distance east of the project site.

Recommended Transit Service Improvements

The following recommendations are made to promote the use of public transit service to and from the project site:

Expansion of Service. With the development of the project, in addition to other approved residential projects along Santa Teresa Boulevard, south of the project site, there will be an opportunity for VTA to expand the existing service area to the south/west part of Gilroy, and by providing a bus stop in the immediate project area, to serve the project site directly.

Site Access

Access to the project site would be provided via one existing driveway along Kelton Drive and one along First Street. These driveways currently provide access to The Piazza and Union Bank. The driveway along Kelton Drive consists of a full-access, 30-foot wide driveway while the driveway along First Street is approximately 37 feet wide and provides right-in and out access only.

The project site also is accessible from Santa Teresa Boulevard, via the existing The Piazza driveway. The Santa Teresa driveway provides right-in and left-in access from Santa Teresa Boulevard, but only right-out access, and is approximately 35 feet wide.

The City of Gilroy commercial driveway design guidelines, dated August 2005, specify that commercial driveways must be a minimum of 35 feet wide (maximum of 45 feet). Based on this requirement, the Kelton Drive project driveway would not meet City design standards. However, based on the emergency vehicle access evaluation prepared by RJA Engineers, it was shown that the Kelton Drive driveway can adequately provide inbound and outbound access to a 24.5-foot long fire engine.
Operations at the Project Driveways

Traffic operations at all three driveways were evaluated to ensure they would continue to operate adequately with the addition of project traffic. The evaluation showed that all three driveways would operate acceptably with the addition of project traffic during the peak hours. Outbound traffic at the driveways is projected to experience average delays of 10 to 14 seconds (corresponding to LOS B or better) while waiting for a gap in the through traffic to complete their turn.

Additionally, an evaluation of the queue lengths shows that the projected maximum queue lengths at the project driveways would be 1 to 2 vehicles during the peak hours.

Therefore, the driveways providing access to the proposed project are projected to operate acceptably and no operational deficiencies are anticipated.

Pedestrian Access

Pedestrian traffic from the adjacent neighborhoods north of First Street would be able to utilize the existing pedestrian facilities (sidewalks, crosswalks, pedestrian signal phasing at signalized intersections) along the adjacent streets to access the project site. With the signalization of the intersection of Kelton Drive and First Street by the proposed project, in conjunction with planned sidewalk improvement along First Street (south side) and Santa Teresa Boulevard (east side, south of First Street) by others, pedestrian access to and from the adjacent neighborhoods to the south also would be provided.

Based on the existing and plan pedestrian facilities, pedestrian access to and from the project site is projected to be adequate.

On-Site Circulation

Project traffic would enter the project site from either the north (via the Kelton Drive driveway or the Santa Teresa Boulevard driveway) or the south (via the First Street driveway), circulate the project site and proceed to park, access the drive-through windows, and/or exit the site. The layout of the parking area would allow for easy circulation of the site and access to all parking stalls.

The site plan does not identify a designated on-site loading zone for the commercial uses. The project must identify a plan for the delivery of goods and supplies.

Drive-Through Window Access

Each of the proposed fast-food restaurants would include drive-through windows. As shown on the site plan, the drive-through window lanes would be 12 feet wide and would wrap around the back of the buildings on either side of the site. The entrance to both drive-through windows would be located on opposite corners at the north side of the site, between the buildings and the northernmost row of parking spaces. Both drive-through windows would be accessible from either the Kelton Drive or the First Street driveways. The western drive-through window exit would be located next to the First Street driveway, allowing drive-through customers to easily exit the site via First Street, or circulate back to the main drive aisle to access the Kelton Street (or Santa Teresa Boulevard) driveway. The eastern drive-through window exit would be located along the main drive aisle, allowing users of this drive-through lane to exit the site via either driveway.

The site plan shows queuing capacity for approximately 8 vehicles (approximately 180 feet long) within each of the drive-through lanes. The queue length at drive-through windows is dependent of the type of establishment and its service rate. For example, drive-through lane lengths for other restaurants in town range from approximately 100 feet (Wienerschnitzel restaurant on First Street), or 250 feet (McDonalds restaurant on First Street), to approximately 300 feet (Sonic restaurant on Pacheco Pass Highway).
Based on information obtained from the project applicant, the proposed fast-food restaurants are not anticipated to be a national chain restaurant like McDonalds, but instead a local high-quality gourmet restaurant.

Although the anticipated queue length within the drive-through lanes cannot be estimated without further information on the proposed fast-food restaurants, the proposed project must ensure that the drive-through window queue lengths will not exceed the 8-vehicle capacity proposed within each lane. If either of the drive-through window queue lengths exceeds the proposed 8-vehicle queue capacity, the queue would block access to the parking spaces located adjacent to the drive-through lane entrances. Additionally, queue lengths in excess of 12 vehicles would extend onto the main (middle) drive aisle, which could then cause project traffic entering the project site from the north to extend onto the existing north drive aisle and potentially block access to/from The Piazza. However, it should be noted that although drive-through window queue lengths longer than 8 or 12 vehicles could potentially create operational issues within the project site, these driveway queues would have no effect on traffic operations on either First Street or Kelton Drive. The location of the drive-through lane entrances would make it very unlikely for their vehicular queues to extend onto First Street.

**Pedestrian On-Site Circulation**

The site plan shows sidewalks and pedestrian pathways throughout the project site and along the project site’s frontage on First Street and Kelton Drive. All pedestrian pathways within the project site would connect to sidewalks along First Street and Kelton Drive. A crosswalk would be clearly marked along the main drive aisle, providing a connection between the buildings and encouraging pedestrian crossing of this drive aisle at a single location.

A pedestrian pathway located at the northwest corner of the project site would connect the project site and The Piazza parking area. This pathway, however, is located adjacent to and south of the proposed trash enclosures and an existing tree, which could limit visibility of pedestrians within the pathway to vehicles entering The Piazza parking area from the existing north drive aisle. A speed bump located at the end of this drive aisle (adjacent to the tree) forces all incoming traffic, as well as outbound traffic, to slow down/stop before entering the Piazza parking area. The speed bump will provide inbound drivers, in particular those turning left, the opportunity to see pedestrians crossing between The Piazza and the project site, before entering the parking area.

Should it be required that the existing speed bump be removed, installation of a stop sign at this location, controlling the inbound movement, should be considered.

**Recommended Site Access and Circulation Improvements**

The following recommendations are made to promote adequate site access and on-site circulation:

**Design of Project Site.** The design of the project site, including but not limited to driveways, sidewalks, drive aisles, and parking stalls, should adhere to City of Gilroy design standards.

**Design of Kelton Drive Driveway.** Although the existing Kelton Drive driveway does not meet the recommended City of Gilroy commercial driveway width of 35-45 feet, an emergency vehicle access evaluation determined that this driveway can adequately provide inbound and outbound access to a 24.5-foot long fire engine. Therefore, access via this driveway is adequate.

The site plan shows a fire hydrant located next to/on the south side of this driveway. It is recommended that this fire hydrant be relocated farther south to avoid vehicles accidently hitting it as they make a right-turn out of this driveway.
Designated Loading Area. The site plan does not identify a designated loading area within the site. It is recommended that a delivery plan be identified and implemented, which would include a designated loading area and delivery time period. The delivery time period should occur during the project’s lowest traffic-generating time period, to the maximum extent possible.

Monitor Drive-Through Window Queue. It is recommended that the project applicant monitor the drive-through window queue lengths to ensure they do not exceed the proposed 8-vehicle queue capacity within each lane. If either of the drive-through window queue lengths exceeds the proposed 8-vehicle queue capacity, the project applicant must work with the fast-food restaurant to develop a strategy to reduce the vehicle queue or accommodate it on-site without causing it to block parking stalls and/or drive aisles.

Visible Pedestrian Connection Between the Project Site and The Piazza. It is recommended that the pathway connecting the proposed project to The Piazza parking lot (located at the northwest corner of the project site) be clearly visible to drivers within The Piazza parking lot, in particular to inbound traffic along the existing drive aisle on the north side of the project site. Additionally, should it be required that the existing speed bump be removed, installation of a stop sign at this location, controlling the inbound movement, should be considered.

**Evaluation of Kelton Drive**

Kelton Drive is the eastern project site boundary and provides direct access to the project site, as well as The Piazza site, via an existing driveway. It is projected that most of the project traffic (approximately 62%) would utilize the Kelton Drive driveway to access the project site, with 21% of the total project traffic utilizing Kelton Drive, north of the project site.

This evaluation consists of a roadway segment analysis to quantify the potential change in traffic volumes along the study roadway segment as a result of the proposed project.

**Roadway Characteristics**

Kelton Drive consists of a two lane, undivided residential roadway that extends between First Street and north of Welburn Avenue. It is approximately 50 feet wide, curb-to-curb, along the project site frontage.

A residential (or local) street is defined by the City of Gilroy as being 38 feet wide (including two 12-foot travel lanes and 2 7-foot parking lanes) with 11 feet of sidewalks and landscaping area on each side of the street, for a total right-of-way of 60 feet. The typical design speed for local streets is 25 miles per hour (mph), and average daily traffic (ADT) volumes typically ranging from 50 to 2,000 vehicles.

**Existing Roadway Conditions**

Speed and count (twenty-four hour tube counts) data were collected on March 27, 2018 at two locations along Kelton Drive: just north of the project site and south of Welburn Avenue. The existing count data revealed that Kelton Drive currently carries daily traffic volumes within the recommended traffic volume range associated with local streets (approximately 1,350 daily vehicles (both directions combined) near the project site and approximately 1,200 daily vehicles near Welburn Avenue). Additionally, the speed surveys revealed that the 85th percentile speeds along Kelton Drive near the project site were measured to be 18 mph, while the 85th percentile speeds near Welburn Avenue were measured to be 26-27 mph. The measured speeds along Kelton Drive are within 5 mph of the design speed limit, or lower. Speeds within 5 mph of the posted speed limits are considered reasonable. Therefore, based on the speed surveys, it can be concluded that there are currently no apparent speeding issues along Kelton Drive.
Project's Effect on Kelton Drive

The proposed project is projected to add approximately 21% of the project traffic to Kelton Drive. This equates to approximately 50 peak-hour trips and 595 daily trips being added to Kelton Drive, north of the project site, by the project. With the proposed project, Kelton Drive is projected to carry approximately 1,950 daily vehicles, continuing to carry the recommended average daily traffic volumes associated with local streets.

Additionally, as it was described in the intersection analysis, the addition of project traffic to the intersection of Kelton Drive/First Street is projected to contribute to the need for the signalization of this intersection, and would be considered a significant project impact. The required mitigation measure identified consists of the installation of a traffic signal.

The following conclusions can be drawn from the evaluation of Kelton Drive:

- Traffic volumes on Kelton Drive are and would continue to be within the local street volume range characteristic.
- The measured 85th percentile speeds along Kelton Drive are within 5 mph of the design speed for local streets, or lower. Speeds within 5 mph of the posted speed limits are considered reasonable.
- Traffic volumes along Kelton Drive are projected to increase by approximately 45% to 50% from existing conditions as a result of the proposed project, an increase which could be considered measurable and would be perceptible to residents of the adjacent neighborhood.

Although traffic volumes along Kelton Drive are projected to increase due to the proposed project, currently, based on the speed and count data collected, there are not indications of speeding or other traffic related issues along Kelton Drive. Even with the addition of the proposed project traffic, Kelton Drive is projected to continue to carry average daily traffic volumes within the typical acceptable volume range associated with local streets.
## Table ES 1
### Intersection Level of Service Summary

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<th>Study Location Number</th>
<th>Intersection</th>
<th>Interaction</th>
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<th>TIF Int.</th>
<th>Peak Hour</th>
<th>Count Date</th>
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<th>Existing Warrant</th>
<th>Existing LOS</th>
<th>Existing Warrant</th>
<th>Mitigated LOS</th>
<th>Mitigated Warrant</th>
<th>Cumulative LOS</th>
<th>Cumulative Warrant</th>
<th>Mitigated LOS</th>
<th>Mitigated Warrant</th>
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<td>31.7 D +2.6 -- 9.9 A 40.9 E -- 43.6 E +2.9 -- 10.6 B</td>
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<td>3/27/18</td>
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**Notes:**
1. TIF Int. = City of Gilroy Traffic Impact Fee Intersection.
2. Signal warrant analysis based on the Peak Hour Signal Warrant #3, Figure 4C Caltrans MUTCD, 2014. Signal warrant analysis is not applicable to signalized intersections.
3. Change in delay, expressed in seconds, for background plus project conditions is measured relative to background conditions.
4. Change in delay, expressed in seconds, for cumulative plus project conditions is measured relative to cumulative no project conditions.
5. All-way stop-controlled intersection under existing conditions. Assumed to be a two-way stop-controlled intersection under background conditions.
6. One-way stop-controlled intersection under existing conditions. Assumed to be a two-way stop-controlled intersection under background conditions.
7. * = CMP intersection
8. Entries denoted in bold indicate conditions that exceed the City’s current level of service standard.

- Denotes significant impact based on City of Gilroy criteria.
### Table ES 2
Intersection Vehicle Queue Analysis Summary

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<th>Measurement</th>
<th>Sant Teresa Blvd/First St (Hecker Pass Hwy)</th>
<th>Wren Ave/First St</th>
<th>Westwood Dr/First St</th>
<th>Kelton Dr/First St</th>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>232</td>
<td>343</td>
<td>281</td>
<td>245</td>
<td>104</td>
</tr>
<tr>
<td>Volume (vph/pl)</td>
<td>232</td>
<td>343</td>
<td>281</td>
<td>245</td>
<td>104</td>
</tr>
<tr>
<td>Avg. Queue (veh/ln.)</td>
<td>5</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Avg. Queue(^2) (ft./ln)</td>
<td>121</td>
<td>250</td>
<td>146</td>
<td>179</td>
<td>69</td>
</tr>
<tr>
<td>95th %. Queue (veh/ln.)</td>
<td>9</td>
<td>15</td>
<td>10</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>95th %. Queue (ft./ln)</td>
<td>225</td>
<td>375</td>
<td>250</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>Storage (ft./ln)</td>
<td>425</td>
<td>425</td>
<td>300</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>Adequate (Y/N)</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td><strong>Background Plus Project Conditions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cycle/Delay(^1) (sec)</td>
<td>75</td>
<td>105</td>
<td>75</td>
<td>105</td>
<td>95</td>
</tr>
<tr>
<td>Lanes</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Volume (vph)</td>
<td>249</td>
<td>367</td>
<td>295</td>
<td>257</td>
<td>117</td>
</tr>
<tr>
<td>Volume (vph/pl)</td>
<td>249</td>
<td>367</td>
<td>295</td>
<td>257</td>
<td>117</td>
</tr>
<tr>
<td>Avg. Queue (veh/ln.)</td>
<td>5</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Avg. Queue(^2) (ft./ln)</td>
<td>130</td>
<td>260</td>
<td>154</td>
<td>187</td>
<td>77</td>
</tr>
<tr>
<td>95th %. Queue (veh/ln.)</td>
<td>9</td>
<td>16</td>
<td>10</td>
<td>12</td>
<td>6</td>
</tr>
<tr>
<td>95th %. Queue (ft./ln)</td>
<td>225</td>
<td>400</td>
<td>200</td>
<td>250</td>
<td>100</td>
</tr>
<tr>
<td>Storage (ft./ln)</td>
<td>425</td>
<td>425</td>
<td>300</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>Adequate (Y/N)</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
</tbody>
</table>

**Mitigation:** Signalize.

\(^1\) Vehicle queue calculations based on cycle length for signalized intersections and control delay for unsignalized intersections.

\(^2\) Assumes 25 feet per vehicle in the queue.

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, R = Right, T = Through, L = Left.
1. Introduction

This report presents the results of the Traffic Impact Analysis conducted for the proposed new commercial development at the northwest corner of the First Street and Kelton Drive intersection, in the City of Gilroy, California. The project site is currently vacant and is bordered by the South Valley Community Church to the north, Union Bank and The Piazza (an existing office/commercial development) to the west, Kelton Drive to the east, and First Street to the south. The project, as proposed, includes 4,000 square feet (s.f.) of general retail space, two separate 2,500-s.f. fast-food restaurants with drive-through window, and a 3,000-s.f. high-turnover sit-down restaurant. Access to the project site would be provided via the existing driveways along First Street and Kelton Drive, which also provide access to Union Bank and The Piazza. Additionally, the project site also would be accessible from Santa Teresa Boulevard, via the existing driveway providing access to The Piazza. The City of Gilroy land use designation for the project site is General Service Commercial, which is consistent with the proposed project.

The project study area and study intersections are shown on Figure 1. The project site plan is shown on Figure 2.

Scope of Study

The traffic impact analysis documents the impacts to the surrounding transportation system associated with the increase in traffic due to the proposed project. The purpose of the traffic analysis is to satisfy the requirements of the City of Gilroy, the Congestion Management Program (CMP) of the Santa Clara Valley Transportation Authority (VTA), Caltrans, and the California Environmental Quality Act (CEQA). The traffic analysis consists of an evaluation of levels of service at key study intersections. A freeway level of service analysis was not completed since the proposed project consists of a neighborhood-serving commercial project and is not anticipated to add a measurable amount of traffic to US 101 to trigger a project impact. However, per CMP guidelines, an analysis to document the determination that a freeway level of service analysis is not required is included within the following sections.

The study includes the analysis of 12 intersections as well as the evaluation of three project driveways and Kelton Drive, just north of the project site. The potential impacts of the project on intersections were evaluated in accordance with City of Gilroy level of service standards and impact criteria. The study facilities are identified below and shown on Figure 1.
Figure 1
Site Location and Study Intersections
Figure 2
Site Plan
Study Intersections

The study includes the evaluation of traffic conditions at 6 signalized intersections, 5 unsignalized intersections, and one roundabout intersection. Additionally, three driveways providing access to the project site also were evaluated in this study and are included among the study locations for ease of reference. All of the study intersections are located within the City of Gilroy. Additionally, all study intersections along First Street/Hecker Pass Highway (6 intersections) are under the jurisdiction of Caltrans (denoted with a CT superscript). The following key intersections were evaluated:

1. Santa Teresa Boulevard and Mantelli Drive (signalized)
2. Santa Teresa Boulevard and Welburn Avenue (signalized)
3. Santa Teresa Boulevard and First Street/Hecker Pass Highway (signalized) CT
4. Santa Teresa Boulevard and Third Street (roundabout)
5. Kelton Drive and Welburn Avenue (unsignalized)
6. Kern Avenue and Welburn Avenue (unsignalized)
7. Wren Avenue and Welburn Avenue (future signal)
8. Miller Avenue/Wayland Lane and First Street (signalized) CT
9. Wren Avenue and First Street (signalized) CT
10. Kern Avenue and First Street (unsignalized) CT
11. Westwood Drive and First Street (signalized) CT
12. Kelton Drive and First Street (unsignalized) CT
13. Project Driveway and First Street (unsignalized, right-in and out access)
14. Kelton Drive and Project Driveway (unsignalized, full-access)
15. Santa Teresa Boulevard and Project Driveway (unsignalized, limited-access)

Study Time Periods

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of traffic. The weekday AM peak hour of traffic generally falls within the 7:00 to 9:00 AM period and the weekday PM peak hour is typically in the 4:00 to 6:00 PM period. It is during these times that the most congested traffic conditions occur on an average day.

Study Scenarios

Traffic conditions were evaluated for the following scenarios:

**Scenario 1:** *Existing Conditions.* Existing conditions are represented by existing peak-hour traffic volumes on the existing roadway network. Existing intersection traffic volumes were obtained from recently conducted traffic studies in the area and new traffic counts conducted in March 2018.

**Scenario 2:** *Existing Plus Project Conditions.* Existing plus Project conditions represent existing peak-hour traffic volumes on the existing roadway network with the addition of traffic generated by the proposed project if the project was open and operating today. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential project deficiencies on the existing transportation network attributable to the project only.

**Scenario 3:** *Background Conditions.* Background traffic conditions represent future traffic volumes on the future transportation network. Background traffic volumes were estimated by adding to existing peak-hour volumes the projected trips from approved but not yet constructed developments in the study area. Background conditions represent the
baseline conditions to which project conditions are compared for the purpose of determining project impacts.

**Scenario 4: Background Plus Project Conditions.** Background plus project conditions, or simply referred to as *Project Conditions*, represent future traffic volumes with the proposed project. Background plus project conditions were estimated by adding to background traffic volumes the trips associated with the proposed project (or *project traffic volumes*). Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

**Scenario 5: Cumulative Conditions.** Cumulative conditions represent future traffic volumes on the future transportation network that would result from traffic growth projected to occur due to proposed but not yet approved (pending) development projects. Traffic volumes from proposed but not yet approved developments were added to background conditions peak-hour volumes to obtain volumes for cumulative without project conditions. Cumulative conditions were evaluated for two scenarios: (1) without the proposed project and (2) with project-generated traffic. The change between these two scenarios illustrates the relative impact the proposed project could have on cumulative conditions.

