

RESOLUTION NO. 2015-87

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF MARINA FINDING AND DETERMINING (1) CAPITAL IMPROVEMENT PROJECT LISTS WERE UPDATED IN ACCORDANCE WITH THE UNIVERSITY VILLAGES SETTLEMENT AGREEMENT, (2) THE LIKELIHOOD OF FUNDING FOR THE LONG TERM IMPROVEMENTS IS REASONABLY CERTAIN, AND (3) THE LONG TERM IMPROVEMENTS CAN BE BUILT AND COMPLETED BY THE END OF FISCAL YEAR 2020

WHEREAS, in May 2005 the City certified an Environmental Impact Report and adopted findings under California Environmental Quality Act (“CEQA”) in approving development of a 420 acre area within the City on former Fort Ord including 390 acres controlled by Marina Community Partners (“MCP”). In July 2005 Save Our Peninsula Committee (“SOP”) petitioned the Monterey Superior Court for a writ of mandate to overturn the City’s approvals. In March 2006, the court denied SOP’s petition and SOP appealed. On September 15, 2006, the City, MCP and SOP entered into the Settlement Agreement to settle all disputes relating to City and FOR A approvals and any other claims or disputes relating to the litigation; and

WHEREAS, in the Settlement Agreement the City agreed to undertake certain actions with respect to construction of improvements to the interchange at Imjin Parkway and State Highway 1 (“SR-1”) as follows: (i) updating its 5-year and 1-year Capital Improvement Program (“CIP”) project lists, along with funding sources identified to complete projects included on the project lists, annually between May 1 and July 31 by holding public meetings of the Planning Commission and public hearings and consideration by the City Council relating to adoption of said CIPs; (ii) within two years of the completion of a Project Study Report (PSR), preparing and presenting publicly at a City Council meeting a preliminary budget for the Long Term Improvements, a report on the status of funding available and funding projected for the Long Term Improvements; and (iii) not later than July 31 of 2015, holding a publicly noticed hearing to determine that, with respect to the City’s Capital Improvement Program and the City’s participation in the funding of the Long Term Improvements, the likelihood of funding for the Long Term Improvements is reasonably certain and the Long Term Improvements can be built and completed by the end of fiscal year 2020; and

WHEREAS, the City updated its 5-year and 1-year CIP annually through City Council approval by Resolutions Nos.: 2007-179, 2008-167, 2009-153, 2010-169, 2011-130, 2012-197, and 2014-11. Council recently approved the 2015 CIP Update on June 23rd, 2015 by Resolution No. 2015-79; and

WHEREAS, in September 2013 the City completed the SR-1 & Imjin Parkway Operational Improvement Options Report (“Operational Improvement Options Report”), a report equivalent to a Project Study Report. This Report satisfies Mitigation Measure TR-3.2 (a) of the University Villages Specific Plan EIR Mitigation Monitoring Program. The Operational Improvement Options Report is attached as “**Exhibit A**”. Caltrans has reviewed, provided comments and provided a letter of acceptance for the Operational Improvement Options Report (“**Exhibit B**”); and

WHEREAS, as discussed in the Operational Improvement Options Report, Caltrans will be studying future regionally related transportation improvements across a large study area that includes the SR-1 / Imjin Parkway interchange. In coordination with the future regionally related improvements, the City will continue to work closely with Caltrans to coordinate the implementation of the Long Term Improvements, Mitigation Measure TR-3.2(b), per the University Village EIR by the end of fiscal year 2020; and

WHEREAS, Mitigation Measure TR-3.2(b) is summarized as follows: convert the southbound SR-1 off-ramp to become an off-ramp loop at the SR-1 southbound ramp at the Imjin Parkway intersection (or functional equivalent, to be determined following the completion of a developer funded combined PSR for the SR-1 southbound ramps at the Imjin Parkway intersection and Imjin Parkway and 2nd Avenue at the 2nd Avenue/Imjin Parkway intersection); and