**Methodology**

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

**Data Requirements**

The data required for the analysis were obtained from new traffic counts, previous traffic studies, the City of Gilroy, and field observations. The following data were collected from these sources:

- existing traffic volumes
- existing lane configurations
- signal timing and phasing (signalized intersections)
- approved and pending developments information (size, use, and location)

**Analysis Methodologies and Level of Service Standards**

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays.

The various analysis methods and level of service standards are described below.

**Intersection Analyses**

All of the study intersections are located in the City of Gilroy and are therefore subject to the City of Gilroy Level of Service standards and impact criteria.

**City of Gilroy Signalized Intersections**

The City of Gilroy uses the Santa Clara County CMP level of service analysis procedure, TRAFFIX, for evaluation of signalized intersections. TRAFFIX is based on the *2000 Highway Capacity Manual* (2000 HCM) methodology for signalized intersections. TRAFFIX evaluates signalized intersection operations
on the basis of average control delay time for all vehicles at the intersection. Control delay is the amount of delay that is attributed to the particular traffic control device at the intersection, and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The correlation between average delay and level of service is shown in Table 1.

Table 1
Signalized Intersection Level of Service Definitions Based on Control Delay

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description</th>
<th>Average Control Delay per Vehicle (sec.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Operations with very low delay occurring with favorable progression and/or short cycle lengths.</td>
<td>up to 10.0</td>
</tr>
<tr>
<td>B</td>
<td>Operations with low delay occurring with good progression and/or short cycle lengths.</td>
<td>10.1 to 20.0</td>
</tr>
<tr>
<td>C</td>
<td>Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.</td>
<td>20.1 to 35.0</td>
</tr>
<tr>
<td>D</td>
<td>Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.</td>
<td>35.1 to 55.0</td>
</tr>
<tr>
<td>E</td>
<td>Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.</td>
<td>55.1 to 80.0</td>
</tr>
<tr>
<td>F</td>
<td>Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.</td>
<td>Greater than 80.0</td>
</tr>
</tbody>
</table>


The City of Gilroy level of service standard for most signalized intersections located west of US 101 is LOS C or better. For signalized intersections located east of US 101 and those in the commercial area designated in the City of Gilroy General Plan (LOS D Area), the City standard is LOS D or better. The level of service D area includes all areas east of US 101, the Tenth Street corridor from Monterey Street to US 101, the Luchessa corridor east of Monterey Street, and the Monterey Street corridor from Luchessa Avenue to the Monterey Street/US 101 interchange.

All study intersections are located outside of the designated LOS D Area, therefore, all study intersections have a level of service standard of LOS C or better.

City of Gilroy Unsignalized Intersections

For unsignalized intersections in the City of Gilroy, an assessment of traffic operations at the intersection is based on two methodologies: (1) peak-hour levels of service are calculated for the entire intersection (intersection average level of service) and for the stop-controlled approach with the highest delay (worst approach level of service) and (2) an assessment is made of the need for signalization of the intersection based on traffic volume levels.
The procedure used to determine the level of service for unsignalized intersections is TRAFFIX and the 2000 Highway Capacity Manual methodology for unsignalized intersection analysis. This method is applicable for both two-way and all-way stop-controlled intersections. For the analysis of stop-controlled intersections, the 2000 HCM methodology evaluates intersection operations on the basis of average control delay time for all vehicles on the stop-controlled approaches.

For the purpose of reporting level of service for stop-controlled intersections, two levels of service are reported. The first is the “overall intersection average” delay and corresponding level of service, which is a measure of the average delay incurred by all motorists at the intersection, including those on the approaches that are not subject to stop control. The second level of service reported is the delay and corresponding level of service for the “highest delay approach”, which is a measure of the delay incurred by motorists only on the stop-controlled approach which is most impacted by traffic conditions at the intersection. The correlation between average control delay and level of service for unsignalized intersections is shown in Table 2.

Table 2
Unsignalized Intersection Level of Service Definitions Based on Control Delay

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Description</th>
<th>Average Control Delay per Vehicle (sec.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Operations with very low delays occurring with favorable progression.</td>
<td>up to 10.0</td>
</tr>
<tr>
<td>B</td>
<td>Operations with low delays occurring with good progression.</td>
<td>10.1 to 15.0</td>
</tr>
<tr>
<td>C</td>
<td>Operations with average delays resulting from fair progression.</td>
<td>15.1 to 25.0</td>
</tr>
<tr>
<td>D</td>
<td>Operation with longer delays due to a combination of unfavorable progression of high V/C ratios.</td>
<td>25.1 to 35.0</td>
</tr>
<tr>
<td>E</td>
<td>Operation with high delay values indicating poor progression and high V/C ratios. This is considered to be the limited of acceptable delay.</td>
<td>35.1 to 50.0</td>
</tr>
<tr>
<td>F</td>
<td>Operation with delays unacceptable to most drivers occurring due to oversaturation and poor progression.</td>
<td>Greater than 50.0</td>
</tr>
</tbody>
</table>


The level of service analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersection. This assessment is made on the basis of signal warrant criteria adopted by Caltrans. For this study, the need for signalization is assessed on the basis of the operating conditions at the intersection (i.e., level of service) and on the peak-hour traffic signal warrant, Warrant #3, described in the California Manual on Uniform Traffic Control Devices for Streets and Highways, Part 4, Highway Traffic Signals, 2014. This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify installation of a traffic signal. Other traffic signal warrants are available; however, they cannot be checked under future conditions (background, project, and cumulative) because they rely on data for which forecasts are not available (such as accidents, pedestrian volume, and four- or eight-hour vehicle volumes).
The City of Gilroy level of service standard for unsignalized intersections has two parts:

- The first part indicates that all stop-controlled intersections must operate with an overall intersection average delay of LOS C or better for those intersections located within the LOS C area, and LOS D or better for those intersections located within the LOS D area.
- The second part indicates that a one-way/two-way stop controlled intersection is considered to exceed the City’s standard if the stop-controlled approach with the highest delay operates at LOS E or F and the peak-hour traffic volume level at the intersection is high enough to satisfy the peak-hour volume signal warrant.

All of the unsignalized study intersections are located within the LOS C area and, therefore, have an overall intersection level of service standard of C and a level of service standard of D for the stop-controlled approach with the highest delay.

City of Gilroy Roundabout Intersection

The City of Gilroy does not have an adopted methodology for evaluating level of service at roundabouts. For this analysis, the 2010 Highway Capacity Manual (HCM) methodology, with the use of the Synchro software, was utilized to evaluate the study roundabout intersections. The 2010 HCM methodology is capable of evaluating multilane roundabouts and will calculate delays on the entry approaches as well as an overall average delay and level of service grade for the roundabout. The 2010 HCM roundabout level of service methodology evaluates operations on the basis of average control delay time for all vehicles at the intersection or on a particular approach, as the case may be.

According to information contained in the HCM, Version 6.0, Chapter 22 (Roundabouts), roundabouts share the same basic control delay formulation with two-way and all-way stop-controlled intersections, adjusting for the effect of Yield control (drivers do not need to come to a complete stop when there is no conflicting traffic). However, at the time of the publication of the latest HCM, no researcher was available on travel perception of quality of service at roundabouts. Therefore, in the absence of such research, and based on the judgment of the Transportation Research Board Committee on Highway Capacity and Quality of Service, the service measure and thresholds for the evaluation of roundabouts have been made consistent with those for other unsignalized intersections, primarily on the basis of the similar control delay formulations.

The correlation between average delay at a roundabout and level of service is shown in Table 3.

For the purpose of reporting level of service at a roundabout, the overall intersection average delay and corresponding level of service are reported. This is a measure of the average delay incurred by all motorists at the intersection. The roundabout intersections were evaluated based on a level of service standard of LOS C.

State (Caltrans) Intersections

Intersections under the State (Caltrans) jurisdiction also were evaluated based on the HCM methodology for signalized and unsignalized intersections, as recommended in the Caltrans Guide for the Preparation of Traffic Impact Studies, December 2002. Since Caltrans does not have an adopted level of service analysis procedure, the study Caltrans intersections were evaluated based on the Santa Clara County CMP procedures, TRAFFIX. The Caltrans study intersections were evaluated based on the average delay for the intersection and applying the Caltrans level of service standards and impact thresholds.

The Caltrans level of service standard for intersections is LOS C or better.
Table 3
Roundabout Level of Service Definitions Based on Delay

<table>
<thead>
<tr>
<th>Average Control Delay per Vehicle (sec.)</th>
<th>LOS by Volume-to-Capacity Ratio (^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>v/c up to 1.0</td>
</tr>
<tr>
<td></td>
<td>v/c greater than 1.0</td>
</tr>
<tr>
<td>up to 10.0</td>
<td>A</td>
</tr>
<tr>
<td>10.1 to 15.0</td>
<td>B</td>
</tr>
<tr>
<td>15.1 to 25.0</td>
<td>C</td>
</tr>
<tr>
<td>25.1 to 35.0</td>
<td>D</td>
</tr>
<tr>
<td>35.1 to 50.0</td>
<td>E</td>
</tr>
<tr>
<td>Greater than 50.0</td>
<td>F</td>
</tr>
</tbody>
</table>

\(^1\) For approaches and intersectionwide assessment, LOS is defined solely by control delay. Source: Transportation Research Board, 2010 Highway Capacity Manual, (Washington, D.C., 2010).

Freeway Segment Analysis

An analysis of freeway levels of service was not conducted since the project would not add enough traffic to the freeway segments near the site to warrant a freeway analysis.

According to CMP Traffic Impact Analysis Guidelines, a freeway level of service analysis is required if the number of project trips added to any freeway segment equals or exceeds one percent of the capacity of the segment. The key freeway segments in the study area were evaluated to determine if the project traffic on each segment would exceed this threshold. US 101 has three mixed flow lanes in each direction in Gilroy. The CMP specifies that a mixed-flow lane capacity of 2,300 vehicles per hour per lane (vphpl) be used for segments six lanes or wider in both directions and a capacity of 2,200 vphpl be used for segments with less than six lanes. Thus, the three lanes on US 101 near the project site have a capacity of 6,900 vph. Using the CMP’s one-percent threshold, a freeway level of service analysis for US 101 would be needed if the project adds 69 or more peak-hour trips to the freeway segments near the site.

The proposed project consists of a neighborhood-serving commercial project and is not anticipated to generate a measurable amount of traffic from outside of Gilroy. The majority of the project generated traffic is anticipated to originate from the adjacent neighborhoods, without the need to utilize the freeway to access the project site. Since the number of project trips on US 101 are anticipated to be less than the one-percent threshold, the project would not cause a significant increase in traffic on the freeway segments in the study area, and a freeway level of service analysis is not required.

Intersection Operations

The analysis of project intersection levels of service was supplemented with an analysis of intersection operations for selected locations. The intersection operations analysis is an important component of the process to evaluate traffic conditions at an intersection. Although calculated levels of service may
appear adequate at some locations, traffic operations problems caused by inadequate storage space for vehicle queues could prevent the intersection from ever realizing the calculated level of service. When inadequate storage space becomes an issue, queues in one turn movement might spill into an adjacent lane and block traffic in that lane from proceeding through the intersection.

The operations analysis is based on vehicle queuing for high-demand movements at intersections. Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of “n” vehicles in the queue for a vehicle movement using the following formula:

\[ P(x=n) = \frac{\lambda^n e^{-\lambda}}{n!} \]

Where:

- \( P(x=n) \) = probability of “n” vehicles in queue per lane
- \( n \) = number of vehicles in the queue per lane
- \( \lambda \) = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement. This analysis thus provides a basis for identifying locations where potential problems may arise in the future and for estimating future storage requirements at intersections.

**Report Organization**

The remainder of this report is divided into seven chapters. Chapter 2 describes existing conditions in terms of the existing roadway network, transit service, and existing bicycle and pedestrian facilities. Chapter 3 describes traffic conditions expected under existing plus project conditions. Chapter 4 presents the intersection levels of service under background conditions with the addition of traffic from approved development projects in the city. Chapter 5 describes the method used to estimate project traffic and the resulting traffic conditions, potential project impacts, and recommended mitigation measures under background plus project conditions. Chapter 6 presents the traffic conditions in the study area under cumulative conditions with the addition of traffic from development projects that are not yet approved. Chapter 7 contains an evaluation of other transportation-related issues than may not be considered environmental issues, and may not be evaluated in the environmental assessment, but have been included in the traffic study to meet the requirements of the local jurisdiction. Chapter 8 presents the summary and conclusions of the traffic study.
2. Existing Conditions

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the site, including the roadway network, transit service, and bicycle and pedestrian facilities. Also included are the existing levels of service of the key intersections in the study area.

Existing Roadway Network

It is not anticipated that the proposed project would generate a measurable amount of regional traffic. Nevertheless, regional access to the project site is provided via US 101. Local access to the project site is provided by Santa Teresa Boulevard, First Street/Hecker Pass Highway, Welburn Avenue, Mantelli Drive, Kern Avenue, Wren Avenue, and Kelton Drive. These facilities are shown on Figure 1 and described below.

**US 101** is a six-lane freeway north of the Monterey Road interchange and transitions to a four-lane freeway south of that point. US 101 extends northward through San Jose and southward into Salinas. This freeway serves as the primary roadway connection between Gilroy and Morgan Hill and other Santa Clara County communities to the north and between Gilroy and Salinas to the south. US 101 includes full-access interchanges at Masten Avenue, Leavesley Road, Tenth Street, and Monterey Street in Gilroy.

**Santa Teresa Boulevard** is a north-south roadway that extends from Castro Valley Road, south of Gilroy, into the City of Morgan Hill where it transitions into Sunnyside Avenue at Watsonville Road. Santa Teresa Boulevard is a two-lane undivided roadway south of First Street and transitions to a four-lane divided roadway between First Street and Fitzgerald Avenue, in the northwest part of town. An existing driveway along Santa Teresa Boulevard, just north of First Street, that currently provides access to The Piazza also would provide access to the project site.

**First Street/Hecker Pass Highway** is an east/west roadway that begins at its intersection with Monterey Road and extends westward to Santa Teresa Boulevard, where it changes designation to Hecker Pass Highway. It is a four-lane roadway between Monterey Road and Santa Teresa Boulevard and transitions to a two-lane roadway west of Santa Teresa Boulevard to Watsonville. First Street/Hecker Pass Highway are designated as State Route (SR) 152, which, in conjunction with the segment of SR 152 east of US 101 (Pacheco Pass Highway), connects the communities of Watsonville and Gilroy to the Central Valley via Interstate 5.
**Welburn Avenue** is a two-lane east-west roadway that begins at Monterey Road as a transition from Leavesley Road and extends westward beyond Santa Teresa Boulevard, where it terminates at Mantelli Drive. Welburn Avenue/Leavesley Road provides a connection between Santa Teresa Boulevard and Monterey Road and US 101.

**Mantelli Drive** is an east-west roadway that begins east of Church Street and extends westward into the west foothills of Gilroy. Mantelli Drive is a four-lane facility between Church Street and Santa Teresa Boulevard and narrows down to two lanes west of Santa Teresa Boulevard.

**Kern Avenue** is a two-lane, north-south roadway that begins at its intersection with First Street/Hecker Pass Highway and extends northward to north of Vickery Avenue where it currently terminates.

**Wren Avenue** is a two- to four-lane, north-south roadway that begins in the southern part of Gilroy at Uvas Park Drive and extends northward to north of Cohanseyy Avenue where it currently terminates.

**Kelton Drive** is a two-lane north-south roadway that begins at its intersection with First Street and extends northward to Violet Way, an east-west street just south of and with connection to Mantelli Drive. Kelton Drive is the eastern project site frontage and provides direct access to the project site via an existing driveway located approximately 250 feet north of First Street.

### Existing Bicycle Facilities

Bicycle facilities are divided into three classes of relative significance:

- **Class I Bikeways (Bike Path).** Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path.
- **Class II Bikeways (Bike Lane).** Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings.
- **Class III Bikeways (Bike Route).** Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations.

There are several bike lanes and bike paths in the vicinity of the project site. These are listed below and shown on Figure 3:

#### Bike Paths

- Uvas Creek Trail, north side of Uvas Creek, extending from the Hecker Pass Specific Plan Area (south of Hecker Pass Highway and west of Santa Teresa Boulevard) in the north to the Gilroy Sports Park in the south. Trail access points are located at Santa Teresa Boulevard, Wren Avenue, Miller Avenue, and Luchessa Avenue.
- Uvas Creek Trail, south side of Uvas Creek, extending from Santa Teresa Boulevard and Third Street in the north to Miller Avenue in the south. Trail access points are located at Santa Teresa Boulevard, Club Drive, Grenache Way, and Miller Avenue.

#### Bike Lanes

- Santa Teresa Boulevard, along its entire length within the City of Gilroy
- Mantelli Drive, along the entire length of the street
- Welburn Avenue, between Wren Avenue and Santa Teresa Boulevard
- Third Street, west of Santa Teresa Boulevard, and between Santa Barbara Drive and Wren Avenue
- Westwood Drive, between Welburn Avenue and Juniper Drive
- Wren Avenue, between Farrell Avenue and Uvas Creek Trail and north of Vickery Avenue
Figure 3
Existing Bicycle Facilities
Existing Pedestrian Facilities

Pedestrian facilities in the project area consist primarily of sidewalks along most streets in the study area. Most developed areas in the vicinity of the project site currently have sidewalks along both sides of the street. However, some of the streets within the project area have missing sidewalks along one or both sides of the street, in particular streets along undeveloped areas. In the immediate vicinity of the project area, sidewalks are missing along the following streets:

- Kelton Drive, along the eastern project site frontage.
- First Street, sidewalks are missing on the south side of the street from Santa Teresa Boulevard eastward to the shopping center on the southwest corner of the Westwood Drive/First Street intersection (approximately 900 feet of missing sidewalks).
- Santa Teresa Boulevard, north of First Street, sidewalks are found along the east side of the street only. Between First Street and Third Street, Santa Teresa Boulevard has sidewalks along the east side of the street only, and south of Third Street, no sidewalks are found along Santa Teresa Boulevard.

Although no sidewalks are provided along Santa Teresa Boulevard, south of Third Street, the Uvas Creek Trail south of Uvas Creek provides an alternative route to pedestrian traffic from neighborhoods along Santa Teresa Boulevard.

Other pedestrian facilities in the project area include crosswalks and pedestrian push buttons along at least two of the legs at all signalized study intersections. With the exception of the unsignalized study intersections along Kelton Drive, crosswalks are present along at least one of the legs of all the unsignalized study intersections. The existing pedestrian facilities in the study area are shown on Figure 4.

Existing Transit Service

Existing transit service in Gilroy is provided primarily by Santa Clara County VTA buses. Although the City of Gilroy is served by various local and express bus routes, none of the existing bus routes currently serving the Gilroy area serve the project site area directly. The nearest bus route to the project site is Community Bus Route 19, which provides service between the Gilroy Transit Center and First Street/Kern Avenue via Sixth Street, Wren Avenue, Mantelli Drive, and Kern Avenue. The closest bus stop to the project site served by Route 19 is located along at the intersection of Kern Avenue and First Street, less than half one mile walking distance east of the project site.

Other transit services serving the Gilroy area include:

- Community Bus Routes 14, 17, and 18, which provide service within Gilroy,
- Bus Route 68 and express Bus Routes 121, 168, and 185, which provide service between Gilroy and the San Jose Diridon Transit Center, Mountain View, or Sunnyvale, and
- Monterey-Salinas Transit (MST) Express Bus Routes 55 and 86, which provide service between Monterey and San Jose and King City and San Jose, respectively.

All of the above transit routes serve the Gilroy Transit Center, located in Downtown Gilroy, approximately 2.5 miles southeast of the project site.

Caltrain also provides commuter rail service between Gilroy and San Francisco, with service at the Gilroy Caltrain Station (Transit Center).

The transit services serving the Gilroy area are shown on Figure 5.
Figure 5
Existing Transit Facilities
Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were determined by observations in the field and are shown on Figure 6.

Existing Traffic Volumes

Existing weekday AM and PM peak-hour traffic volumes were obtained from recently conducted traffic studies in the area and new peak-hour turning movement counts conducted in March 2018. The existing peak-hour intersection volumes are shown on Figure 7. The traffic count data are included in Appendix A. Peak-hour intersection turning movement volumes for all intersections and study scenarios are tabulated in Appendix B.

Existing Intersection Levels of Service

The results of the intersection level of service analysis under existing conditions are discussed below and summarized in Table 4. The level of service calculation sheets are included in Appendix C.

Signalized Intersections

The results of the level of service analysis indicate that all signalized study intersections currently operate at acceptable levels of service (LOS C or better) during both the AM and PM peak hours.

Unsignalized Intersections

The results of the level of service analysis indicate that the unsignalized study intersection of Wren Avenue and Welburn Avenue (#7) currently operates with overall average intersection delays corresponding to an unacceptable LOS D during the PM peak-hour.

Additionally, based on the peak-hour volume signal warrant, the existing traffic volumes at the intersection of Wren Avenue and Welburn Avenue meet the thresholds that warrant installation of a traffic signal during both the AM and PM peak hours under existing conditions.

Improvements at the intersections of Wren Avenue/Welburn Avenue that include the installation of a traffic signal are currently under construction. At the time this analysis was completed, it was estimated that the planned improvements at this intersection would be completed by the first week of July 2018.

The remaining unsignalized study intersections do not have traffic volume and level of service conditions that exceed the City of Gilroy level of service standards.

The peak-hour signal warrant sheets are contained in Appendix D.

Roundabout Intersection

The results of the level of service analysis indicate that the study roundabout intersection of Santa Teresa Boulevard and Third Street (#4) currently operates at an acceptable LOS B during both the AM and PM peak hours.
Figure 6
Existing Lane Configurations
LEGEND:

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 7
Existing Traffic Volumes
### Table 4
Existing Intersection Levels of Service

<table>
<thead>
<tr>
<th>Int. Number</th>
<th>Intersection</th>
<th>Control</th>
<th>LOS Standard</th>
<th>TIF Int.</th>
<th>Peak Hour</th>
<th>Count Date</th>
<th>Avg. Delay</th>
<th>Warrant Met?</th>
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<td>1</td>
<td>Santa Teresa Boulevard and Mantelli Drive</td>
<td>Signal</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>5/18/17</td>
<td>29.3</td>
<td>C</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
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<td>5/18/17</td>
<td>26.6</td>
<td>C</td>
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<td>Santa Teresa Boulevard and Welburn Avenue</td>
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<td>C</td>
<td>No</td>
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<td>3/27/18</td>
<td>24.4</td>
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</tr>
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<td></td>
<td></td>
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<td>Santa Teresa Boulevard and First Street</td>
<td>Signal</td>
<td>C</td>
<td>Yes</td>
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<td>3/30/17</td>
<td>22.2</td>
<td>C+</td>
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<td>3/30/17</td>
<td>30.7</td>
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<td>6</td>
<td>Kern Avenue and Welburn Avenue</td>
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<td>AM</td>
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<td>B</td>
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<tr>
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<td>7</td>
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<td>All-Way Stop</td>
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<td>Yes</td>
<td>AM</td>
<td>5/16/17</td>
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<td>C</td>
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<td></td>
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<td>5/16/17</td>
<td>27.6</td>
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<td>8</td>
<td>Miller Avenue/Wayland Lane and First Street</td>
<td>Signal</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>5/18/17</td>
<td>12.1</td>
<td>B</td>
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<td>9</td>
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<td>5/16/17</td>
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<td>C</td>
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<td>PM</td>
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<td>33.6</td>
<td>D-</td>
</tr>
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<td>Westwood Drive and First Street</td>
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<td>No</td>
<td>AM</td>
<td>3/27/18</td>
<td>12.1</td>
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<td>A+</td>
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<td>D+</td>
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<td>38.0</td>
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Notes:
1. TIF Int. = City of Gilroy Traffic Impact Fee intersection.
2. Signal warrant analysis based on the Peak Hour Signal Warrant #3, Figure 4C Caltrans MUTCD, 2014.
   Signal warrant analysis is not applicable to signalized intersections.
* = CMP intersection
Entries denoted in bold indicate conditions that exceed the City’s current level of service standard.
3. Existing Plus Project Conditions

This chapter describes existing traffic conditions with the addition of the traffic that would be generated by the proposed project if the project was complete and operating today. Existing plus project conditions were evaluated relative to existing conditions in order to determine potential project deficiencies on the existing transportation network attributable solely to the project. Existing plus project conditions are presented per CEQA requirements to disclose the project’s effect on existing conditions.

Included within this chapter is a brief description of the procedure of estimating project-generated traffic and the resulting traffic conditions under existing plus project conditions.

Transportation Network under Existing Plus Project Conditions

It is assumed in this analysis that the transportation network under existing plus project conditions would be the same as the existing transportation network.

Project Description

The proposed project consists of a new commercial development at the northwest corner of the First Street and Kelton Drive intersection, in the City of Gilroy, California. The project site is currently vacant and is bordered by the South Valley Community Church to the north, Union Bank and The Piazza (an existing office/commercial development) to the west, Kelton Drive to the east, and First Street to the south. The project, as proposed, includes 4,000 square feet (s.f.) of general retail space, two separate 2,500-s.f. fast-food restaurants with drive-through window, and a 3,000-s.f. high-turnover sit-down restaurant. Access to the project site would be provided via the existing driveways along First Street and Kelton Drive, which also provide access to Union Bank and The Piazza. Both of these driveways provide direct access to the project site. Additionally, the project site also would be accessible from Santa Teresa Boulevard, via the existing driveway providing access to The Piazza. Traffic accessing the project site via the Santa Teresa Boulevard driveway would need to navigate through The Piazza’s parking areas to access the project site.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip
assignment. This procedure is explained in more detail in Chapter 5 (Background Plus Project Conditions) of this report.

**Trip Generation**

Based on the ITE trip generation rates and applicable trip reductions, it is estimated that the proposed project would generate 2,831 net new daily vehicle trips, with 232 trips (121 inbound and 111 outbound) occurring during the AM peak-hour and 197 trips (105 inbound and 92 outbound) occurring during the PM peak-hour.

The project trip generation estimates are presented in Table 8 in Chapter 5.

**Trip Distribution and Assignment**

The project trip distribution and assignment are discussed in Chapter 5.

**Existing Plus Project Traffic Volumes**

Net project trips associated with the proposed project, as presented in the above project trip assignment, were added to existing traffic volumes to obtain existing plus project traffic volumes. The existing plus project traffic volumes are shown on Figure 8.

**Existing Plus Project Intersection Levels of Service**

The results of the intersection level of service analysis under existing plus project conditions are discussed below and summarized in Table 5. The level of service calculation sheets are included in Appendix C.

**Signalized Intersections**

The results of the level of service analysis indicate that all signalized study intersections are projected to operate at acceptable levels of service (LOS C or better) during both the AM and PM peak hours under existing plus project conditions.

**Unsignalized Intersections**

The results of the level of service analysis indicate that the unsignalized study intersection of **Wren Avenue and Welburn Avenue (#7)** is projected to operate with overall average intersection delays corresponding to an unacceptable LOS D during the PM peak-hour under existing plus project conditions. Additionally, based on the peak-hour volume signal warrant, the traffic volumes at the intersection of **Wren Avenue and Welburn Avenue** are projected to be high enough to meet the thresholds that warrant installation of a traffic signal during both the AM and PM peak hours under existing plus project conditions.

The unsignalized intersection analysis results also indicate that the study intersection of **Kelton Drive and First Street (#12)** is projected to operate with average delays corresponding to LOS E or F on its stop-controlled approach with the highest delay and its traffic volume is high enough to satisfy the peak-hour volume warrant during the peak hours under existing plus project conditions.

Based on City of Gilroy level of service standards, the above two intersections would be deficient under existing plus project conditions.

Improvements at the intersections of Wren Avenue/Welburn Avenue that include the installation of a traffic signal are currently under construction. At the time this analysis was completed, it was estimated
### Figure 8
Existing Plus Project Traffic Volumes

**LEGEND:**

XX(XX) = AM(PM) Peak-Hour Traffic Volumes
Table 5
Existing Plus Project Intersection Level of Service Results

<table>
<thead>
<tr>
<th>Study</th>
<th>Int. Number Intersection</th>
<th>Intersection Control</th>
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<th>TIF Int. 1</th>
<th>Peak Hour</th>
<th>Avg. Delay</th>
<th>LOS Met? 2</th>
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<td>12.7</td>
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<td>C</td>
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<td>AM</td>
<td>27.6</td>
<td>D</td>
<td>Yes</td>
<td>30.9</td>
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<td>8</td>
<td>Miller Avenue/Wayland Lane and First Street</td>
<td>Signal</td>
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<td>AM</td>
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<td>B</td>
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<td>C</td>
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<td>28.1</td>
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<td>AM</td>
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<td>No</td>
<td>AM</td>
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<td>AM</td>
<td>1.1</td>
<td>A+</td>
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Notes:
1. TIF Int. = City of Gilroy Traffic Impact Fee intersection.
2. Signal warrant analysis based on the Peak Hour Signal Warrant #3, Figure 4C Caltrans MUTCD, 2014.
3. Signal warrant analysis is not applicable to signalized intersections.
4. CMP intersection

Entries denoted in bold indicate conditions that exceed the City’s current level of service standard.

that the planned improvements at this intersection would be completed by the first week of July 2018.

The remaining unsignalized study intersections would not have traffic volume and level of service conditions that exceed the City of Gilroy level of service standards under existing plus project conditions. The peak-hour signal warrant sheets are contained in Appendix D.

Roundabout Intersection

The results of the level of service analysis indicate that the study roundabout intersection of Santa Teresa Boulevard and Third Street (#4) is projected to operate at an acceptable LOS B during both the AM and PM peak hours under existing plus project conditions.
4. Background Conditions

This chapter describes background traffic conditions. Background conditions are defined as conditions just prior to completion of the proposed project. Traffic volumes for background conditions comprise volumes from the existing traffic counts plus traffic generated by approved developments in the vicinity of the project site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions. Any planned and funded transportation improvements in the study area are included in background conditions.

Background Transportation Network

It is assumed in the analysis that the transportation network under background conditions would be the same as described under existing conditions with the exception of the following improvements:

*Signalization of the Wren Avenue and Welburn Avenue Intersection.* This intersection is currently being improved from a four-way stop-controlled intersection to a signalized intersection. According to the signal and signing and striping plans, the new intersection traffic signal includes protected left-turn phasing on the northbound and southbound approaches of the intersection and split phasing on the eastbound and westbound approaches. The intersection configuration will include one left-turn, one through, and one right-turn lane on both the northbound and southbound approaches, a separate left-turn lane and a shared right-and-through lane on the eastbound approach, and a single lane on the westbound approach. Crosswalks with pedestrian push buttons will be installed along all legs of the intersection.

Approved Developments

Table 6 lists the latest approved but not-yet-completed developments in the City of Gilroy, which would add traffic to the roadway network under background conditions. The list of approved projects was provided by the City staff in March 2018. The traffic associated with these developments is discussed below.

Since both the Glen Loma Ranch Specific Plan (GLRSP) and the Hecker Pass Specific Plan (HPSP) are currently being constructed, and some of their residential neighborhoods have been completed and occupied, traffic associated with the occupied residential units is included in the existing counts. For this reason, the total development approved under the GLRSP and HPSP was adjusted to account for the number of units that were completed and occupied at the time the counts were conducted (March 2017 and March 2018) and only the trips associated with the number of incomplete units was assigned to
<table>
<thead>
<tr>
<th>#</th>
<th>Project Name/Applicant</th>
<th>Project Location/Address</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bolsa Road (Zen Nursery)</td>
<td>5350 Bolsa Rd</td>
<td>17 Industrial lots, 1 open space preserve, 1 private road, 20 ac parcel</td>
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<tr>
<td>2</td>
<td>Cannery Apartments</td>
<td>111 Lewis St</td>
<td>104 apartments</td>
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<tr>
<td>3</td>
<td>Country Estates, Phase 1-3</td>
<td>West end of Mantelli Dr, west of Santa Teresa Blvd</td>
<td>SFDUs: 123 sf lots (phase 1-A), 30 sf lots (phase 1-B), 87 sf lots (phase 2), 63 sf lots (phase 3) (22 units remaining)</td>
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<tr>
<td>4</td>
<td>Eagle Ridge: Bellavista</td>
<td>Eagle Ridge Dr</td>
<td>16-lot single-family homes</td>
</tr>
<tr>
<td>5</td>
<td>The Fresh Group</td>
<td>Northeast corner of Forest St and Leauesley Rd</td>
<td>113,100 square foot full-service hotel and 43,100 square foot extended stay hotel</td>
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<tr>
<td>6</td>
<td>Germains Seed Addition</td>
<td>8333 Swanston Ln</td>
<td>15,800 SF addition to an existing manufacturing and warehouse facility</td>
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<td>Gilroy Hampton Inn</td>
<td>Monterey Rd and Travel Park Cir</td>
<td>105-room hotel</td>
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<td>Inwalle Properties (Santa Teresa Townhouses)</td>
<td>First St and Santa Teresa Blvd</td>
<td>217 townhouses</td>
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<tr>
<td>9</td>
<td>Intex Building Tenant Improvements</td>
<td>8425 Monterey Rd</td>
<td>11,186-square foot warehouse tenant space converts to auto repair use space</td>
</tr>
<tr>
<td>10</td>
<td>Jan Hochhauser/San Ysidro Ct</td>
<td>199 Banes Ln (Tenth St and Alexander St)</td>
<td>5-story, 265 unit apartment complex</td>
</tr>
<tr>
<td>11</td>
<td>Las Animas Residential Subdivision (GUSD)</td>
<td>8450 Wren Ave</td>
<td>70 SFR subdivision w/ private streets</td>
</tr>
<tr>
<td>12</td>
<td>Mayock Industrial Addition</td>
<td>205 Mayock Rd</td>
<td>10,000 s.f. addition to an existing industrial building</td>
</tr>
<tr>
<td>13</td>
<td>McCarthy Business Park (Wellington)</td>
<td>South side of Hwy. 152 East, east of Silacci Wy</td>
<td>145,715 sf Highway Commercial Shopping Center &amp; 73.4 ac Industrial Park</td>
</tr>
<tr>
<td>14</td>
<td>Melia (Martin Industrial)</td>
<td>Southeast corner of Las Animas Ave and Monterey St.</td>
<td>9-lot industrial subdivision - 40,904 s.f. total</td>
</tr>
<tr>
<td>15</td>
<td>Monterey Gateway</td>
<td>Monterey at Ervin Ct</td>
<td>75 Affordable Senior Family Units</td>
</tr>
<tr>
<td>16</td>
<td>Murray/Forest Industrial</td>
<td>Between Murray Ave and Forest St, south of Kishimura Dr</td>
<td>14 Industrial lots on 7.3 ac.</td>
</tr>
<tr>
<td>17</td>
<td>Noah Concrete</td>
<td>5117 Obata Wy</td>
<td>12,600 s.f. office building (no longer 12,600 sq ft building but a small modular)</td>
</tr>
<tr>
<td>18</td>
<td>Performance Food Group</td>
<td>5480 Monterey Rd</td>
<td>350,000 s.f. distribution center on a 29 acre lot</td>
</tr>
<tr>
<td>19</td>
<td>PSI Development Co., Inc.</td>
<td>9070 Kern Ave</td>
<td>40-unit apartment complex</td>
</tr>
<tr>
<td>20</td>
<td>San Ysidro Storage</td>
<td>9080 San Ysidro Ave</td>
<td>114,035 self storage</td>
</tr>
<tr>
<td>21</td>
<td>Sports Complex</td>
<td>Monterey Frontage Road, S. of West Luchessa Ave</td>
<td>3-phase sports park with 7 multi-use ball fields, picnic areas, valleal ball courts, bocce ball courts, skate facility, lot lot play area, bike/pedestrian trail, parking and offices</td>
</tr>
<tr>
<td>22</td>
<td>Syngenta Flowers</td>
<td>2280 Hecker Pass Highway</td>
<td>Greenhouses: 6,879 s.f.; Hoop Houses: 2,400 s.f.; Potting Shed: 1,875 s.f.; Shade Structure: 75 s.f.</td>
</tr>
<tr>
<td>23</td>
<td>Harvest Park II / James Suner</td>
<td>West of Monterey Rd, north and south of Cohansey Ave</td>
<td>55-lot single-family residential subdivision at Harvest Park 2</td>
</tr>
<tr>
<td>24</td>
<td>SV Affordable Investors, LLC</td>
<td>Harvest Park, Monterey Rd at Cohansey Ave</td>
<td>66 Unit 3-Story Apt Complex at Harvest Park 2</td>
</tr>
<tr>
<td>25</td>
<td>Vince Fortino (Monterey Road Commercial)</td>
<td>5400 Monterey Rd</td>
<td>122.51 ksf commercial space, 137.21 ksf industrial space, 24.5 ksf office space</td>
</tr>
<tr>
<td>26</td>
<td>Zhongmin Feng</td>
<td>300 Obata Wy</td>
<td>Plastic Sheeting Recycling Plan, 10,500 s.f. factory building w/ 1000 s.f. office</td>
</tr>
<tr>
<td>27</td>
<td>Glen Loma Ranch Specific Plan</td>
<td>Santa Teresa Blvd, between Third St and Thomas Rd</td>
<td>1,690 residential units and 155,550 s.f. of commercial units (337 units completed)</td>
</tr>
<tr>
<td>28</td>
<td>Hecker Pass Specific Plan</td>
<td>North and South of Hecker Pass Hwy, west of Santa Teresa Blvd</td>
<td>554 homes, 91.91 ksf agri-commercial, 3k sf convenience market, 29.19 ksf agriculture (337 units completed)</td>
</tr>
</tbody>
</table>

Source: City of Gilroy Planning Department, March 2018
each of the study intersections. Information on the number of complete and occupied residential units was obtained with the assistance of City staff. The remaining approved but not-yet completed development within both specific plans was included as part of the approved projects.

**Background Traffic Volumes**

Background peak-hour traffic volumes were estimated by adding to existing volumes the estimated traffic from approved but not yet constructed developments. The traffic added to the study intersections from approved developments was estimated by distributing and assigning trips generated by these developments to the roadway network using the same procedure of trip generation, distribution, and assignment as described in the next chapter (Chapter 5 – Background Plus Project Conditions). The traffic from approved developments includes both new trip productions and attractions on the local transportation system. The traffic associated with residential uses would be considered new productions, which would be going to commercial and employment areas. The traffic associated with non-residential land uses would be considered new trip attractions. In some cases, the new trips added by approved developments could be double counted since some trips generated by the new residential developments would be attracted to the new commercial land uses. Therefore, to account for this double counting and to be consistent with the procedures used for all other traffic studies in the City of Gilroy, trips from new residential projects were not assigned to the areas where new commercial development is planned to occur.

Background traffic volumes are shown on Figure 9. Traffic volumes for all components of traffic are tabulated in Appendix B.

**Background Intersection Levels of Service**

The results of the intersection level of service analysis under background conditions are discussed below and summarized in Table 7. The level of service calculation sheets are included in Appendix C.

**Signalized Intersections**

The results of the level of service analysis indicate that the following signalized study intersections are projected to operate at unacceptable levels of service during one of the peak hours under background conditions:

3. Santa Teresa Boulevard and First Street (LOS D – PM peak-hour)
7. Wren Avenue and Welburn Avenue (LOS D – PM peak-hour)

The remaining signalized study intersections are projected to operate at acceptable levels of service during the AM and PM peak hours under background conditions.

**Unsignalized Intersections**

The results of the level of service analysis indicate that all unsignalized study intersections are projected to operate with overall average intersection delays corresponding to acceptable LOS B or better during both the AM and PM peak hours under background conditions.