WHEREAS, City has budgeted and set aside funding for the future installation of a SR-1 / Imjin Parkway southbound loop off-ramp (or functional equivalent). Staff estimated the cost for the development and construction of this loop off ramp to be \$2,025,000. This estimate includes a contingency factor of 20%. The City has set aside \$1,998,579, representing 99% of the estimated amount, in the Public Facility Impact Fee, Roadway and Intersection accounts, as set forth below; and

WHEREAS, Staff has presented the Preliminary Budget for the Long Term Improvements to the interchange at Imjin Parkway and SR-1 and a report on the status of funding available and funding projected for those long term improvements; and; the City is working with Caltrans to coordinate regionally related transportation improvements with the Long Term Improvements identified in TR-3.2(b). The City has allocated adequate Public Facilities Impact Fee (PFIF) funding in the Capital Improvement Program Project Fund 62 for a conversion of the southbound Highway1 off-ramp to become an off-ramp loop as specified in TR-3.2(b), based on the City’s estimate of construction costs for the Long Term Improvements and the existing balance in CIP Project Fund 62 and estimated future revenue from the PFIF through Fiscal Year 2020. Estimated future revenue is based on the reasonable advancement of currently entitled and planned development projects. . (See City of Marina Project Impact Fees – Estimated Revenues attached as “**EXHIBIT C.**”) Therefore the likelihood of funding for the Long Term Improvements is reasonably certain; and

WHEREAS, the City has programmed \$\$1,998,579 in the currently adopted 5-Year Capital Improvement Program to fund construction of the Long Term Improvements by the end of Fiscal Year 2020; and

WHEREAS, funding has been provided through development impact fees paid and allocated into the Capital Improvement Program Project Fund No. 62 for the Long Term Improvements. The City estimates the cost of the Long Term Improvements to be \$2,025,000, as set forth on the cost estimate attached as “**Exhibit D;**” and

WHEREAS, through current development project advancement, expected PFIF funding is as follows:

<u>CIP Fund 62</u> Fund Balance by Fee Type	FY 14/15 Fund Balance	Est. Revenue FY15/16 - FY19/20	Est. Balance FY19/20
Roadway PFIF	\$ 2,078,978.00	\$ 3,711,391	\$ 5,790,369
Intersection PFIF	\$ 756,455.00	\$ 1,831,275	\$ 2,587,730

WHEREAS, existing and future PFIF funding, demonstrates with reasonable certainty the likelihood of adequate funds being available so that the Long Term Improvements can be built and completed by the end of the 2020 fiscal year, because there is reasonably estimated to be \$8,378,099 available to pay for the Long Term Improvements in the City's FY2020 5-year Capital Improvement Program; and

NOW THEREFORE, BE IT RESOLVED, based upon the information received during the public hearing, the staff report, and staff's presentations at the meeting on July 14, 2015, that it is found and determined by the City Council of the City of Marina on the basis of substantial evidence that:

1. The City updated its 5-year and 1-year Capital Improvement Program project lists substantially in accordance with the University Villages Settlement Agreement.
2. With respect to the City's Capital Improvement Programs and the City's participation in the funding of the Long Term Improvements, the likelihood of funding for the Long Term Improvements is reasonably certain.
3. The Long Term Improvements can be built and completed by the end of fiscal year 2020.

PASSED AND ADOPTED, at a special meeting of the City Council of the City of Marina, duly held on the 14th day of July 2015 by the following vote:

AYES: COUNCIL MEMBERS: Amadeo, Brown, Morton, O'Connell, Delgado

NOES: COUNCIL MEMBERS: None

ABSENT: COUNCIL MEMBERS: None

ABSTAIN: COUNCIL MEMBERS: None

Bruce C. Delgado, Mayor

ATTEST:

Anita Sharp, Deputy City Clerk

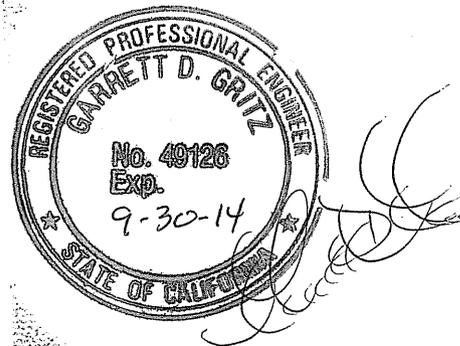
EXHIBIT A

SR 1/IMJIN PARKWAY OPERATIONAL IMPROVEMENT OPTIONS REPORT

FINAL REPORT

PREPARED FOR:

CITY OF MARINA, CA



SEPTEMBER 23, 2013

RBF
CONSULTING

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1. INTRODUCTION AND STUDY OBJECTIVE

State Route 1 (SR 1) is the major coastal route through Monterey County and is the primary highway that serves the Monterey Peninsula. The highway passes through varying terrain, ranging from agricultural lands to urban areas. The April 2006 *Transportation Concept Report for State Route 1 in District 5*, classified SR 1 in the vicinity of the City of Marina as a principal arterial and a High Emphasis Route on the Interregional Road System.

The SR 1 / Imjin Parkway interchange is located in the City of Marina, California between the SR 1 / Del Monte Boulevard interchange (northerly) and the SR 1 / Light Fighter Drive interchange (southerly). The SR 1 / Imjin Parkway interchange configuration is a compact diamond (Caltrans Type L-1) and was constructed during the 1970's.

In 2005, the University Villages Environmental Impact Report (EIR) (currently known as the Dunes on Monterey Bay project) was adopted by the City of Marina. Several of the mitigation measures identified in this EIR require the preparation of a Project Study Report (PSR) for the SR 1 / Imjin Parkway interchange. Caltrans has determined that upon their acceptance of the SR 1 / Imjin Parkway Operational Improvement Options Report (the information contained herein), the mitigation requirement (See Appendix D) associated with the preparation of a PSR for the SR 1 / Imjin Parkway interchange will be satisfied.

This SR 1 / Imjin Parkway Operational Improvement Options Report identifies and evaluates potential alternatives to improve operations at the SR 1 / Imjin Parkway interchange in the City of Marina, including weave analysis, merge and diverge operations, and mainline LOS for SR 1 between Del Monte Boulevard and Light Fighter Drive. Specifically, the alternatives identified herein consist of near-term improvements anticipated to be constructed prior to 2015 and longer-term improvements that are anticipated to be constructed between 2016 and 2035, as warranted. These improvements will address the immediate operational deficiencies (near-term improvements) and forecast operational deficiencies (long-term improvements), as warranted, that are directly related to mitigation requirements as specifically identified in the University Villages EIR.. In addition, this report acknowledges future long-term regionally related transportation improvements that will likely be required to address cumulative impacts from both local and regional growth that are not associated with the mitigation measures identified in the University Villages EIR. These future long-term regionally related transportation improvements are being acknowledged herein to balance the timing and implementation of the University Villages EIR mitigation measures with the anticipated future regional improvements. Ultimately, the University Villages EIR mitigation measures should be constructed concurrently with the anticipated regional improvements needed along SR 1 in the vicinity of Imjin Parkway and Del Monte Boulevard.

The City of Marina and Caltrans agreed that this Operational Improvement Options Report would evaluate the traffic and operational characteristics of the SR 1 / Imjin Parkway interchange, traffic volumes along the SR 1 mainline from Light Fighter Drive to Reservation Road, and the programmed and planned local circulation system in the vicinity of Imjin Parkway. The supporting traffic analysis also incorporates regional traffic traveling using the regional travel demand model.

This Operational Improvement Options Report summarizes Existing Conditions, the development of the future traffic forecasts, and the evaluation of the project alternatives. The report includes the following sections:

1. Introduction and Study Objective
2. Background and Existing Conditions

3. Study Purpose and Need
4. Project Alternatives
5. Traffic Forecasts
6. Traffic Analysis of Project Alternatives

2. BACKGROUND AND EXISTING CONDITIONS

Background

The SR 1 / Imjin Parkway interchange and the SR 1 / Del Monte Boulevard interchange were originally constructed under the direction of the U.S. Army. These two interchanges are very close together, and the spacing between the two interchanges is approximately 3,500 feet. The current Caltrans standard for interchange spacing is one mile or 5,280 feet. The nonstandard interchange spacing, the increases in traffic volumes and the interchange configurations have previously caused operational issues for vehicles entering and exiting the SR 1 mainline.