The unsignalized intersection analysis results also indicate that the following study intersection is projected to operate with average delays corresponding to LOS F on its stop-controlled approach with the highest delay and its traffic volume during the same peak-hour is high enough to satisfy the peak-hour volume warrant under background conditions:

12. Kelton Drive and First Street (LOS F/signal warrant met – PM peak-hour)
**Figure 9**

Background Traffic Volumes

---

**LEGEND:**

XX(XX) = AM(PM) Peak-Hour Traffic Volumes
Table 7
Background Conditions Intersection Level of Service Results

<table>
<thead>
<tr>
<th>Study Int. Number</th>
<th>Intersection Control</th>
<th>LOS Standard</th>
<th>TIF Int.</th>
<th>Peak Hour</th>
<th>Avg. Delay</th>
<th>LOS Met?</th>
<th>Avg. Delay</th>
<th>LOS Met?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Signal</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>29.3</td>
<td>C</td>
<td>30.7</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>26.6</td>
<td>C</td>
<td>30.2</td>
<td>C</td>
</tr>
<tr>
<td>2</td>
<td>Signal</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>24.4</td>
<td>C</td>
<td>24.0</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>21.0</td>
<td>C</td>
<td>19.2</td>
<td>B</td>
</tr>
<tr>
<td>3</td>
<td>Signal</td>
<td>C</td>
<td>Yes</td>
<td>AM</td>
<td>22.2</td>
<td>C+</td>
<td>23.8</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>30.7</td>
<td>C</td>
<td>36.1</td>
<td>D</td>
</tr>
<tr>
<td>4</td>
<td>Roundabout</td>
<td>C</td>
<td>Yes</td>
<td>AM</td>
<td>12.3</td>
<td>B</td>
<td>29.7</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>10.1</td>
<td>B</td>
<td>57.2</td>
<td>F</td>
</tr>
<tr>
<td>5</td>
<td>Two-Way Stop</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>3.9</td>
<td>A</td>
<td>4.0</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>(Average Delay)</td>
<td></td>
<td></td>
<td>PM</td>
<td>2.7</td>
<td>A+</td>
<td>2.9</td>
<td>A</td>
</tr>
<tr>
<td>6</td>
<td>All-Way Stop</td>
<td>C</td>
<td>Yes</td>
<td>AM</td>
<td>12.6</td>
<td>B</td>
<td>13.8</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>(Worst Approach)</td>
<td></td>
<td></td>
<td>PM</td>
<td>12.8</td>
<td>B</td>
<td>14.3</td>
<td>B</td>
</tr>
<tr>
<td>7</td>
<td>All-Way Stop, Signal 2</td>
<td>C</td>
<td>Yes</td>
<td>AM</td>
<td>20.0</td>
<td>C</td>
<td>32.4</td>
<td>C-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>27.6</td>
<td>D</td>
<td>36.2</td>
<td>D+</td>
</tr>
<tr>
<td>8</td>
<td>Signal</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>12.1</td>
<td>B</td>
<td>12.1</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>6.2</td>
<td>A</td>
<td>6.5</td>
<td>A</td>
</tr>
<tr>
<td>9</td>
<td>Signal</td>
<td>C</td>
<td>Yes</td>
<td>AM</td>
<td>27.9</td>
<td>C</td>
<td>28.2</td>
<td>C</td>
</tr>
<tr>
<td></td>
<td>(Worst Approach)</td>
<td></td>
<td></td>
<td>PM</td>
<td>31.3</td>
<td>C</td>
<td>31.7</td>
<td>C</td>
</tr>
<tr>
<td>10</td>
<td>One-Way Stop</td>
<td>C</td>
<td>Yes</td>
<td>AM</td>
<td>1.8</td>
<td>A+</td>
<td>2.2</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>(Average Delay)</td>
<td></td>
<td></td>
<td>PM</td>
<td>2.0</td>
<td>A+</td>
<td>3.1</td>
<td>A*</td>
</tr>
<tr>
<td>11</td>
<td>Signal</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>12.1</td>
<td>B</td>
<td>12.2</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>13.5</td>
<td>B</td>
<td>12.6</td>
<td>B</td>
</tr>
<tr>
<td>12</td>
<td>One-Way Stop, Two-Way Stop 4</td>
<td>C</td>
<td>No</td>
<td>AM</td>
<td>1.1</td>
<td>A+</td>
<td>2.5</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>(Average Delay)</td>
<td></td>
<td></td>
<td>PM</td>
<td>2.0</td>
<td>A+</td>
<td>4.8</td>
<td>A</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>38.0</td>
<td>E+</td>
<td>80.1</td>
<td>F</td>
</tr>
</tbody>
</table>

Notes:
1 TIF Int. = City of Gilroy Traffic Impact Fee intersection.
2 Signal warrant analysis based on the Peak Hour Signal Warrant #3, Figure 4C Caltrans MUTCD, 2014. Signal warrant analysis is not applicable to signalized intersections.
3 All-way stop-controlled intersection under existing conditions. Assumed to be signalized under background conditions.
4 One-way stop-controlled intersection under existing conditions. Assumed to be a two-way stop-controlled intersection under background conditions.
* = CMP intersection
Entries denoted in bold indicate conditions that exceed the City’s current level of service standard.

Based on the City of Gilroy level of service standards, unsignalized intersections are considered deficient when both the average delay on the stop-controlled approach with the highest delay operates at an unacceptable level of service and the intersection traffic volumes satisfy the peak-hour volume traffic signal warrant during the same peak-hour.

The remaining unsignalized study intersections would not have traffic volume and level of service conditions that exceed the City of Gilroy level of service standards during the peak hours under background conditions.

The peak-hour signal warrant sheets are contained in Appendix D.
Roundabout Intersection

The results of the level of service analysis indicate that the study roundabout intersection of Santa Teresa Boulevard and Third Street (#4) is projected to operate at unacceptable LOS D and F during the AM and PM peak hours, respectively, under background conditions.
5. Background Plus Project Conditions

This chapter describes background plus project traffic conditions, significant project impacts, and measures that are recommended to mitigate significant project impacts. Included are descriptions of the significance criteria that define a project impact, the method by which project traffic is estimated, identification of the impacts, and descriptions of the mitigation measures to address these impacts. Background plus project conditions are represented by background traffic conditions (existing plus approved traffic) with the addition of traffic generated by the proposed project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

Although some of the information provided below has already been described in Chapter 3 – Existing Plus Project Conditions, it is presented again within this chapter for the reader’s convenience.

Significant Impact Criteria

Significance criteria are used to define what constitutes an impact. For this analysis, impacts on intersections are based on the applicable (City of Gilroy and Caltrans) Level of Service standards and City of Gilroy impact criteria.

Since the City of Gilroy does not have adopted thresholds of significance for the evaluation of roundabout intersections, in this analysis, the study roundabout intersection was evaluated based on the significant impact criteria for unsignalized intersections since roundabouts share the same basic control delay formulation with two-way and all-way stop-controlled intersections.

City of Gilroy Definition of Significant Signalized Intersection Level of Service Impacts

The City of Gilroy uses two sets of impact criteria, one for intersections located west of US 101 and another set for intersections located in the LOS D commercial area designated in the City of Gilroy General Plan, primarily east of US 101.

All of the signalized study intersections are located in the LOS C area and are subject to the LOS C standard.

**LOS C Area**

For intersections located west of US 101 in the LOS C areas, the project is said to create a significant adverse impact on traffic conditions at a signalized intersection if for any peak hour:
1. The level of service at the intersection degrades from an acceptable LOS C or better under background conditions to an unacceptable LOS D or worse under background plus project conditions, or

2. If the intersection is already operating at an unacceptable LOS D and the addition of project traffic causes the average delay to increase by two (2) second or more, or

3. If the intersection is already operating at an unacceptable LOS E or F and the addition of project traffic causes the average delay to increase by one (1) second or more.

**LOS D Area**

For intersections located in the LOS D area, primarily east of US 101 and in the Tenth Street corridor, the project is said to create a significant adverse impact on traffic conditions at a signalized intersection if for any peak hour:

1. The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under background plus project conditions, or

2. If the intersection is already operating at an unacceptable LOS E or F and the addition of project traffic causes the average delay to increase by one (1) second or more.

A significant impact is said to be satisfactorily mitigated when measures are implemented that would restore intersection levels of service to background (no-project) conditions or better.

**City of Gilroy Definition of Significant Unsignalized (and Roundabout) Intersection Impacts**

All of the unsignalized, as well as the roundabout, study intersections are located within the LOS C area.

The project is said to create a significant adverse impact on traffic conditions at an unsignalized intersection if for any peak hour:

1. **For intersections in the LOS C areas:** The average overall level of service at the intersection degrades from an acceptable LOS C or better under background conditions to an unacceptable LOS D or worse under background plus project conditions, or

   If the average overall intersection level of service is already at an unacceptable LOS D and the addition of project traffic causes the average overall delay to increase by two (2) second or more, or

2. **For intersections in the LOS D areas:** The average overall intersection level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under background plus project conditions, or

   If the average overall intersection level of service is already at an unacceptable LOS E or F and the addition of project traffic causes the overall average delay to increase by one (1) second or more, or

3. If the worst approach at a one- or two-way stop-controlled intersection is projected to operate at an unacceptable LOS E or F under background plus project conditions and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant adopted by Caltrans.

A significant impact is said to be satisfactorily mitigated when measures are implemented that would restore intersection levels of service to background (no-project) conditions or better.
Definition of Significant Operations Impacts
The City of Gilroy considers a project to create a significant adverse impact on operations if:

1. The 95th percentile vehicle queue in a critical turn movement at a study intersection is projected to be less than the available or planned storage length for that movement under background conditions and the addition of projected traffic to that turn movement causes the projected 95th percentile vehicle queue to exceed the available or planned storage length, or
2. The 95th percentile vehicle queue in a critical turn movement at a study intersection is projected to exceed the available or planned storage length for that movement under background conditions and the addition of projected traffic to that turn movement causes the projected 95th percentile vehicle queue to grow by at least one vehicle.

Definition of Significant Parking Impacts
The City of Gilroy considers a project to create a significant adverse impact on parking conditions if:

1. The proposed on-site parking supply does not satisfy the parking requirement contained in the City of Gilroy Municipal Code.

Definition of Significant Emergency Access Impacts
The City of Gilroy considers a project to create a significant adverse impact on emergency access to the project site if:

1. The proposed site design does not satisfy the emergency access requirements contained in the City of Gilroy Municipal Code, or if the proposed site design is determined by the City Engineer to provide inadequate emergency access.

Transportation Network Under Background Plus Project Conditions
It is assumed in the analysis that the transportation network under background plus conditions would be the same as described under background conditions.

Project Description
The proposed project consists of a new commercial development at the northwest corner of the First Street and Kelton Drive intersection, in the City of Gilroy, California. The project site is currently vacant and is bordered by the South Valley Community Church to the north, Union Bank and The Piazza (an existing office/commercial development) to the west, Kelton Drive to the east, and First Street to the south. The project, as proposed, includes 4,000 square feet (s.f.) of general retail space, two separate 2,500-s.f. fast-food restaurants with drive-through window, and a 3,000-s.f. high-turnover sit-down restaurant. Access to the project site would be provided via the existing driveways along First Street and Kelton Drive, which also provide access to Union Bank and The Piazza. Both of these driveways provide direct access to the project site. Additionally, the project site also would be accessible from Santa Teresa Boulevard, via the existing driveway providing access to The Piazza. Traffic accessing the project site via the Santa Teresa Boulevard driveway would need to navigate through The Piazza’s parking areas to access the project site.
Project Trip Generation, Distribution, and Assignments

The magnitude of traffic produced by a new development and the locations where that traffic would appear were estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that correlate to common land uses their propensity for producing traffic. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. Project trip estimates are based on trip generation rates obtained from the Institute of Transportation Engineers’ (ITE’s) Trip Generation, Tenth Edition, 2017.

Project trip generation was estimated by applying to the size of the proposed development ITE trip generation rates for shopping center (ITE land use code #820), fast-food restaurant with drive-through window (ITE land use code #934), and high-turnover (sit-down) restaurant (ITE land use code #932).

A 3-percent (%) trip reduction was applied to the project trip generation estimates for internalization between the existing adjacent employment uses (The Piazza) and the proposed commercial uses, as prescribed by VTA guidelines. This trip reduction represent patrons to the proposed commercial project from The Piazza walking to the project site instead of driving to a similar land use elsewhere, eliminating a trip from the roadway network. According to VTA guidelines, the percent reduction must be based on the employment component, and the resulting number of trips must be reduced from both components. In this case, the trip reduction is only being applied to the proposed project. No trip credits were applied due to the elimination of some of the existing Piazza trips on the roadway network. The amount of peak-hour trips currently generated by The Piazza were estimated based on peak-hour counts at the driveways providing access to The Piazza (and Union Bank).

In addition, a 25% PM peak-hour pass-by reduction was applied to the retail portion of the project. The pass-by reduction was derived based on information contained in the ITE Trip Generation Handbook, Third Edition, regarding pass-by trip percentages obtained from surveys conducted at retail sites in California, as well as pass-by reductions typically used for projects in Santa Clara County. Pass-by-trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. Justification for applying the pass-by-trip reduction is founded on the observation that such retail traffic is not actually generated by the retail development, but is already part of the ambient traffic levels. Pass-by-trips are therefore excluded from the traffic projections to yield net new project trips generated by the project. However, at intersections providing direct access to the retail sites, all project-generated traffic is included, including pass-by trips.

On the basis of the ITE trip generation rates, and after applying the above trip reductions, it is estimated that the proposed project would generate 2,831 net new daily vehicle trips, with 232 trips (121 inbound and 111 outbound) occurring during the AM peak-hour and 197 trips (105 inbound and 92 outbound) occurring during the PM peak-hour. The project trip generation estimates are presented in Table 8.
Table 8
Project Trip Generation Estimates

<table>
<thead>
<tr>
<th>Land Use</th>
<th>ITE Land Use Code</th>
<th>Size</th>
<th>Daily Trip Rate</th>
<th>Daily Trips</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PK-Hr Factor</td>
<td>PK-Hr Factor</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>PK-Hr Splits In</td>
<td>PK-Hr Splits Out</td>
<td>PK-Hr Trips In</td>
<td>PK-Hr Trips Out</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PK-Hr Trips In</td>
<td>PK-Hr Trips Out</td>
<td>PK-Hr Total In</td>
<td>PK-Hr Total Out</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>PK-Hr Total In</td>
<td>PK-Hr Total Out</td>
<td>PK-Hr Total In</td>
<td>PK-Hr Total Out</td>
</tr>
<tr>
<td>Shopping Center</td>
<td>820</td>
<td>4,000 s.f.</td>
<td>37.75</td>
<td>151</td>
<td>0.94</td>
<td>62%</td>
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<td>PM Retail Pass-by Reduction (25%) 1</td>
<td></td>
<td></td>
<td>-4</td>
<td>-2</td>
<td>-2</td>
<td>-2</td>
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<tr>
<td>Retail-Office Reduction (3%) 2</td>
<td></td>
<td></td>
<td>-3</td>
<td>0</td>
<td>-1</td>
<td>-1</td>
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<tr>
<td>Fast-Food Restaurant with Drive-Through Window</td>
<td>934</td>
<td>5,000 s.f.</td>
<td>470.95</td>
<td>2,355</td>
<td>40.19</td>
<td>51%</td>
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<tr>
<td>Retail-Office Reduction (3%) 2</td>
<td></td>
<td></td>
<td>-4</td>
<td>-1</td>
<td>-1</td>
<td>-2</td>
</tr>
<tr>
<td>High-Turnover (Sit-Down) Restaurant</td>
<td>932</td>
<td>3,000 s.f.</td>
<td>112.18</td>
<td>337</td>
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<td>Total Project Trips</td>
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<td>121</td>
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</table>


1 A pass-by trip reduction is typically applied during the PM peak-hour to retail development to account for ambient traffic that would turn into the site while passing by. The 25% reduction is based on ITE surveys conducted at retail sites in California, contained in their Trip Generation Handbook, Third Edition, and is consistent with pass-by reductions typically used for projects in Santa Clara County.

2 A reduction of 3% was applied for internalization between the existing adjacent office (employment) land use and the proposed project, as prescribed by the VTA in their Transportation Impact Analysis Guidelines (October 2014). According to the VTA guidelines, the reduction should be equal to 3% off the employment component. The peak-hour trip generation for the existing employment component was estimated based on peak-hour traffic counts conducted at the access driveways.
Trip Distribution and Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns in the study area and on the locations of complementary land uses. The project trip distribution pattern is shown graphically on Figure 10.

The peak-hour trips generated by the proposed development were assigned to the roadway system in accordance with the trip distribution pattern discussed above. The project trip assignment under the future roadway network is presented graphically on Figure 11.

Background Plus Project Traffic Volumes

The project trips were added to background traffic volumes to obtain background plus project traffic volumes. The background plus project traffic volumes are shown graphically on Figure 12. Traffic volumes for all components of traffic are tabulated in Appendix B.

Background Plus Project Intersection Levels of Service

The results of the intersection level of service analysis under background plus project conditions are discussed below and summarized in Table 9. The analysis results are presented for all study intersections based on City of Gilroy impact criteria.

The level of service calculation sheets are included in Appendix C.

Signalized Intersections

The results of the level of service analysis indicate that the following signalized study intersections are projected to operate at unacceptable LOS D under background plus project conditions:

3. Santa Teresa Boulevard and First Street (LOS D – PM peak-hour)
7. Wren Avenue and Welburn Avenue (LOS D – PM peak-hour)

However, the addition of project traffic at the above intersections is not sufficient to cause the intersection average delay to increase by more than 2.0 seconds. This typically happens when project traffic volumes are low and/or are added to non-critical movements of the intersection. Therefore, based on City of Gilroy intersection impact criteria, the project would not cause a significant level or service impact at the above two locations.

The remaining signalized study intersections would continue to operate at acceptable levels of service during the peak hours under background plus project conditions.

Unsignalized Intersections

The results of the level of service analysis indicate that all unsignalized study intersections are projected to operate with overall average intersection delays corresponding to acceptable LOS C or better during both the AM and PM peak hours under background plus project conditions.

The unsignalized intersection analysis results also indicate that the following study intersection is projected to operate with average delays corresponding to LOS F on its stop-controlled approach with the highest delay and its traffic volume is high enough to satisfy the peak-hour volume warrant during both peak hours under background plus project conditions:

12. Kelton Drive and First Street (Impact: AM and PM peak hours)
LEGEND:

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 11
Project Trip Assignment
### Figure 12
Background Plus Project Traffic Volumes

**Legend:**  
XX(XX) = AM(PM) Peak-Hour Traffic Volumes
Table 9
Background Plus Project Conditions Intersection Level of Service Results

<table>
<thead>
<tr>
<th>Study Int. Number</th>
<th>Intersection Control</th>
<th>LOS Standard</th>
<th>TIF Int.</th>
<th>Peak Hour</th>
<th>Background</th>
<th>Background Plus Project</th>
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<td>Avg. Delay</td>
<td>LOS Met?</td>
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</tr>
<tr>
<td>1</td>
<td>Santa Teresa Boulevard and Mantelli Drive</td>
<td>Signal</td>
<td>C No</td>
<td>AM</td>
<td>30.7 C</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>30.2 C</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td>Santa Teresa Boulevard and Welburn Avenue</td>
<td>Signal</td>
<td>C No</td>
<td>AM</td>
<td>24.0 C</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>19.2 B-</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>Santa Teresa Boulevard and First Street</td>
<td>Signal</td>
<td>C Yes</td>
<td>AM</td>
<td>23.8 C</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>36.1 D+</td>
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<td>Santa Teresa Boulevard and Third Street</td>
<td>Roundabout</td>
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<td>AM</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>57.2 F</td>
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<td>5</td>
<td>Kelton Drive and Welburn Avenue</td>
<td>Two-Way Stop</td>
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<td>AM</td>
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<td>--</td>
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<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>2.9 A+</td>
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<td>6</td>
<td>Kern Avenue and Welburn Avenue</td>
<td>All-Way Stop</td>
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<td>AM</td>
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<td>PM</td>
<td>14.3 B</td>
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<td>7</td>
<td>Wren Avenue and Welburn Avenue</td>
<td>All-Way Stop, Signal</td>
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<td>AM</td>
<td>32.4 C-</td>
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<td>8</td>
<td>Miller Avenue/Wayland Lane and First Street</td>
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<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>6.5 A</td>
<td>--</td>
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<td>9</td>
<td>Wren Avenue and First Street</td>
<td>Signal</td>
<td>C Yes</td>
<td>AM</td>
<td>28.2 C</td>
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<td></td>
<td></td>
<td>PM</td>
<td>31.7 C</td>
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<tr>
<td>10</td>
<td>Kern Avenue and First Street</td>
<td>One-Way Stop (Average Delay)</td>
<td>C Yes</td>
<td>AM</td>
<td>2.2 A+</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM</td>
<td>3.1 A+</td>
<td>--</td>
</tr>
<tr>
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<td></td>
<td>One-Way Stop (Worst Approach)</td>
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<td>37.6 E+</td>
</tr>
<tr>
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<td>PM  68.9 F</td>
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<td>74.0 F</td>
</tr>
<tr>
<td>11</td>
<td>Westwood Drive and First Street</td>
<td>Signal</td>
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<td>AM</td>
<td>12.2 B</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>PM  12.6 B</td>
<td>--</td>
<td>12.6 B</td>
</tr>
<tr>
<td>12</td>
<td>Kelton Drive and First Street</td>
<td>One-Way Stop, Two-Way Stop (Average Delay)</td>
<td>C No</td>
<td>AM</td>
<td>2.5 A+</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td>PM  4.8 A</td>
<td>--</td>
<td>12.3 B</td>
</tr>
<tr>
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<td></td>
<td>One-Way Stop, Two-Way Stop (Worst Approach)</td>
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<td></td>
<td></td>
<td>PM  80.1 F</td>
<td>Yes</td>
<td>163.9 F</td>
</tr>
</tbody>
</table>

Notes:
1. TIF Int. = City of Gilroy Traffic Impact Fee intersection.
2. Signal warrant analysis based on the Peak Hour Signal Warrant #3, Figure 4C Caltrans MUTCD, 2014. Signal warrant analysis is not applicable to signalized intersections.
3. Change in delay, expressed in seconds, for background plus project conditions is measured relative to background conditions.
4. All-way-stop-controlled intersection under existing conditions. Assumed to be signalized under background conditions.
5. One-way-stop-controlled intersection under existing conditions. Assumed to be a two-way stop-controlled intersection under background conditions.

Based on the unsignalized intersection level of service impact criteria, intersections where both the average delay on the stop-controlled approach with the highest delay operates at LOS E or F and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant, are considered to be impacted by the project. Although this condition was met at the above intersection under background conditions (the intersection was identified as being deficient under background conditions), the proposed project would contribute to the projected deficiency at this location, increasing the delay for the approach with the highest delay. Therefore, this is considered a significant project impact.

The remaining unsignalized study intersections would not have traffic volume and level of service conditions that exceed the City of Gilroy level of service standards during the AM and PM peak hours under background plus project conditions.

The peak-hour signal warrant sheets are contained in Appendix D.
**Roundabout Intersection**

The results of the level of service analysis indicate that the study roundabout intersection is projected to operate at unacceptable LOS D and F during the AM and PM peak hours, respectively, under background plus project conditions.

4. Santa Teresa Boulevard and Third Street (**Impact:** AM and PM peak hours)

The study roundabout intersection also is identified as being deficient under background conditions. The level of service calculations show that the addition of project traffic at this intersection would cause the intersection’s average delay to increase by 2 or more seconds from background conditions. Based on City of Gilroy unsignalized intersection level of service impact criteria, this constitutes a significant project impact.

**Freeway Segment Analysis**

As discussed in Chapter 1 of this report, a freeway level of service analysis was not conducted since the number of project trips added to the freeway segments near the site would be minimal (less than the one percent capacity threshold). Based on CMP Traffic Impact Analysis Guidelines, a freeway level of service analysis is not required.

**Intersection Operations Analysis**

The analysis of the intersection levels of service was supplemented with an analysis of intersection operations for selected intersections. The intersection operations analysis is an important component of the process to evaluate traffic conditions at an intersection. Although calculated levels of service may appear adequate at some locations, traffic operations problems caused by inadequate storage space for vehicle queues could prevent the intersection from ever realizing the calculated level of service.

When inadequate storage space becomes an issue, queues in one turn movement might spill into an adjacent lane and block traffic in that lane from proceeding through the intersection.

**Analysis Procedures and Assumptions**

The operations analysis is based on vehicle queuing for high-demand movements at intersections. Vehicle queues were estimated using a Poisson probability distribution. For this analysis, the average length of a vehicle in a queue is assumed to be 25 feet (20 feet vehicle length plus 5-foot headway space). This is a value typically used in traffic engineering practice (including most jurisdictions in the Santa Clara County) for the evaluation of vehicle queues.

Key intersections where the project is anticipated to add more than 10 peak-hour trips per lane to the left-turn movement were selected for evaluation. The adequacy of the queue storage capacity for the following intersection movements was evaluated in this analysis:

3. Santa Teresa Boulevard and First Street/Hecker Pass Highway – Westbound left-turn and northbound right-turn movements
9. Wren Avenue and First Street – Northbound left-turn movement
11. Westwood Drive and First Street – Northbound left-turn movement
12. Kelton Drive and First Street – Southbound left-turn and eastbound left-turn movements
15. Santa Teresa Boulevard and West Piazza Driveway – Southbound left-turn movement

The operations analysis results under background plus project are summarized in Table 10. The intersection queue calculation sheets are included in Appendix E.
**Table 10**

**Intersection Vehicle Queue Analysis**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>WBL AM</th>
<th>WBL PM</th>
<th>NBR AM</th>
<th>NBR PM</th>
<th>WBL AM</th>
<th>NBL AM</th>
<th>WBL PM</th>
<th>NBL PM</th>
<th>WBL AM</th>
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<th>EBL PM</th>
<th>EBL PM</th>
<th>EBL PM</th>
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<td></td>
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</tr>
<tr>
<td>Cycle/Delay (sec)</td>
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<td>105</td>
<td>75</td>
<td>105</td>
<td>95</td>
<td>100</td>
<td>55</td>
<td>65</td>
<td>39.3</td>
<td>47.2</td>
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<td>YES</td>
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<tr>
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<td>YES</td>
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<tr>
<td>Volume (vph)</td>
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<td>167</td>
<td>106</td>
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<td>46</td>
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<td>95th %. Queue (veh/ln.)</td>
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<td>116</td>
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<tr>
<td>Storage (ft./ln.)</td>
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<td>11</td>
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<td>8</td>
<td>6</td>
<td>8</td>
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<td></td>
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<tr>
<td>Cycle/Delay (sec)</td>
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<td>100</td>
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<tr>
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<td>232</td>
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<tr>
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</tbody>
</table>

1 Vehicle queue calculations based on cycle length for signalized intersections and control delay for unsignalized intersections.

2 Assumes 25 feet per vehicle in the queue.

NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, R = Right, T = Through, L = Left.
Operations Analysis Results

The existing maximum queue length for all of the above movements is estimated to be able to accommodate within the available queue storage capacity for each of the movements during the peak hours, with the exception of the following two movements:

9. Wren Avenue and First Street – Northbound left-turn movement

The maximum queue length for the northbound left-turn movement at the Wren Avenue/First Street intersection is estimated to be 8 vehicles (or 200 feet) during the PM peak-hour under existing conditions. This exceeds the existing storage capacity of approximately 150 feet (or 6 vehicles) for this movement. The addition of approved (background) traffic to this movement would cause the projected queue length to increase by 1 vehicle (to 9 vehicles, or 225 feet) during the PM peak hour under background conditions. However, it is projected that project traffic would not have an effect on the projected vehicle queue for this movement under background plus project conditions. Therefore, the proposed project would not have an impact on the projected vehicle queue length for this movement.

12. Kelton Drive and First Street – Southbound left-turn movement

The maximum queue length for the southbound left-turn movement at the Kelton Drive/First Street intersection is estimated to be 2 vehicles (or 50 feet) during both peak hours under existing conditions. The existing queue length can be accommodated within the existing storage capacity of approximately 150 feet (or 6 vehicles) for this movement. The addition of approved (background) traffic to this intersection would result in slightly longer wait times for this movement, causing the projected queue length to increase by 2 vehicles (to 4 vehicles, or 100 feet) during the PM peak hour under background conditions. The addition of project traffic to this turn movement would cause the projected 95th percentile vehicle queue to increase by 6 vehicles (from 4 to 10 vehicles, or 250 feet) during the PM peak-hour under background plus project conditions, exceeding the existing storage capacity by approximately 4 vehicles (or 100 feet). Addition of project traffic that results in the projected 95th percentile vehicle queue to exceed the available queue storage capacity is considered a significant project impact, according to the City of Gilroy definition of significant traffic operations impacts.

The projected queue lengths for the southbound left-turn movement at the intersection of Kelton Drive and First Street would be the result of southbound left-turning traffic from Kelton Drive waiting for a gap in traffic along First Street to complete the turn. With the installation of a traffic signal at this intersection (discussed in the mitigation measures section), the 95th percentile queue length for the southbound left-turn movement would be able to accommodate within the existing turn pocket (see Table 10).

Parking Analysis

The projected parking demand for the proposed project was estimated based on the City of Gilroy parking requirements contained within the City of Gilroy Zoning Ordinance (Section 31, Off-street parking requirements).

City of Gilroy Parking Requirements

The proposed project consists of three land uses: fast-food restaurants with drive-through windows, sit-down restaurant, and general retail space. The City of Gilroy parking code states that fast-food restaurants with drive-up windows are required to provide one parking stall for every 100 s.f. of gross floor area plus one stall for each shift employee. For sit-down restaurant, one stall is required for every 100 s.f. of dining area plus one stall for each shift employee. For general retail space, the requirement calls for 1 stall for every 250 s.f. of gross floor area.

Based on information provided by the project applicant, a typical breakdown of 60% dining area and
40% kitchen/miscellaneous area was assumed for the sit-down restaurant. In addition, with the assistance of a retail consultant, the applicant estimates that each of the restaurants would require 6 employees per shift.

Based on the City of Gilroy adopted parking rates, the size of the proposed project, and assumptions and recommendations from the applicant, the proposed project is estimated to require a minimum of 16 parking spaces for the proposed retail space, 24 spaces for the sit-down restaurant, and 31 spaces each for the two fast-food restaurants. As summarized in Table 11, the project would need to provide a minimum total of 102 parking spaces to meet the City’s parking requirements.

The project is proposing to provide a total of 63 parking spaces on site, which is 39 spaces less than the number of parking spaces required based on City of Gilroy parking requirements. Therefore, the estimated shortage of on-site parking to serve the projected parking demand constitutes a significant project impact, according to the City of Gilroy definition of significant parking impacts.

**Parking Management Plan**

A shared parking analysis was completed for the proposed project in September 2017 by Hexagon. The purpose of the shared parking analysis was to determine if adequate parking supply is being proposed to serve the project, and if not, whether the additional parking spaces needed to serve the project can be provide by implementing a shared parking program between the proposed project and The Piazza.

The Transportation and Circulation section of the current City of Gilroy General Plan, under Policy 12.12, encourages shared parking facilities where uses on the same or adjoining sites have parking requirements at different times of the day or week. Additionally, Gilroy City Code Section 30.31.30(c) establishes the requirements for pursuing shared parking, which includes preparation of a parking analysis by a licensed professional verifying that parking is suitable for the proposed uses. Further, Gilroy City Code Section 30.31.30(g)(1) allows that owners of adjoining properties may provide parking space in common if said parking area is secured by easement or other sufficient legal document, and provided the total number of parking spaces provided is equal to the sum of the individual needs.

There are a total of 187 parking spaces on-site to serve The Piazza. Based on the City of Gilroy parking requirements, The Piazza is required to provide a total of 186 parking spaces. To estimate the actual existing parking demand at The Piazza, parking counts were conducted at The Piazza during the week and weekend. The results of the parking counts indicate that at its peak, the parking demand was observed to be 123 parking spaces (66% of the total number of parking spaces available, or occupancy) during the week, 92 spaces (49% occupancy) on Saturday, and 145 spaces (78% occupancy) on Sunday. During the peak parking demand periods, a minimum of 64 parking spaces within the Piazza parking areas were observed to be unoccupied during the week, 95 on Saturday, and 42 on Sunday. Sunday’s observed higher demand is due to a current contract between The Piazza and the adjacent South Valley Community Church that allows the church to utilize The Piazza parking during their Sunday service. With the construction of the proposed project, this parking contract will be terminated. According to information provided by The Piazza management, all leasable space at The Piazza, with the exception of a 1,000-square-foot office (representing approximately 2% of the total Piazza square footage), was occupied at the time the parking counts were conducted. Typically, office buildings that are up to 90% occupied are considered fully occupied. Therefore, it can be assumed that the surveyed parking demand reflect the total demand for The Piazza at what would be considered 100% occupancy.

The results of the parking counts show that the actual parking demand at The Piazza is approximately 64 parking spaces (42 parking spaces on Sunday) less than the required number of parking spaces based on the City off-street parking code.
## Table 11
Proposed Project Parking Demand Estimates – City of Gilroy Requirements

<table>
<thead>
<tr>
<th>Building (Unit)</th>
<th>Land Use</th>
<th>Size</th>
<th>Parking Requirements per square feet</th>
<th>Total Stalls Required</th>
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<td>General Retail</td>
<td>4,000 s.f.</td>
<td>250 s.f. of GFA</td>
<td>16</td>
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<td>1</td>
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<td>2,500 s.f.</td>
<td>100 s.f. of GFA</td>
<td>25 + 1 employee</td>
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<td>3 (1)</td>
<td>Fast-Food Restaurant with Drive-Through Windows</td>
<td>2,500 s.f.</td>
<td>100 s.f. of GFA</td>
<td>25 + 1 employee</td>
</tr>
<tr>
<td>3 (2)</td>
<td>Sit-Down Restaurant</td>
<td>3,000 s.f.</td>
<td>100 s.f. of DA</td>
<td>18 + 1 employee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12,000 s.f.</td>
<td>84</td>
<td>18</td>
</tr>
</tbody>
</table>

**Source:** City of Gilroy Parking Code

GFA = Gross Floor Area; DA = Dining Area

1^Per recommendations by the project applicant.

2^Per recommendations by the project applicant, a 60% dining area/40% kitchen building ratio was assumed.

Source: First Street and Kelton Drive Commercial Development Shared Parking Analysis, September 26, 2017, by Hexagon Transportation Consultants, Inc.
The shared parking analysis showed that, based on the number of parking spaces required by the City of Gilroy to serve the proposed project and information contained in the Urban Land Institute’s publication *Shared Parking*, Second Edition, the proposed project’s parking demand would exceed its proposed parking supply between 10:00 AM and 9:00 PM during the week by a maximum of 39 parking spaces, and between 10:00 AM and 8:00 PM on the weekend by a maximum of 37 parking spaces. Based on the observed unoccupied parking spaces within The Piazza, the excess parking supply at The Piazza could be utilized to satisfy the projected parking demand for the proposed project. The shared-parking study concluded that combining the existing and proposed parking spaces would provide sufficient parking to serve the projected demand from both The Piazza and the proposed commercial project. The study also made the recommendation to designate the farthest parking stalls from the proposed shopping center (parking spaces along the east side of The Piazza) as employee parking. This will reduce parking activity within The Piazza and will provide the nearest parking spaces to the proposed commercial development customers.

Table 12 summarizes the results of the shared-parking analysis, as presented in the September 2017 study report. Figure 13 illustrates the proposed parking management plan for the proposed project.

The shared-parking study is included in Appendix F.

**Americans with Disabilities Act Requirements**

The Americans with Disabilities Act (ADA) requires developments to provide one accessible parking space for every 25 parking spaces provided for the first 100 parking spaces, and one additional parking space for every 50 parking spaces provided from 100 up to 200 total parking spaces. Accessible parking spaces shall be at least 96 inches (8 feet) wide and shall be located on the shortest accessible route of travel from adjacent parking to an accessible entrance. In addition, one in every 8 accessible spaces, but no less than one, shall be served by an access aisle at least 96 inches wide and shall be designated as “van accessible”. It should be noted that the accessible parking spaces are not additional parking spaces, but are part of the minimum parking spaces required.

The parking management plan (Figure 13) shows a total of four accessible parking spaces within the project site. Therefore, the proposed project satisfies ADA parking requirements.

**Emergency Access Evaluation**

Two existing driveways would provide direct access to the project site: one along Kelton Drive and the second one along First Street.

The Kelton Drive driveway would be the only full-access project driveway. This driveway is shown on the site plan to be 30 feet wide, while Kelton Drive consists of a 50-foot wide (curb-to-curb), two-lane roadway with on-street parking on both sides of the street. Both Kelton Drive and the project driveway provide adequate width to allow for emergency vehicles access to and from the project site.

The First Street driveway is shown on the site plan to be approximately 37 feet wide. This driveway provides right-in and out access only. The width of this driveway also is adequate to allow in and out emergency vehicle access.

The layout of the project site includes a drive aisle that runs north/south through the middle of the project site connecting the two project site driveways. With the proposed site plan layout and project driveway locations, emergency vehicles would be able to enter the site via one of the two project driveways, circulate the site, and exit the site via the second driveway, providing adequate emergency vehicle access.
### Table 12
**Shared Parking Analysis Results**

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<th>Saturday</th>
<th>Sunday</th>
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<td>Total</td>
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</table>

1The hourly parking demand for the proposed project is based on the City of Gilroy parking requirements and the hourly demand information for each proposed land use contained in the Urban Land Institute (ULI) Shared Parking, 2nd Edition, 2005.
2Based on parking counts conducted on two weekdays (May 10 and 11, 2017), two Saturdays (May 6 and 20, 2017), and two Sundays (May 7 and 21, 2017).
3The number of unoccupied parking spaces shown represents the lower number between the two count days.
4Combined number of unoccupied parking spaces between the proposed project and the existing uses (The Piazza).

**Source:** First Street and Kelton Drive Commercial Development Shared Parking Analysis, September 26, 2017, by Hexagon Transportation Consultants, Inc.
Figure 13
Proposed Parking Management Plan
A possible third access point for emergency vehicles would be the existing Piazza driveway along Santa Teresa Boulevard. With up to three access points, the project site provides adequate emergency vehicle access.

A site plan prepared by RJA Engineers and dated October 30, 2017 (see Figure 14), shows the wheel travel path of a 24.5-foot fire engine entering, traveling through, and exiting the project site. This travel path evaluation demonstrates that a fire engine would be able to access and circulate the project site via both project driveways on Kelton Drive and First Street. Therefore, it can be concluded that the proposed project site layout and driveway width and locations would provide adequate emergency vehicular access and circulation.

**Recommended Mitigation Measures under Background Plus Project Conditions**

Described below are the intersection impacts under background plus project conditions and recommended mitigation measures necessary to maintain the level of service standard and acceptable intersection operations under background plus project conditions.

**4. Santa Teresa Boulevard and Third Street (City of Gilroy Intersection)**

**Impact:** This roundabout intersection is projected to operate at an unacceptable LOS D and F during the AM and PM peak hours, respectively, under background conditions. The addition of project traffic would cause the intersection’s average delay to increase by 2 seconds or more. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a significant project impact.

**Mitigation:** The project impact to this intersection could be mitigated by widening the roundabout from a one-lane to a two-lane roundabout. This improvement can be accomplished by converting the existing northbound/southbound right-turn lanes to shared right-and-through lanes. Additionally, a second receiving lane in both the northbound and southbound directions (Santa Teresa Boulevard) would be required, requiring the widening of Santa Teresa Boulevard from 2 to 4 lanes, including the widening of the bridge structure south of Third Street. Implementation of the above improvements would improve the intersection level of service to acceptable LOS B or better during the AM and PM peak hours under background plus project conditions.

The roundabout improvement, as well as the widening of Santa Teresa Boulevard to four lanes and the widening of the bridge structure south of Third Street, are included in the City’s Traffic Circulation Master Plan (TCMP) and Traffic Impact Fee (TIF) Program. However, due to the magnitude of the necessary improvements, it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements. Thus, to mitigate the project impact at this location, the developer will be required to pay the applicable TIF fee as a fair-share contribution toward the above improvements. With implementation of this mitigation measure, this impact would be less-than-significant.
Figure 14
Emergency Vehicle Travel Path Evaluation
12. Kelton Drive and First Street (Caltrans Intersection)

**Impact:** This unsignalized intersection is projected to operate with delays on the highest-delay approach equivalent to an unacceptable LOS F during the peak hours under background plus project conditions and the traffic volume levels at the intersection would be high enough to satisfy the peak-hour volume traffic signal warrant. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a significant project impact.

**Mitigation:** The project impact to this intersection could be mitigated with the installation of a traffic signal. With implementation of the above improvements, the intersection level of service would improve to LOS B during the AM and PM peak hours under background plus project conditions, and the impact would be less-than-significant.

First Street through its intersection with Kelton Drive is under the jurisdiction of Caltrans. Therefore, the installation of a signal at this intersection must be reviewed and approved by Caltrans. Should Caltrans deem the proposed traffic signal undesirable, the intersection would need to be designed to restrict some, or all, left-turn access at the intersection.

12. Kelton Drive and First Street – Southbound Left-Turn Queue

**Impact:** The addition of project traffic to the southbound left-turn movement at this intersection would cause the projected 95th percentile vehicle queue to increase by six vehicles (from 4 to 10 vehicles, or 250 feet) from background to background plus project conditions. This exceeds the existing storage capacity of approximately 150 feet. Based on City of Gilroy definition of significant traffic operations impacts, this constitutes a significant project impact.

**Mitigation:** The project impact to the southbound left-turn movement at this intersection could be mitigated with the installation of a traffic signal. Implementation of a traffic signal at this location also has been identified as an improvement to mitigate a level of service impact. With implementation of the traffic signal, projected maximum queue lengths at the intersection would be able to accommodate within the existing queue storage capacity during the AM and PM peak hours under background plus project conditions, and the project impact would be less-than-significant.