The 2006 Transportation Concept Report for SR 1 forecasts the mainline to operate at Level of Service (LOS) D during peak hours. This forecast is based upon the existing and programmed improvements on SR 1 in the vicinity of the City of Marina. Regional traffic volumes continue to increase and currently there are no projects programmed to increase the capacity of the existing SR 1 mainline facility within the study area.

Imjin Parkway is a major roadway that provides access to and from SR 1 for City of Marina community members. In addition, Imjin Parkway accommodates regional traffic that uses Imjin Parkway as an alternative “bypass” facility when other regional routes (SR 68) are impacted. As such, Imjin Parkway serves both local and regional traffic. Caltrans has stated that the ultimate configuration of the SR 1 / Imjin Parkway interchange should be properly designed in a phased approach to accommodate future growth associated with approved local projects, as well as growth associated with increases in regional traffic.

There are two projects that are currently being studied for improving the SR 1 / Imjin Parkway interchange. The first project is associated with implementing all or portions of the University Villages EIR mitigation measures. The second project is a TAMC and City of Marina (in collaboration with Caltrans) project to prepare a Project Initiation Document (PSR/PDS) that will study and then program funding for SR 1 mainline and interchange improvements near Imjin Parkway that will address long term mainline traffic operations issues related to the closely spaced interchanges. This Project Initiation Document will also address the operational deficiencies at the interchanges due to increases in regional traffic volumes. The long term improvement mitigation measures identified in the University Villages EIR would be incorporated into the second project.

Existing Conditions

SR 1 Mainline

SR 1 is a major arterial highway that travels along the western edge of the City of Marina. Vehicles traveling along SR 1 can access the City of Marina via three interchanges: the SR 1 / Imjin Parkway interchange, the SR 1 / Del Monte Boulevard interchange, and the SR 1 / Reservation Road interchange. SR 1 is a four-lane facility to the north of Del Monte Boulevard and a six-lane facility to the south of Imjin Parkway.

SR 1 Interchanges

Four interchanges along the SR 1 corridor are included within the study area. Light Fighter is the most southerly interchange and is approximately 8,300 feet south of Imjin Parkway. The distance between the Imjin Parkway interchange and the Del Monte Boulevard interchange is approximately 3,500 feet. This interchange spacing does not meet the Caltrans minimum standard (5,280 ft) for interchange spacing. The distance between Del Monte Boulevard interchange and Reservation Road interchange is approximately 7,700 feet.

SR 1 Ramps

SR 1 / Del Monte Boulevard Interchange

SR 1 SB on-ramp at Del Monte Boulevard

The SB SR 1 on-ramp at Del Monte Boulevard is a one-lane on-ramp, which connects to the SR 1 mainline as a dedicated outside lane. The freeway continues SB as a three-lane facility.

SR 1 NB off-ramp at Del Monte Boulevard

The NB SR 1 off-ramp at Del Monte Boulevard is a two-lane off ramp which diverges as the outside lane from the SR 1 mainline. The third NB lane on the freeway mainline continues into the one off ramp lane. The freeway continues northbound as a two-lane facility.

SR 1 NB on-ramp and SB off-ramp at Del Monte Boulevard

The existing Del Monte Boulevard interchange does not accommodate a NB on-ramp or a SB off-ramp.

SR 1 / Imjin Parkway Interchange

SR 1 SB Ramps at Imjin Parkway

The SB SR 1 off-ramp at Imjin Parkway is a one-lane off-ramp that terminates at Imjin Parkway. The off-ramp intersection with Imjin Parkway is controlled by a stop sign. The SB off-ramp is 1,150 feet long and meets the minimum Caltrans design standards for a single lane off-ramp.

The SB SR 1 on-ramp at Imjin Parkway is a one-lane on-ramp that merges onto SR 1 into the number 3 lane. The SB on-ramp is 1,080 feet long and meets the minimum Caltrans design standards for a single lane on-ramp. The westbound to southbound movement at this intersection is uncontrolled.