Parking

**Impact:** Based on the recommended City of Gilroy parking rates, the size of the proposed project, and assumptions and recommendations from the applicant, the proposed project is required to provide a minimum of 102 on-site parking spaces. The project is proposing to provide a total of 63 parking spaces on-site, which is 39 spaces less than the recommended number of parking spaces based on City of Gilroy parking requirements. Based on City of Gilroy definition of significant parking impacts, the shortage of on-site parking constitutes a significant project impact.

**Mitigation:** The project impact to the parking requirements could be mitigated with the implementation of a Parking Management Plan (shared-parking) between the project and The Piazza. It was estimated that the proposed project is proposing to provide 39 on-site parking spaces less than the number of parking spaces required based on City of Gilroy parking requirements. Based on a shared-parking analysis that was completed for the proposed project and The Piazza, it was determined that The Piazza currently provides more on-site parking than its full-occupancy demand, and that the observed
excess parking supply at The Piazza (approximately 42 to 64 parking spaces) could be utilized to satisfy the projected parking demand for the proposed project. The shared-parking study concluded that implementing a shared-parking program would result in sufficient parking to serve the projected demand from both The Piazza and the proposed commercial project. The study also made the recommendation to designate the farthest parking stalls from the proposed shopping center (parking spaces along the east side of The Piazza) as employee parking. This will reduce parking activity within The Piazza and will provide the nearest parking spaces to the proposed commercial development customers.

A parking agreement between the proposed project and The Piazza establishing the shared-parking program shall be developed and implemented prior to occupancy of the proposed project. With implementation of an acceptable shared-parking program, the project impact would be less-than-significant.
6. Cumulative Conditions

This chapter presents a summary of the traffic conditions that would occur under cumulative conditions with the proposed project. Cumulative conditions are defined as conditions shortly after completion of the proposed project. Traffic volumes for cumulative conditions comprise volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site, trips generated by the proposed project, and traffic from proposed but not yet approved developments. This chapter describes the procedure used to determine cumulative traffic volumes and the resulting traffic conditions.

Cumulative Transportation Network

It is assumed in this analysis that the transportation network under cumulative conditions would be the same as described under background conditions. Under cumulative plus project conditions, the transportation network would be the same as described under background plus project conditions.

Proposed Developments

The latest list of proposed but not yet approved (pending) developments in the City of Gilroy was provided by City staff in March 2018. Table 13 lists the pending developments in the City of Gilroy, which are assumed to add traffic to the roadway network under cumulative conditions. Traffic associated with proposed developments is discussed below.

Cumulative Conditions Traffic Volumes

Baseline cumulative peak-hour traffic volumes (without project traffic) were calculated by adding to background volumes the estimated traffic from proposed but not yet approved (pending) development projects. The added traffic from proposed developments was estimated based on the location, size, and use of each proposed development, and applying the process of trip generation, distribution, and assignment described in Chapter 5. The same assumptions utilized to estimate approved project traffic, as discussed in Chapter 4 (Background Conditions), were applied to estimate pending project traffic. The baseline cumulative conditions traffic volumes are presented graphically on Figure 15.

Cumulative plus project traffic volumes were calculated by adding project-generated trips to baseline cumulative volumes. The cumulative plus project peak-hour traffic volumes are shown on Figure 16. Peak-hour intersection turning movement volumes for all intersections and study scenarios are tabulated in Appendix B.
Table 13
Pending Development Projects in the City of Gilroy

<table>
<thead>
<tr>
<th>#</th>
<th>Project Name/Applicant</th>
<th>Project Location/Address</th>
<th>Project Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Downtown Specific Plan</td>
<td>Downtown Gilroy</td>
<td>560ksf retail, 312ksf office space, 1,276 residential units</td>
</tr>
<tr>
<td>2</td>
<td>First &amp; Kern Apartments</td>
<td>First St and Kern Ave</td>
<td>120-unit apartments</td>
</tr>
<tr>
<td>3</td>
<td>Gilroy Crossing - Regency Phase II</td>
<td>Southeast corner of Camino Arroyo and Hwy 152</td>
<td>Industrial (5.64 acres remaining)</td>
</tr>
<tr>
<td>4</td>
<td>Gilroy Self-Storage</td>
<td>6500 &amp; 6700 Cameron Blvd</td>
<td>39,751 SF self-storage additions</td>
</tr>
<tr>
<td>5</td>
<td>Glen Loma Elementary School (GUSD)</td>
<td>N/e corner of Santa Teresa Blvd and Club Drive</td>
<td>800-student K-5 elementary school</td>
</tr>
<tr>
<td>6</td>
<td>Greenfield Drive Subdivision</td>
<td>Thomas Ln</td>
<td>14 lots development on 8 acres</td>
</tr>
<tr>
<td>7</td>
<td>Hwy 152 Retail Cntr-Newman (Industrial)</td>
<td>Easterly terminus of Renz Ln</td>
<td>Industrial Park (12.84 acres)</td>
</tr>
<tr>
<td>8</td>
<td>Larson Steel</td>
<td>5747 Obata Wy</td>
<td>10,500 s.f. industrial building with warehouse and steel fabrication shop</td>
</tr>
<tr>
<td>9</td>
<td>Leavesley Road Chevron</td>
<td>Northwest quadrant of Murray Ave and Leavesley Rd</td>
<td>Two new fuel pumps (4 fueling stations) with an overhead canopy</td>
</tr>
<tr>
<td>10</td>
<td>Monterey Apartments</td>
<td>8955 Monterey Rd</td>
<td>78-unit apartment with new 4,600 s.f. commercial</td>
</tr>
<tr>
<td>11</td>
<td>StorQuest Express Self-Storage</td>
<td>1000 Gilman Rd</td>
<td>81,950 SF self-storage with 7 buildings</td>
</tr>
<tr>
<td>12</td>
<td>Wren Investor</td>
<td>Vickery Ln between Kern Ave and Wren Ave</td>
<td>137 low-density residential lots, 20 medium-density residential lots, 102 high-density townhome/apartments, and 0.40 acres of neighborhood commercial</td>
</tr>
</tbody>
</table>

Source: City of Gilroy Planning Department, March 2018
LEGEND:

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 15
Cumulative Traffic Volumes
Figure 16

Cumulative Plus Project Traffic Volumes

LEGEND:

XX(XX) = AM(PM) Peak-Hour Traffic Volumes
Cumulative Conditions Intersection Levels of Service

The results of the intersection level of service analysis under cumulative plus project conditions are discussed below and summarized in Table 14. The analysis results are presented for all study intersections based on City of Gilroy impact criteria.

The level of service calculation sheets are included in Appendix C.

Signalized Intersections

The results of the level of service analysis indicate that the following signalized study intersections are projected to operate at unacceptable LOS D under cumulative and cumulative plus project conditions:

3. Santa Teresa Boulevard and First Street (LOS D – PM peak-hour)
7. Wren Avenue and Welburn Avenue (LOS D – AM and PM, Impact: PM peak-hour)
9. Wren Avenue and First Street (LOS D – PM peak-hour)

The level of service calculations show that the addition of project traffic at the intersection of Wren Avenue and Welburn Avenue (intersection #7) would cause the intersection average delay to increase by more than 2.0 seconds during the PM peak-hour. This constitutes a cumulative project impact, based on City of Gilroy signalized intersection level of service impact criteria.

The remaining signalized study intersections would continue to operate at acceptable levels of service during the peak hours under cumulative plus project conditions.

Unsignalized Intersections

The results of the level of service analysis indicate that all unsignalized study intersections are projected to operate with overall average intersection delays corresponding to acceptable LOS C or better during both the AM and PM peak hours under cumulative plus project conditions.

The unsignalized intersection analysis results also indicate that the following study intersection is projected to operate with average delays corresponding to LOS F on its stop-controlled approach with the highest delay and its traffic volume is high enough to satisfy the peak-hour volume warrant during both peak hours under cumulative plus project conditions:

12. Kelton Drive and First Street (Impact: AM and PM peak hours)

Based on the unsignalized intersection level of service impact criteria, intersections where both the average delay on the stop-controlled approach with the highest delay operates at LOS E or F and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant, are considered to be impacted by the project. Although this condition was met at the above intersection under cumulative conditions, the proposed project would contribute to the projected deficiency at this location, increasing the delay for the approach with the highest delay. Therefore, this is considered a cumulative project impact.

The remaining unsignalized study intersections would not have traffic volume and level of service conditions that exceed the City of Gilroy level of service standards during the AM and PM peak hours under cumulative plus project conditions.

The peak-hour signal warrant sheets are contained in Appendix D.
Table 14
Cumulative Plus Project Intersection Level of Service Results

<table>
<thead>
<tr>
<th>Study Int. Number</th>
<th>Intersection Control</th>
<th>LOS Standard</th>
<th>TIF Int. 1</th>
<th>Peak Hour</th>
<th>Cumulative No Project</th>
<th>Cumulative Plus Project</th>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td>AM</td>
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<td></td>
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<td>AM</td>
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<td>AM</td>
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<td></td>
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<td></td>
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<td>PM</td>
<td>67.9</td>
<td>F</td>
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</tbody>
</table>

Notes:
1. TIF Int. = City of Gilroy Traffic Impact Fee intersection.
2. Signal warrant analysis based on the Peak Hour Signal Warrant #3, Figure 4C Caltrans MUTCD, 2014.
3. Signal warrant analysis is not applicable to signalized intersections.
4. All-way stop-controlled intersection under existing conditions. Assumed to be signalized under background conditions.
5. All-way stop-controlled intersection under existing conditions. Assumed to be a two-way stop-controlled intersection under background conditions.
6. = CMP intersection

Roundabout Intersection

The results of the level of service analysis indicate that the study roundabout intersection is projected to operate at unacceptable LOS E and F during the AM and PM peak hours, respectively, under cumulative and cumulative plus project conditions.

4. Santa Teresa Boulevard and Third Street (Impact: AM and PM peak hours)

The level of service calculations show that the addition of project traffic at the study roundabout intersection would cause the intersection’s average delay to increase by 2 or more seconds from cumulative conditions. Based on City of Gilroy unsignalized intersection level of service impact criteria, this constitutes a cumulative project impact.
**Recommended Mitigation Measures under Cumulative Plus Project Conditions**

Described below are the intersection impacts under cumulative plus project conditions and recommended mitigation measures necessary to maintain the City’s level of service standard and acceptable intersection operations.

**4. Santa Teresa Boulevard and Third Street (City of Gilroy Intersection)**

**Impact:** This roundabout intersection is projected to operate at an unacceptable LOS E and F during the AM and PM peak hours, respectively, under cumulative conditions. The addition of project traffic would cause the intersection’s average delay to increase by 2 seconds or more. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a cumulative project impact.

**Mitigation:** The project impact to this intersection could be mitigated by widening the roundabout from a one-lane to a two-lane roundabout. This improvement can be accomplished by converting the existing northbound/southbound right-turn lanes to shared right-and-through lanes. Additionally, a second receiving lane in both the northbound and southbound directions (Santa Teresa Boulevard) would be required, requiring the widening of Santa Teresa Boulevard from 2 to 4 lanes, including the widening of the bridge structure south of Third Street. Implementation of the above improvements would improve the intersection level of service to acceptable LOS B during the AM and PM peak hours under cumulative plus project conditions.

The roundabout improvement, as well as the widening of Santa Teresa Boulevard to four lanes and the widening of the bridge structure south of Third Street, are included in the City’s Traffic Circulation Master Plan (TCMP) and Traffic Impact Fee (TIF) Program. However, due to the magnitude of the necessary improvements, it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements. Thus, to mitigate the project impact at this location, the developer will be required to pay the applicable TIF fee as a fair-share contribution toward the above improvements. With implementation of this mitigation measure, this cumulative impact would be less-than-significant.

**7. Wren Avenue and Welburn Avenue (City of Gilroy Intersection)**

**Impact:** This future signalized intersection is projected to operate at an unacceptable LOS D during the AM and PM peak hours under cumulative and cumulative plus project conditions. The addition of project traffic would cause the intersection’s average delay to increase by 2 seconds or more during the PM peak-hour. Based on City of Gilroy level of service impact criteria for signalized intersections, this constitutes a cumulative project level.

**Mitigation:** The project impact to this intersection could be mitigated with the addition of a separate westbound left-turn lane, or with the addition of a separate eastbound right-turn lane. Both of these improvements would require the removal of on-street parking along Welburn Avenue to accommodate the additional lane. Implementation of either of the above improvements would improve the intersection level of service to acceptable LOS C during the AM and PM peak hours under cumulative plus project conditions.

The above improvements are planned in the City’s TCMP and are included in the City’s TIF Program. The developer will be required to pay the applicable TIF fee as a fair-share
contribution toward improvements at this intersection. With implementation of this mitigation measure, this cumulative impact would be less-than-significant.

12. Kelton Drive and First Street (Caltrans Intersection)

Impact: This unsignalized intersection is projected to operate with delays on the highest-delay approach equivalent to an unacceptable LOS F during the peak hours under cumulative plus project conditions and the traffic volume levels at the intersection would be high enough to satisfy the peak-hour volume traffic signal warrant. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a cumulative project impact.

Mitigation: The project impact to this intersection could be mitigated with the installation of a traffic signal. With implementation of the above improvements, the intersection level of service would improve to LOS B during the AM and PM peak hours under cumulative plus project conditions, and this cumulative impact would be less-than-significant.

First Street through its intersection with Kelton Drive is under the jurisdiction of Caltrans. Therefore, the installation of a signal at this intersection must be reviewed and approved by Caltrans. Should Caltrans deem the proposed traffic signal undesirable, the intersection would need to be designed to restrict some, or all, left-turn access at the intersection.
7. Other Transportation Issues

Other issues related to transportation were evaluated to determine if any deficiencies would exist under project conditions that are not specifically linked to environmental impact reporting. These are not considered environmental issues, and may not be evaluated in an environmental assessment, but have been included in the traffic study to meet the requirements of the local jurisdiction and Caltrans. The other transportation issues considered in this chapter include:

- Potential impacts to bicycle, pedestrian, transit facilities
- Site access and circulation evaluation
- Evaluation of Kelton Drive

Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Bicycle Circulation

Various bicycle facilities exist in the vicinity of the project site, including the Uvas Creek Trail (Class III bikeway) and bike lanes (Class II bikeways) along Santa Teresa, Mantelli Drive, Welburn Avenue, Third Street, Westwood Drive, and Wren Avenue.

The Bicycle Transportation Plan contained in the City of Gilroy General Plan, the City of Gilroy Bicycle/Pedestrian Transportation Plan, and the City of Gilroy Trails Master Plan indicate that a variety of bicycle facilities are planned in the City of Gilroy, some of which would serve the study area. Of the planned facilities, the following are relevant to the project:

**Planned Class I bikeways:**

- South Santa Teresa Trail – along the east side of Santa Teresa Boulevard, between First Street and the Gavilan College parking lot entrance;
- Creek Trail – from Fitzgerald Avenue to Cohanseay Avenue between Santa Teresa Boulevard and Monterey Road

**Planned Class III bikeways:**

- First Street, between Santa Teresa Boulevard and Monterey Road.

Additionally, the VTA Valley Transportation Plan 2040 (VTP2040) identifies various bicycle projects in the Gilroy area, some of which are also listed above. The VTP2040 is a long-range transportation...
planning document, which is the first step in the development and eventual construction of the projects. The bicycle projects identified in the VTP2040 located in the Gilroy area are summarized in Table 15.

**Project’s Effect on Bicycle Facilities**

The proposed project would increase the demand on bicycle facilities in the vicinity of the project site. The potential demand could be served by the various bicycle facilities available in the immediate vicinity of the project site. With implementation of the planned bicycle facilities, in addition to the existing facilities, the project site would be served directly by numerous bicycle facilities.

Although the City of Gilroy currently does not have requirements for bicycle parking, VTA recommends bicycle-parking rates for new developments in *Bicycle Technical Guidelines*, December 2007. According to VTA’s recommended rates, retail sales/shopping center developments should strive to supply one Class I (bike lockers) bike parking space for every 30 employees plus one Class II (bike racks) bike parking space for every 6,000 s.f. of retail space. Additionally, VTA also recommends supplying one Class I bike parking for every 30 employees plus one Class II bike parking for every 3,000 s.f. of restaurant space. Based on these rates, the project size, and the assumptions regarding employees presented in Chapter 5 (Parking Analysis), the proposed project should provide one (1) Class I and 4 Class II bicycle parking spaces.

**Recommended Bicycle Facility Improvements**

The following recommendations are made to promote non-auto modes of transportation in the City and to accommodate bicycle travel to and from the project site:

**Install Bicycle Parking Facilities.** It is recommended that the proposed project provide adequate bicycle parking supply on site, based on VTA’s recommends bicycle-parking rates, to serve the potential demand of the project. Based on VTA’s bicycle parking supply recommendations, the proposed project should provide 1 Class I and 4 Class II bicycle parking spaces.

**Pedestrian Circulation**

As discussed in Chapter 2 (Existing Conditions), pedestrian facilities in the project area consist primarily of sidewalks along most streets in the study area. Although most developed areas in the vicinity of the project site have sidewalks along both sides of the street, some streets within the project area have missing sidewalks along one or both sides of the street, including Kelton Drive (along the proposed project site frontage), First Street (along the south side of the street), and Santa Teresa Boulevard (along the west side of the street). This results in a discontinuous pedestrian facility network in the project area.

The approved project at the southeast corner of the Santa Teresa Boulevard/First Street intersection (across from the project site) will be required to install sidewalks along its project frontage on Santa Teresa Boulevard (east side of the street, south of First Street) and First Street (south side of the street), providing a complete sidewalk network along First Street and improving the existing pedestrian facilities along Santa Teresa Boulevard. The proposed project also would install sidewalks along its frontage on Kelton Drive (west side of the street), closing the existing gap in the sidewalks along this street.

Although no sidewalks are provided along Santa Teresa Boulevard, south of Third Street, the Uvas Creek Trail south of Uvas Creek provides an alternative route to pedestrian traffic from neighborhoods along Santa Teresa Boulevard.
Table 15
VTP2040 Bicycle Improvement Projects in Gilroy

<table>
<thead>
<tr>
<th>VTP ID</th>
<th>Project Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bicycle Projects in Gilroy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B4</td>
<td>Lions Creek Santa Clara Valley Water District (SCVWD) Service Rd. Trail: West of Kern Ave. between Kern and Day</td>
<td>Construct 12-foot-wide bicycle/pedestrian trail to follow the existing SCVWD service road elevation and alignment</td>
</tr>
<tr>
<td>B5</td>
<td>Lions Creek SCVWD Service Road Trail: West of Santa Teresa Blvd./Day Rd. East (between Tapestry and Day Rd. East)</td>
<td>Install 12-foot-wide bicycle/pedestrian trail segment, to connect Christopher High School to surrounding neighborhoods, on Santa Teresa Blvd. to the bicycle/pedestrian bridge across Lions Creek.</td>
</tr>
<tr>
<td>B6</td>
<td>Northern Uvas Creek SCVWD Service Road Trail (Gilroy Gardens Extension Trail)</td>
<td>Construct a 12-foot wide bicycle/pedestrian trail, to connect and expand the existing Uvas Creek trail system, on Santa Teresa Blvd. at Third St. to Burchell Creek Bridge.</td>
</tr>
<tr>
<td>B7</td>
<td>Western Ronan Channel SCVWD Service Road Trail</td>
<td>Convert an existing unpaved creek-side maintenance road that is closed to the public to a multi-use public trail for use by bicyclists and pedestrians.</td>
</tr>
<tr>
<td>B50</td>
<td>Santa Teresa Boulevard Bicycle Delineation and Shoulder Widening</td>
<td>Project provides bicycle delineation at eight intersections between SR-152 and Castro Valley Rd.; provides bike slots and shoulder widening as needed through intersections with acceleration/deceleration lanes and free running right-turn lanes allowing for safer transitions for through traveling bicyclists.</td>
</tr>
<tr>
<td>B77</td>
<td>Gilroy Sports Park Trail: Santa Teresa Boulevard/Mesa Road to Sports Park Ticket Booth</td>
<td>Construct a 12-foot-wide bicycle/pedestrian trail to connect Gavilan College and planned future residential development in Southern Gilroy to the Sports Park.</td>
</tr>
<tr>
<td>B78</td>
<td>Lions Creek Trail West: Gap Closure from Santa Teresa Blvd. at Day Road East to Just East of Kern Avenue Bridge</td>
<td>Construct a paved 4,100-foot-extension of an all-weather 12-foot wide bicycle trail on Lions Creek connecting existing Lions Creek Trail East to Santa Teresa Blvd., area schools, public transit, regional transit centers, and to existing on-street bicycle facilities.</td>
</tr>
<tr>
<td>B115</td>
<td>Fitzgerald Avenue Bicycle Shoulder widening from Santa Teresa Boulevard to Monterey Highway</td>
<td>Install shoulders on Fitzgerald Ave. to support safe operations for bicycles.</td>
</tr>
<tr>
<td>B116</td>
<td>Watsonville Road shoulders from Santa Teresa Boulevard to SR 152</td>
<td>Improve paved shoulder for bicycle use, add center lane and right-turn enhancements at select locations to accommodate vehicular turning such that shoulders remain unobstructed for bicyclists.</td>
</tr>
</tbody>
</table>

Source: VTA's Valley Transportation Plan 2040 (VTP 2040).