SR 1 NB Ramps at Imjin Parkway

The NB SR 1 off-ramp at Imjin Parkway is a single-lane off ramp which transitions into two lanes approximately 750 feet from the gore point at SR 1. The right lane curves as a free movement

eastward onto Imjin Parkway in its own exclusive lane. The left lane travels northbound to a one-way stop controlled intersection at Imjin Parkway. This intersection provides access to the northbound SR 1 on-ramp and Imjin Parkway.

The northbound SR 1 on-ramp at Imjin is a single-lane on-ramp that merges onto the SR 1 with the number 3 lane.

Imjin Parkway

Imjin Parkway is a local arterial, which begins at Reservation Road within the City of Marina and terminates at SR 1. Currently, Imjin Parkway is a four-lane facility; however, it is planned to be widened to a six-lane facility between Imjin Road and SR 1. Imjin Parkway is currently used as a regional commute route, accommodating vehicles traveling between the Salinas and the Monterey areas. It should be noted that Imjin Parkway was not designed to be a regional commute route.

Study Limit Summary

The following provides a summary of the locations included in the project study area for the SR 1 / Imjin Parkway alternatives analysis and recommended improvements. The locations studied include the freeway mainline, southbound and northbound weave sections (between Del Monte Boulevard and Imjin Parkway), freeway ramps, and multiple intersections, as follows:

- SR 1 mainline between Light Fighter Drive and Reservation Road (mainline operational analysis)
- Northbound and southbound SR 1 mainline between Del Monte Boulevard and Imjin Parkway (weave analysis)
- SR 1 on- and off-ramps at Del Monte Boulevard and Imjin Parkway interchanges (ramp operational analysis)
- Intersection analysis at:
 - SR 1 SB Ramps / Imjin Parkway
 - SR 1 NB Ramps / Imjin Parkway
 - 2nd Avenue / Imjin Parkway
 - 2nd Avenue / Patton Parkway (future intersection)
 - 2nd Avenue / Del Monte Boulevard/SR 1 NB Off-ramp (future intersection)
 - 2nd Avenue / Del Monte Boulevard/SR 1 SB On-ramp (future intersection)

3. STUDY PURPOSE AND NEED

Purpose and Need

This SR 1 / Imjin Parkway Operational Improvement Options Report analyzes operational improvements (near-term improvements) to mitigate the expected development growth on opening day and the future growth identified in the AMBAG regional travel demand forecast model. The anticipated

near term operational improvements in the vicinity of Imjin Parkway are intersection control improvements, including:

- Installation of new traffic signals at Imjin Parkway/SR 1 SB and NB ramps intersections
- Modification of the NB Imjin Parkway off-ramp
- Extension of 2nd Avenue from Imjin Parkway to Del Monte Boulevard.

This SR 1 / Imjin Parkway Operational Improvement Options Report also acknowledges increasing local and regional traffic volumes, as forecast in the AMBAG regional travel demand forecast model. Major improvements are anticipated to mitigate the growth associated with the forecast increases in local and regional traffic volumes. These major improvements require a thorough analysis of the Imjin Parkway interchange configuration in combination with anticipated regionally beneficial mainline and regional improvements. TAMC, the City of Marina and Caltrans have acknowledged that there is a need to address the regional deficiencies anticipated on SR 1 between Imjin Parkway and Del Monte Boulevard. Several long term improvements will be considered in the vicinity of Imjin Parkway, such as:

- Improving capacity along SR 1
- Improving the Imjin Parkway and Del Monte interchanges

4. POTENTIAL ALTERNATIVES

Five “Build” alternatives and one “No Build” alternative are presented in this report. These “Build” alternatives are anticipated to provide intersection control, near-term (prior to 2015) and long-term (between 2016 and 2035) capacity to address existing and future operations of the SR 1 / Imjin Parkway interchange. It should be noted that other intersection control measures were evaluated, including a preliminary roundabout analysis. The following sections provide a description of the alternatives.