Project’s Effect on Pedestrian Facilities

It can be expected that new pedestrian traffic would be generated by the proposed project. The project site is located within what would be considered a walking distance (less than half one mile) from various surrounding neighborhoods, in particular those immediately north of the project site. Existing pedestrian facilities are current available between the neighborhoods north of First Street and the project site. Additionally, with the implementation of a traffic signal at the intersection of Kelton Drive and First Street (required to mitigate a project impact at this intersection), a direct pedestrian connection between the proposed project and the approved project located across from the project site would be provided, facilitating pedestrian access between the two sites.
Based on the existing and planned pedestrian facilities, sufficient pedestrian facilities will be available providing a connection between the project site and the surrounding residential neighborhoods.

**Recommended Pedestrian Circulation Improvements**

The following recommendations are made to promote pedestrian travel to and from the project site:

**Installation of Crosswalks.** Crosswalks and pedestrian phases should be planned along all legs of the proposed new signalized intersection of Kelton Drive and First Street.

**Transit Service**

Currently, the project site is not served directly by any of the existing bus routes in Gilroy. The nearest bus route to the project site is Community Bus Route 19, which provides service between the Gilroy Transit Center and First Street/Kern Avenue and includes a stop at the intersection of Kern Avenue and First Street, less than one half mile walking distance east of the project site.

**Recommended Transit Service Improvements**

The following recommendations are made to promote the use of public transit service to and from the project site:

**Expansion of Service.** With the development of the project, in addition to other approved residential projects along Santa Teresa Boulevard, south of the project site, there will be an opportunity for VTA to expand the existing service area to the south/west part of Gilroy, and by providing a bus stop in the project area, to serve the project site directly.

**Site Access and On-Site Circulation**

This analysis is based on a review of the project site plan, dated October 30, 2017, by RJA Engineers. The site plan is presented on Figure 2 of this report.

**Site Access**

Access to the project site would be provided via one existing driveway along Kelton Drive and one along First Street. These driveways currently provide access to The Piazza and Union Bank. The driveway along Kelton Drive consists of a full-access, 30-foot wide driveway while the driveway along First Street is approximately 37 feet wide and provides right-in and out access only. Currently, the Kelton driveway serves approximately 42 and 49 vehicles during the AM and PM peak hours, respectively, while the First Street driveway currently serves approximately 11 and 37 vehicles during the AM and PM peak hours, respectively.

The project site also is accessible from Santa Teresa Boulevard, via the existing The Piazza driveway. Traffic accessing the project site via the Santa Teresa Boulevard driveway would need to navigate through The Piazza’s parking areas to access the project site. It is anticipated that project traffic from the north on Santa Teresa Boulevard would mainly use this driveway. The Santa Teresa driveway provides right-in and left-in access from Santa Teresa Boulevard, but only right-out access. It is approximately 35 feet wide and currently serves approximately 64 and 134 vehicles during the AM and PM peak hours, respectively.

The City of Gilroy commercial driveway design guidelines, dated August 2005, specify that commercial driveways must be a minimum of 35 feet wide (maximum of 45 feet). Based on this requirement, the Kelton Drive project driveway would not meet City design standards. However, based on the emergency vehicle access evaluation prepared by RJA Engineers (discussed in Chapter 5 and
illustrated in Figure 14), it was shown that the Kelton Drive driveway can adequately provide inbound and outbound access to a 24.5-foot long fire engine.

**Operations at the Project Driveways**

The proposed project is projected to add a total of approximately 232 and 197 AM and PM peak hour trips, respectively, to the three driveways providing access to the project site. It is anticipated that the majority of the project traffic (approximately 62% of the total project traffic) would utilize the Kelton Drive driveway.

Traffic operations at all three driveways were evaluated to ensure they would continue to operate adequately with the addition of project traffic. The evaluation showed that all three driveways would operate acceptably with the addition of project traffic during the peak hours. Outbound traffic at the driveways is projected to experience average delays of 10 to 14 seconds (corresponding to LOS B or better) while waiting for a gap in the through traffic to complete their turn.

Additionally, an evaluation of the queue lengths shows that the projected maximum queue lengths at the project driveways would be 1 to 2 vehicles during the peak hours.

Therefore, the driveways providing access to the proposed project are projected to operate acceptably and no operational deficiencies are anticipated.

**Emergency Vehicle Access**

As discussed in Chapter 5 (Emergency Vehicle Access), with the proposed site plan layout and project driveway locations, emergency vehicles would be able to enter the site via one of the two adjacent project driveways, circulate the site, and exit the site via the second driveway, providing adequate emergency vehicle access.

**Pedestrian Access**

Pedestrian traffic from the adjacent neighborhoods north of First Street would be able to utilize the existing pedestrian facilities (sidewalks, crosswalks, pedestrian signal phasing at signalized intersections) along the adjacent streets to access the project site. With the signalization of the intersection of Kelton Drive and First Street by the proposed project, in conjunction with planned sidewalk improvement along First Street (south side) and Santa Teresa Boulevard (east side, south of First Street) by others, pedestrian access to and from the adjacent neighborhoods to the south also would be provided.

Pedestrian traffic also would be generated between the project site and The Piazza. The site plan shows a pedestrian pathway at the northwest corner of the project site connecting the project site and The Piazza parking area. This pedestrian connection would facilitate pedestrian travel between the two sites.

Based on the existing and plan pedestrian facilities, pedestrian access to and from the project site is projected to be adequate.

**On-Site Circulation**

The site plan shows the proposed buildings located along the western and eastern project site boundaries. The main drive aisle extends north/south between the buildings, connecting to both the Kelton Drive and the First Street driveways. All internal drive aisles are shown to be 22 feet wide, lined with 18-foot long parking stalls on one or both sides of the drive aisle. The proposed sit-down restaurant and one of the fast-food restaurants are located on the west side of the project site, while the retail building and the second fast-food restaurant are located on the east side of the site.
Project traffic would enter the project site from either the north (via the Kelton Drive driveway or the Santa Teresa Boulevard driveway) or the south (via the First Street driveway), circulate the project site and proceed to park, access the drive-through windows, and/or exit the site. The layout of the parking area would allow for easy circulation of the site and access to all parking stalls.

The site plan does not identify a designated on-site loading zone for the commercial uses. The project must identify a plan for the delivery of goods and supplies.

**Drive-Through Window Access**

Each of the proposed fast-food restaurants would include drive-through windows. As shown on the site plan, the drive-through window lanes would be 12 feet wide and would wrap around the back of the buildings on either side of the site. The entrance to both drive-through windows would be located on opposite corners at the north side of the site, between the buildings and the northernmost row of parking spaces. Both drive-through windows would be accessible from either the Kelton Drive or the First Street driveways. The western drive-through window exit would be located next to the First Street driveway, allowing drive-through customers to easily exit the site via First Street, or circulate back to the main drive aisle to access the Kelton Street (or Santa Teresa Boulevard) driveway. The eastern drive-through window exit would be located along the main drive aisle, allowing users of this drive-through lane to exit the site via either driveway.

The site plan shows queuing capacity for approximately 8 vehicles (approximately 180 feet long) within each of the drive-through lanes. The queue length at drive-through windows is dependent of the type of establishment and its service rate. For example, drive-through lane lengths for other restaurants in town range from approximately 100 feet (Wienerschnitzel restaurant on First Street), or 250 feet (McDonalds restaurant on First Street), to approximately 300 feet (Sonic restaurant on Pacheco Pass Highway). Based on information obtained from the project applicant, the proposed fast-food restaurants are not anticipated to be a national chain restaurant like McDonalds, but instead a local high-quality gourmet restaurant.

Although the anticipated queue length within the drive-through lanes cannot be estimated without further information on the proposed fast-food restaurants, the proposed project must ensure that the drive-through window queue lengths will not exceed the 8-vehicle capacity proposed within each lane. If either of the drive-through window queue lengths exceeds the proposed 8-vehicle queue capacity, the queue would block access to the parking spaces located adjacent to the drive-through lane entrances. Additionally, queue lengths in excess of 12 vehicles would extend onto the main (middle) drive aisle, which could then cause project traffic entering the project site from the north to extend onto the existing north drive aisle and potentially block access to/from The Piazza. However, it should be noted that although drive-through window queue lengths longer than 8 or 12 vehicles could potentially create operational issues within the project site, these driveway queues would have no effect on traffic operations on either First Street or Kelton Drive. The location of the drive-through lane entrances would make it very unlikely for their vehicular queues to extend onto First Street.

**Pedestrian On-Site Circulation**

The site plan shows sidewalks and pedestrian pathways throughout the project site and along the project site's frontage on First Street and Kelton Drive. All pedestrian pathways within the project site would connect to sidewalks along First Street and Kelton Drive. A crosswalk would be clearly marked along the main drive aisle, providing a connection between the buildings and encouraging pedestrian crossing of this drive aisle at a single location.

A pedestrian pathway located at the northwest corner of the project site would connect the project site and The Piazza parking area. This pathway, however, is located adjacent to and south of the proposed trash enclosures and an existing tree, which could limit visibility of pedestrians within the pathway to
vehicles entering The Piazza parking area from the existing north drive aisle. A speed bump located at the end of this drive aisle (adjacent to the tree) forces all incoming traffic, as well as outbound traffic, to slow down/stop before entering the Piazza parking area. The speed bump will provide inbound drivers, in particular those turning left, the opportunity to see pedestrians crossing between The Piazza and the project site, before entering the parking area.

Should it be required that the existing speed bump be removed, installation of a stop sign at this location, controlling the inbound movement, should be considered.

**Recommended Site Access and Circulation Improvements**

The following recommendations are made to promote adequate site access and on-site circulation:

**Design of Project Site.** The design of the project site, including but not limited to driveways, sidewalks, drive aisles, and parking stalls, should adhere to City of Gilroy design standards.

**Design of Kelton Drive Driveway.** Although the existing Kelton Drive driveway does not meet the recommended City of Gilroy commercial driveway width of 35-45 feet, an emergency vehicle access evaluation determined that this driveway can adequately provide inbound and outbound access to a 24.5-foot long fire engine. Therefore, access via this driveway is adequate.

The site plan shows a fire hydrant located next to/on the south side of this driveway. It is recommended that this fire hydrant be relocated farther south to avoid vehicles accidently hitting it as they make a right-turn out of this driveway.

**Designated Loading Area.** The site plan does not identify a designated loading area within the site. It is recommended that a delivery plan be identified and implemented, which would include a designated loading area and delivery time period. The delivery time period should occur during the project’s lowest traffic-generating time period, to the maximum extent possible.

**Monitor Drive-Through Window Queue.** It is recommended that the project applicant monitor the drive-through window queue lengths to ensure they do not exceed the proposed 8-vehicle queue capacity within each lane. If either of the drive-through window queue lengths exceeds the proposed 8-vehicle queue capacity, the project applicant must work with the fast-food restaurant to develop a strategy to reduce the vehicle queue or accommodate it on-site without causing it to block parking stalls and/or drive aisles.

**Visible Pedestrian Connection Between the Project Site and The Piazza.** It is recommended that the pathway connecting the proposed project to The Piazza parking lot (located at the northwest corner of the project site) be clearly visible to drivers within The Piazza parking lot, in particular to inbound traffic along the existing drive aisle on the north side of the project site. Additionally, should it be required that the existing speed bump be removed, installation of a stop sign at this location, controlling the inbound movement, should be considered.

**Evaluation of Kelton Drive**

Kelton Drive is the eastern project site boundary and provides direct access to the project site, as well as The Piazza site, via an existing driveway. It is projected that most of the project traffic (approximately 62%) would utilize the Kelton Drive driveway to access the project site, with 21% of the total project traffic utilizing Kelton Drive, north of the project site.

This evaluation consists of a roadway segment analysis to quantify the potential change in traffic volumes along the study roadway segment as a result of the proposed project. For the evaluation, the existing and projected with the project peak-hour and daily traffic volumes along Kelton Drive were
compared to acceptable volume thresholds for residential roadways to determine if the projected change in traffic volume would be considered significant.

Unlike the intersection level of service analysis methodology, which has established impact thresholds, the analyses contained in this section are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

**Roadway Characteristics**

Kelton Drive consists of a two lane, undivided residential roadway that extends between First Street and north of Welburn Avenue. It is approximately 50 feet wide, curb-to-curb, along the project site frontage.

A residential (or local) street is defined by the City of Gilroy as being 38 feet wide (including two 12-foot travel lanes and 2 7-foot parking lanes) with 11 feet of sidewalks and landscaping area on each side of the street, for a total right-of-way of 60 feet. The typical design speed for local streets is 25 miles per hour (mph), and average daily traffic (ADT) volumes typically ranging from 50 to 2,000 vehicles.

**Existing Roadway Conditions**

Speed and count (twenty-four hour tube counts) data were collected on March 27, 2018 at two locations along Kelton Drive: just north of the project site and south of Welburn Avenue. The traffic count data revealed that Kelton Drive currently carries approximately 1,350 daily vehicles (both directions combined) near the project site and approximately 1,200 daily vehicles near Welburn Avenue. Existing peak-hour volumes along Kelton Drive near the project site are 128 and 118 vehicles during the AM and PM peak hours, respectively. Based on the typical traffic volume ranges associated with local streets, Kelton Drive currently serves the recommended traffic volumes associated with its street classification.

Although no speed-limit signs are posted along Kelton Drive, typical design speeds along residential streets is 25 mph. The speed surveys revealed that the 85th percentile speeds along Kelton Drive near the project site were measured to be 18 mph, while the 85th percentile speeds near Welburn Avenue were measured to be 26-27 mph. The measured 85th percentile speeds along Kelton Drive are within 5 mph of the design speed limit, or lower. Speeds within 5 mph of the posted speed limits are considered reasonable. Therefore, based on the speed surveys, it can be concluded that there are currently no apparent speeding issues along Kelton Drive. Table 16 summarizes the existing traffic volumes and 85th percentile speeds collected along each of the studied roadway segments.

**Project's Effect on Kelton Drive**

The proposed project is projected to add approximately 21% of the project traffic to Kelton Drive. This equates to approximately 50 peak-hour trips and 595 daily trips being added to Kelton Drive, north of the project site, by the project. However, it should be noted that the daily project trip projections include pass-by traffic that would already be on the roadway network, and therefore would not be considered new traffic. With the proposed project, Kelton Drive is projected to carry approximately 1,950 daily vehicles, continuing to carry the recommended average daily traffic volumes associated with local streets.

Although the projected average daily trips are within acceptable ranges, the added project trips to Kelton Drive constitute an increase in traffic of approximately 45% to 50% from the existing daily traffic volumes, which could be considered a measurable increase in traffic volumes.
Table 16
Existing and Projected Traffic Volumes Along Kelton Drive

<table>
<thead>
<tr>
<th>#</th>
<th>Roadway Segment</th>
<th>Count Date</th>
<th>Direction</th>
<th>Speed Limit</th>
<th>85th Percentile Speed (mph)</th>
<th>ADT</th>
<th>ADT</th>
<th>ADT</th>
<th>% Change</th>
<th>ADT</th>
<th>ADT</th>
<th>ADT</th>
<th>ADT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Kelton Drive, North of Project</td>
<td>03/27/18</td>
<td>NB</td>
<td>25</td>
<td>18</td>
<td>67</td>
<td>71</td>
<td>716</td>
<td>49%</td>
<td>71</td>
<td>62</td>
<td>350</td>
<td>47%</td>
</tr>
<tr>
<td></td>
<td>Drive</td>
<td></td>
<td>SB</td>
<td>25</td>
<td>18</td>
<td>66</td>
<td>62</td>
<td>350</td>
<td>41%</td>
<td>64</td>
<td>59</td>
<td>255</td>
<td>43%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>133</td>
<td>49</td>
<td>42</td>
<td>605</td>
<td>45%</td>
<td>182</td>
<td>144</td>
<td>1,066</td>
<td>49%</td>
</tr>
<tr>
<td>2</td>
<td>Kelton Drive, South of Welburn</td>
<td>03/27/18</td>
<td>NB</td>
<td>25</td>
<td>27</td>
<td>61</td>
<td>58</td>
<td>558</td>
<td>63%</td>
<td>88</td>
<td>81</td>
<td>908</td>
<td>51%</td>
</tr>
<tr>
<td></td>
<td>Avenue</td>
<td></td>
<td>SB</td>
<td>25</td>
<td>26</td>
<td>38</td>
<td>33</td>
<td>634</td>
<td>40%</td>
<td>60</td>
<td>72</td>
<td>889</td>
<td>42%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>99</td>
<td>49</td>
<td>42</td>
<td>605</td>
<td>51%</td>
<td>148</td>
<td>153</td>
<td>1,797</td>
<td>51%</td>
</tr>
</tbody>
</table>

Notes:
1. Assumed speed limit, based on the California Vehicle Code which states that the speed limit for residential districts is 25 miles per hour, unless otherwise posted.
2. ADT = Average Daily Traffic

Additionally, as it was described in the intersection analysis, the addition of project traffic to the intersection of Kelton Drive/First Street is projected to contribute to the need for the signalization of this intersection, and would be considered a significant project impact. The required mitigation measure identified consists of the installation of a traffic signal.

The following conclusions can be drawn from the evaluation of Kelton Drive:

- Traffic volumes on Kelton Drive are and would continue to be within the local street volume range characteristic.
- The measured 85th percentile speeds along Kelton Drive are within 5 mph of the design speed for local streets, or lower. Speeds within 5 mph of the posted speed limits are considered reasonable.
- Traffic volumes along Kelton Drive are projected to increase by approximately 45% to 50% from existing conditions as a result of the proposed project, an increase which could be considered measurable and would be perceptible to residents of the adjacent neighborhood.

Although traffic volumes along Kelton Drive are projected to increase due to the proposed project, currently, based on the speed and count data collected, there are not indications of speeding or other traffic related issues along Kelton Drive. Even with the addition of the proposed project traffic, Kelton Drive is projected to continue to carry average daily traffic volumes within the typical acceptable volume range associated with local streets.
7. Conclusions

The traffic impact analysis documents the potential traffic impacts to the surrounding transportation network associated with the proposed project. The purpose of the traffic analysis is to satisfy the requirements of the City of Gilroy, the Congestion Management Program (CMP) of the Santa Clara Valley Transportation Authority (VTA), Caltrans, and the California Environmental Quality Act (CEQA).

The study includes the analysis of 12 intersections. The potential impacts of the project on intersections were evaluated in accordance with City of Gilroy level of service standards and impact criteria.

Background Plus Project Conditions Analysis

Signalized Intersections

The results of the level of service analysis indicate that, based on City of Gilroy intersection impact criteria, the project would not cause a significant level or service impact at any of the signalized study intersections under background plus project conditions.

Unsignalized Intersections

The unsignalized intersection analysis results also indicate that the following study intersection is projected to operate with average delays corresponding to LOS F on its stop-controlled approach with the highest delay and its traffic volume is high enough to satisfy the peak-hour volume warrant during both peak hours under background plus project conditions:

12. Kelton Drive and First Street (Impact: AM and PM peak hours)

Based on the unsignalized intersection level of service impact criteria, intersections where both the average delay on the stop-controlled approach with the highest delay operates at LOS E or F and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant, are considered to be impacted by the project. Although this condition was met at the above intersection under background conditions (the intersections was identified as being deficient under background conditions), the proposed project would contribute to the projected deficiency at this location, increasing the delay for the approach with the highest delay. Therefore, this is considered a significant project impact.

Roundabout Intersection

The results of the level of service analysis indicate that the study roundabout intersection is projected to be impacted by the proposed project under background plus project conditions, based on City of Gilroy signalized intersection level of service impact criteria:
4. Santa Teresa Boulevard and Third Street (Impact: AM and PM peak hours)

**Freeway Segment Analysis**

The proposed project consists of a neighborhood-serving commercial project and is not anticipated to generate a measurable amount of traffic from outside of Gilroy. The majority of the project generated traffic is anticipated to originate from the adjacent neighborhoods, without the need to utilize the freeway to access the project site. Since the number of project trips on US 101 is anticipated to be less than the one-percent threshold, the project would not cause a significant increase in traffic on the freeway segments in the study area, and a freeway level of service analysis is not required.

**Intersection Operations Analysis**

The intersection operations analysis shows that the addition of project traffic to the southbound left-turn movement at the intersection of Kelton Drive and First Street would cause the projected 95th percentile vehicle queue to increase by 6 vehicles (from 4 to 10 vehicles, or 250 feet) during the PM peak-hour under background plus project conditions, exceeding the existing storage capacity by approximately 4 vehicles (or 100 feet). Addition of project traffic that results in the projected 95th percentile vehicle queue to exceed the available queue storage capacity is considered a significant project impact, according to the City of Gilroy definition of significant traffic operations impacts.

**Parking Analysis**

Based on the City of Gilroy adopted parking rates, the proposed project must provide a total of 102 parking spaces on-site to satisfy the City’s requirements. The project is proposing to provide a total of 63 parking spaces on site, which is 39 spaces less than the number of parking spaces required based on City of Gilroy parking requirements. Therefore, the estimated shortage of on-site parking to serve the projected parking demand constitutes a significant project impact, according to the City of Gilroy definition of significant parking impacts.

To satisfy the City of Gilroy parking requirements, the project applicant is proposing to implement a shared parking program between the proposed project and The Piazza. There are a total of 187 parking spaces on-site to serve The Piazza, while based on the City of Gilroy parking requirements, a total of 186 parking spaces are required to serve The Piazza. A shared parking study was completed in September 2017 where it was determined that the existing parking supply serving The Piazza is currently under utilized. The parking counts showed that no more than 66% and 78% of the available parking spaces were occupied during The Piazza’s weekday and weekend peak parking demand, respectively, with occupancy at The Piazza at what would be considered fully occupied (approximately 98% occupied, based on information provided by The Piazza). The results also show that the actual parking demand at The Piazza is approximately 64 parking spaces (42 parking spaces on Sunday) less than the required number of parking spaces based on the City off-street parking code, and the measured excess parking supply at The Piazza could be utilized to satisfy the projected parking demand for the proposed project. The shared-parking study concluded that combining the existing Piazza and proposed project parking spaces would provide sufficient parking to serve the projected demand from both The Piazza and the proposed commercial project.

**Emergency Access Evaluation**

With up to three access points, the project site provides adequate emergency vehicle access.

A site plan prepared by RJA Engineers and dated October 30, 2017 shows the wheel travel path of a 24.5-foot fire engine (typical size) entering, traveling through, and exiting the project site. This travel path evaluation demonstrates that a fire engine would be able to access and circulate the project site via both project driveways on Kelton Drive and First Street. Therefore, it can be concluded that the
proposed project site layout and driveway width and locations would provide adequate emergency
vehicular access and circulation.

**Recommended Mitigation Measures under Background Plus Project Conditions**

Described below are the recommended mitigation measures necessary to maintain the level of service
standard and intersection operations under background plus project conditions.

**4. Santa Teresa Boulevard and Third Street (City of Gilroy Intersection)**

**Mitigation:** The project impact to this intersection could be mitigated by widening the roundabout
from a one-lane to a two-lane roundabout. This improvement can be accomplished by
converting the existing northbound/southbound right-turn lanes to shared right-and-
thru lanes. Additionally, a second receiving lane in both the northbound and
southbound directions (Santa Teresa Boulevard) would be required, requiring the
widening of Santa Teresa Boulevard from 2 to 4 lanes, including the widening of the
bridge structure south of Third Street. Implementation of the above improvements would
improve the intersection level of service to acceptable LOS B or better during the AM
and PM peak hours under background plus project conditions.

The roundabout improvement, as well as the widening of Santa Teresa Boulevard to four
lanes and the widening of the bridge structure south of Third Street, are included in the
City’s Traffic Circulation Master Plan (TCMP) and Traffic Impact Fee (TIF) Program.
However, due to the magnitude of the necessary improvements, it is not feasible for an
individual development project to bear responsibility for implementing such extensive
transportation system improvements. Thus, to mitigate the project impact at this location,
the developer will be required to pay the applicable TIF fee as a fair-share contribution
toward the above improvements. With implementation of this mitigation measure, this
impact would be less-than-significant.

**12. Kelton Drive and First Street (Caltrans Intersection)**

**Mitigation:** The project impact to this intersection could be mitigated with the installation of a traffic
signal. With implementation of the above improvements, the intersection level of service
would improve to LOS B during the AM and PM peak hours under background plus
project conditions, and the impact would be less-than-significant.

First Street through its intersection with Kelton Drive is under the jurisdiction of Caltrans.
Therefore, the installation of a signal at this intersection must be reviewed and approved
by Caltrans. Should Caltrans deem the proposed traffic signal undesirable, the
intersection would need to be designed to restrict some, or all, left-turn access at the
intersection.

**12. Kelton Drive and First Street – Southbound Left-Turn Queue**

**Mitigation:** The project impact to the southbound left-turn movement at this intersection could be
mitigated with the installation of a traffic signal. Implementation of a traffic signal at this
location also has been identified as an improvement to mitigate a level of service impact.
With implementation of the traffic signal, projected maximum queue lengths at the
intersection would be able to accommodate within the existing queue storage capacity
during the AM and PM peak hours under background plus project conditions, and the
project impact would be less-than-significant.
Parking

Mitigation: The project impact to the parking requirements could be mitigated with the implementation of a Parking Management Plan (shared-parking) between the project and The Piazza. It was estimated that the proposed project is proposing to provide 39 on-site parking spaces less than the number of parking spaces required based on City of Gilroy parking requirements. Based on a shared-parking analysis that was completed for the proposed project and The Piazza, it was determined that The Piazza currently provides more on-site parking than its full-occupancy demand, and that the observed excess parking supply at The Piazza (approximately 42 to 64 parking spaces) could be utilized to satisfy the projected parking demand for the proposed project. The shared-parking study concluded that implementing a shared-parking program would result in sufficient parking to serve the projected demand from both The Piazza and the proposed commercial project. The study also made the recommendation to designate the farthest parking stalls from the proposed shopping center (parking spaces along the east side of The Piazza) as employee parking. This will reduce parking activity within The Piazza and will provide the nearest parking spaces to the proposed commercial development customers.

A parking agreement between the proposed project and The Piazza establishing the shared-parking program shall be developed and implemented prior to occupancy of the proposed project. With implementation of an acceptable shared-parking program, the project impact would be less-than-significant.

Cumulative Plus Project Conditions Analyses

Signalized Intersections

The results of the level of service analysis indicate that the intersection of Wren Avenue and Welburn Avenue (intersection #7) is projected to operate at unacceptable LOS D under cumulative and cumulative plus project conditions and the addition of project traffic would cause the intersection average delay to increase by more than 2.0 seconds during the PM peak-hour. This constitutes a cumulative project impact, based on City of Gilroy signalized intersection level of service impact criteria.

Unsignalized Intersections

The unsignalized intersection analysis results also indicate that the following study intersection is projected to operate with average delays corresponding to LOS F on its stop-controlled approach with the highest delay and its traffic volume is high enough to satisfy the peak-hour volume warrant during both peak hours under cumulative plus project conditions:

12. Kelton Drive and First Street (Impact: AM and PM peak hours)

Based on the unsignalized intersection level of service impact criteria, intersections where both the average delay on the stop-controlled approach with the highest delay operates at LOS E or F and the addition of project traffic causes the traffic volumes at the intersection to satisfy the peak-hour volume traffic signal warrant, are considered to be impacted by the project. Although this condition was met at the above intersection under cumulative conditions, the proposed project would contribute to the projected deficiency at this location, increasing the delay for the approach with the highest delay. Therefore, this is considered a cumulative project impact.
Roundabout Intersection

The results of the level of service analysis indicate that the study roundabout intersection is projected to be impacted by the proposed project under cumulative plus project conditions, based on City of Gilroy signalized intersection level of service impact criteria:

4. Santa Teresa Boulevard and Third Street (Impact: AM and PM peak hours)

Recommended Mitigation Measures under Cumulative Plus Project Conditions

Described below are the recommended mitigation measures necessary to maintain the level of service standard and intersection operations under cumulative plus project conditions.

4. Santa Teresa Boulevard and Third Street (City of Gilroy Intersection)

Mitigation: The project impact to this intersection could be mitigated by widening the roundabout from a one-lane to a two-lane roundabout. This improvement can be accomplished by converting the existing northbound/southbound right-turn lanes to shared right-and-through lanes. Additionally, a second receiving lane in both the northbound and southbound directions (Santa Teresa Boulevard) would be required. Implementation of the above improvements would improve the intersection level of service to acceptable LOS B during the AM and PM peak hours under cumulative plus project conditions.

The roundabout improvement, as well as the widening of Santa Teresa Boulevard to four lanes and the widening of the bridge structure south of Third Street, are included in the City’s Traffic Circulation Master Plan (TCMP) and Traffic Impact Fee (TIF) Program. However, due to the magnitude of the necessary improvements, it is not feasible for an individual development project to bear responsibility for implementing such extensive transportation system improvements. Thus, to mitigate the project impact at this location, the developer will be required to pay the applicable TIF fee as a fair-share contribution toward the above improvements. With implementation of this mitigation measure, this cumulative impact would be less-than-significant.

7. Wren Avenue and Welburn Avenue (City of Gilroy Intersection)

Mitigation: The project impact to this intersection could be mitigated with the addition of a separate westbound left-turn lane, or with the addition of a separate eastbound right-turn lane. Both of these improvements would require the removal of on-street parking along Welburn Avenue to accommodate the additional lane. Implementation of either of the above improvements would improve the intersection level of service to acceptable LOS C during the AM and PM peak hours under cumulative plus project conditions.

The above improvements are planned in the City’s TCMP and are included in the City’s TIF Program. The developer will be required to pay the applicable TIF fee as a fair-share contribution toward improvements at this intersection. With implementation of this mitigation measure, this cumulative impact would be less-than-significant.

12. Kelton Drive and First Street (Caltrans Intersection)

Impact: This unsignalized intersection is projected to operate with delays on the highest-delay approach equivalent to an unacceptable LOS F during the peak hours under cumulative plus project conditions and the traffic volume levels at the intersection would be high enough to satisfy the peak-hour volume traffic signal warrant. Based on City of Gilroy level of service impact criteria for unsignalized intersections, this constitutes a cumulative project impact.
Mitigation: The project impact to this intersection could be mitigated with the installation of a traffic signal. With implementation of the above improvements, the intersection level of service would improve to LOS B during the AM and PM peak hours under cumulative plus project conditions, and this cumulative impact would be less-than-significant.

First Street through its intersection with Kelton Drive is under the jurisdiction of Caltrans. Therefore, the installation of a signal at this intersection must be reviewed and approved by Caltrans. Should Caltrans deem the proposed traffic signal undesirable, the intersection would need to be designed to restrict some, or all, left-turn access at the intersection.

Other Transportation Issues

Bicycle Circulation

Project’s Effect on Bicycle Facilities

The proposed project would increase the demand on bicycle facilities in the vicinity of the project site. The potential demand could be served by the various bicycle facilities available in the immediate vicinity of the project site. With implementation of the planned bicycle facilities, in addition to the existing facilities, the project site would be served directly by numerous bicycle facilities.

Recommended Bicycle Facility Improvements

The following recommendations are made to promote non-auto modes of transportation in the City and to accommodate bicycle travel near the project site:

Install Bicycle Parking Facilities. It is recommended that the proposed project provide adequate bicycle parking supply on site, based on VTA’s recommends bicycle-parking rates, to serve the potential demand of the project. Based on VTA’s bicycle parking supply recommendations, the proposed project should provide 1 Class I (bicycle locker) and 4 Class II (bicycle rack) bicycle parking spaces.

Pedestrian Circulation

Project’s Effect on Pedestrian Facilities

It can be expected that new pedestrian traffic would be generated by the proposed project. The project site is located within what would be considered a walking distance (less than half one mile) from various surrounding neighborhoods, in particular those immediately north of the project site. Existing pedestrian facilities are currently available between the neighborhoods north of First Street and the project site. Additionally, with the implementation of a traffic signal at the intersection of Kelton Drive and First Street (required to mitigate a project impact at this intersection), a direct pedestrian connection between the proposed project and the approved project located across from the project site would be provided, facilitating pedestrian access between the two sites.

Based on the existing and planned pedestrian facilities, sufficient pedestrian facilities will be available providing a connection between the project site and the surrounding residential neighborhoods.

Recommended Pedestrian Circulation Improvements

The following recommendations are made to promote pedestrian travel to and from the project site:

Installation of Crosswalks. Crosswalks and pedestrian phases should be planned along all legs of the proposed new signalized intersection of Kelton Drive and First Street.
Transit Service

Currently, the project site is not served directly by any of the existing bus routes in Gilroy. The nearest bus route to the project site is Community Bus Route 19, which provides service between the Gilroy Transit Center and First Street/Kern Avenue and includes a stop at the intersection of Kern Avenue and First Street, less than one half mile walking distance east of the project site.

Recommended Transit Service Improvements

The following recommendations are made to promote the use of public transit service to and from the project site:

Expansion of Service. With the development of the project, in addition to other approved residential projects along Santa Teresa Boulevard, south of the project site, there will be an opportunity for VTA to expand the existing service area to the south/west part of Gilroy, and by providing a bus stop in the immediate project area, to serve the project site directly.

Site Access

Access to the project site would be provided via one existing driveway along Kelton Drive and one along First Street. These driveways currently provide access to The Piazza and Union Bank. The driveway along Kelton Drive consists of a full-access, 30-foot wide driveway while the driveway along First Street is approximately 37 feet wide and provides right-in and out access only.

The project site also is accessible from Santa Teresa Boulevard, via the existing The Piazza driveway. The Santa Teresa driveway provides right-in and left-in access from Santa Teresa Boulevard, but only right-out access, and is approximately 35 feet wide.

The City of Gilroy commercial driveway design guidelines, dated August 2005, specify that commercial driveways must be a minimum of 35 feet wide (maximum of 45 feet). Based on this requirement, the Kelton Drive project driveway would not meet City design standards. However, based on the emergency vehicle access evaluation prepared by RJA Engineers, it was shown that the Kelton Drive driveway can adequately provide inbound and outbound access to a 24.5-foot long fire engine.

Operations at the Project Driveways

Therefore, the driveways providing access to the proposed project are projected to operate acceptably and no operational deficiencies are anticipated.

Pedestrian Access

Based on the existing and plan pedestrian facilities, pedestrian access to and from the project site is projected to be adequate.

On-Site Circulation

Project traffic would enter the project site from either the north (via the Kelton Drive driveway or the Santa Teresa Boulevard driveway) or the south (via the First Street driveway), circulate the project site and proceed to park, access the drive-through windows, and/or exit the site. The layout of the parking area would allow for easy circulation of the site and access to all parking stalls.

The site plan does not identify a designated on-site loading zone for the commercial uses. The project must identify a plan for the delivery of goods and supplies.
**Drive-Through Window Access**

The site plan shows queuing capacity for approximately 8 vehicles (approximately 180 feet long) within each of the drive-through lanes. The queue length at drive-through windows is dependent on the type of establishment and its service rate. For example, drive-through lane lengths for other restaurants in town range from approximately 100 feet (Wienerschnitzel restaurant on First Street), or 250 feet (McDonalds restaurant on First Street), to approximately 300 feet (Sonic restaurant on Pacheco Pass Highway). Based on information obtained from the project applicant, the proposed fast-food restaurants are not anticipated to be a national chain restaurant like McDonalds, but instead a local high-quality gourmet restaurant.

Although the anticipated queue length within the drive-through lanes cannot be estimated without further information on the proposed fast-food restaurants, the proposed project must ensure that the drive-through window queue lengths will not exceed the 8-vehicle capacity proposed within each lane. If either of the drive-through window queue lengths exceeds the proposed 8-vehicle queue capacity, the queue would block access to the parking spaces located adjacent to the drive-through lane entrances. Additionally, queue lengths in excess of 12 vehicles would extend onto the main (middle) drive aisle, which could then cause project traffic entering the project site from the north to extend onto the existing north drive aisle and potentially block access to/from The Piazza. However, it should be noted that although drive-through window queue lengths longer than 8 or 12 vehicles could potentially create operational issues within the project site, these driveway queues would have no effect on traffic operations on either First Street or Kelton Drive. The location of the drive-through lane entrances would make it very unlikely for their vehicular queues to extend onto First Street.

**Pedestrian On-Site Circulation**

A pedestrian pathway located at the northwest corner of the project site would connect the project site and The Piazza parking area. This pathway, however, is located adjacent to and south of the proposed trash enclosures and an existing tree, which could limit visibility of pedestrians within the pathway to vehicles entering The Piazza parking area from the existing north drive aisle. A speed bump located at the end of this drive aisle (adjacent to the tree) forces all incoming traffic, as well as outbound traffic, to slow down/stop before entering the Piazza parking area. The speed bump will provide inbound drivers, in particular those turning left, the opportunity to see pedestrians crossing between The Piazza and the project site, before entering the parking area.

Should it be required that the existing speed bump be removed, installation of a stop sign at this location, controlling the inbound movement, should be considered.

**Recommended Site Access and Circulation Improvements**

The following recommendations are made to promote adequate site access and on-site circulation:

**Design of Project Site.** The design of the project site, including but not limited to driveways, sidewalks, drive aisles, and parking stalls, should adhere to City of Gilroy design standards.

**Design of Kelton Drive Driveway.** Although the existing Kelton Drive driveway does not meet the recommended City of Gilroy commercial driveway width of 35-45 feet, an emergency vehicle access evaluation determined that this driveway can adequately provide inbound and outbound access to a 24.5-foot long fire engine. Therefore, access via this driveway is adequate.

The site plan shows a fire hydrant located next to/on the south side of this driveway. It is recommended that this fire hydrant be relocated farther south to avoid vehicles accidently hitting it as they make a right-turn out of this driveway.
Designated Loading Area. The site plan does not identify a designated loading area within the site. It is recommended that a delivery plan be identified and implemented, which would include a designated loading area and delivery time period. The delivery time period should occur during the project’s lowest traffic-generating time period, to the maximum extent possible.

Monitor Drive-Through Window Queue. It is recommended that the project applicant monitor the drive-through window queue lengths to ensure they do not exceed the proposed 8-vehicle queue capacity within each lane. If either of the drive-through window queue lengths exceeds the proposed 8-vehicle queue capacity, the project applicant must work with the fast-food restaurant to develop a strategy to reduce the vehicle queue or accommodate it on-site without causing it to block parking stalls and/or drive aisles.

Visible Pedestrian Connection Between the Project Site and The Piazza. It is recommended that the pathway connecting the proposed project to The Piazza parking lot (located at the northwest corner of the project site) be clearly visible to drivers within The Piazza parking lot, in particular to inbound traffic along the existing drive aisle on the north side of the project site. Additionally, should it be required that the existing speed bump be removed, installation of a stop sign at this location, controlling the inbound movement, should be considered.

Evaluation of Kelton Drive

Kelton Drive is the eastern project site boundary and provides direct access to the project site, as well as The Piazza site, via an existing driveway. It is projected that most of the project traffic (approximately 62%) would utilize the Kelton Drive driveway to access the project site, with 21% of the total project traffic utilizing Kelton Drive, north of the project site.

This evaluation consists of a roadway segment analysis to quantify the potential change in traffic volumes along the study roadway segment as a result of the proposed project.

Project's Effect on Kelton Drive

The proposed project is projected to add approximately 21% of the project traffic to Kelton Drive. This equates to approximately 50 peak-hour trips and 595 daily trips being added to Kelton Drive, north of the project site, by the project. With the proposed project, Kelton Drive is projected to carry approximately 1,950 daily vehicles, continuing to carry the recommended average daily traffic volumes associated with local streets.

Additionally, as it was described in the intersection analysis, the addition of project traffic to the intersection of Kelton Drive/First Street is projected to contribute to the need for the signalization of this intersection, and would be considered a significant project impact. The required mitigation measure identified consists of the installation of a traffic signal.

The following conclusions can be drawn from the evaluation of Kelton Drive:

- Traffic volumes on Kelton Drive are and would continue to be within the local street volume range characteristic.
- The measured 85th percentile speeds along Kelton Drive are within 5 mph of the design speed for local streets, or lower. Speeds within 5 mph of the posted speed limits are considered reasonable.
- Traffic volumes along Kelton Drive are projected to increase by approximately 45% to 50% from existing conditions as a result of the proposed project, an increase which could be considered measurable and would be perceptible to residents of the adjacent neighborhood.

Although traffic volumes along Kelton Drive are projected to increase due to the proposed project, currently, based on the speed and count data collected, there are not indications of speeding or other
traffic related issues along Kelton Drive. Even with the addition of the proposed project traffic, Kelton Drive is projected to continue to carry average daily traffic volumes within the typical acceptable volume range associated with local streets.