No Build Alternative

A “No Build” alternative is considered a viable option for the study site. With a “No Build” alternative, no improvements would be constructed and operations of the existing SR 1 / Imjin Parkway interchange and the SB SR 1 mainline would degrade over time.

Alternative 1 (Stop Control for WB Left-turns at SR 1 SB Ramp / Imjin Parkway)

Alternative 1 proposes implementation of stop control for the westbound left-turn movement from Imjin Parkway to the southbound SR 1 on-ramp. The existing stop control for the southbound off-ramp from SR 1 to Imjin Parkway would be removed, thus allowing an uncontrolled movement. No additional travel lanes or widening are proposed with this alternative. This improvement will be constructed within the State right-of-way. Figure 1 includes an illustration of Alternative 1.

Alternative 2 (Signal at SR 1 SB Ramp / Imjin Parkway)

The existing stop control at the SB SR 1 ramps / Imjin Parkway intersection will be replaced with a signal. The new intersection will provide one left turn lane for the SB SR 1 off-ramp vehicles traveling to eastbound (EB) Imjin Parkway. The proposed signal will include two-phase signal operations and be coordinated with the signal at 2nd Avenue / Imjin Parkway. No additional travel lanes are proposed. In addition, no separate signal phase would be provided for bicyclists to cross the intersection. This

improvement will be constructed within the State right-of-way. Alternative 2 is presented on Figure 2. The traffic analysis shows that this operational improvement provides the required interim mitigation.

Alternative 3 (Signal with Exclusive Bicycle Phase at SR 1 SB Ramp / Imjin Parkway)

This alternative is similar to Alternative 2 except that an exclusive all-red signal phase is provided for bicyclists. The exclusive bicycle phase would stop traffic in all directions and allow bicyclists to cross the intersection to access a bicycle trail on the west side of the SR 1 southbound ramps. Alternative 3 is presented on Figure 3.

Although the exclusive signal phase would provide a protected signal crossing for bicyclists, bicycle lanes would still not be provided on Imjin Parkway. This configuration is consistent with the University Villages EIR. Without dedicated bike lanes on Imjin Parkway, bicyclists would still be required to share the roadway with motor vehicles as is representative of the existing conditions. The exclusive bicycle phase would also make the intersection operate less efficiently as no motor vehicles are allowed to enter the intersection during the bicycle phase. Overall vehicle delays and queues would be increased as compared to Alternative 2.

Alternative 4 (Signals at Both SR 1 Ramp / Imjin Parkway Intersections)

Alternative 4 is Alternative 2 plus the implementation of a University Villages mitigation measure identified in the EIR to make improvements to the SR 1 Imjin Parkway northbound off-ramp intersection.

The University Villages EIR identified a mitigation measure to install a median island on Imjin Parkway at the northbound off-ramp. An improvement that is equivalent to this mitigation measure is to install a new traffic signal at the northbound off-ramp (Caltrans concurrence provided in letter dated September 5, 2012, see **Appendix E**).

Alternative 4 proposes two new traffic signals. One new traffic signal would be installed at the SR 1 / Imjin Parkway southbound ramps intersection (Alternative 2), and the other new traffic signal would be installed at the SR 1 / Imjin Parkway northbound ramps intersection. These two signals would be interconnected with the existing 2nd Avenue/Imjin Parkway traffic signal. The interconnected signals will optimize traffic flow between the two ramp intersections while discouraging westbound traffic queues from blocking the SR 1 / Imjin Parkway off-ramp intersections. Alternative 4 is presented on Figure 4.

Caltrans will require the installation of preemptive traffic detection devices at each off-ramp. These preemptive traffic detection devices will give priority green time to off-ramp vehicles so that off-ramp vehicles do not queue onto the SR-1 mainline. The SR 1 / Imjin Parkway southbound off-ramp would be improved to include preemptive traffic detection measures at 500 feet from the stop bar. The SR 1 / Imjin Parkway northbound off-ramp would be improved to include preemptive traffic detection measures at 600 feet from the stop bar. If either of these off-ramp queues trigger the preemptive detection, the signal priority will hold the green longer or allow the signal to change to green as soon as possible in order to clear the off-ramp traffic queues.

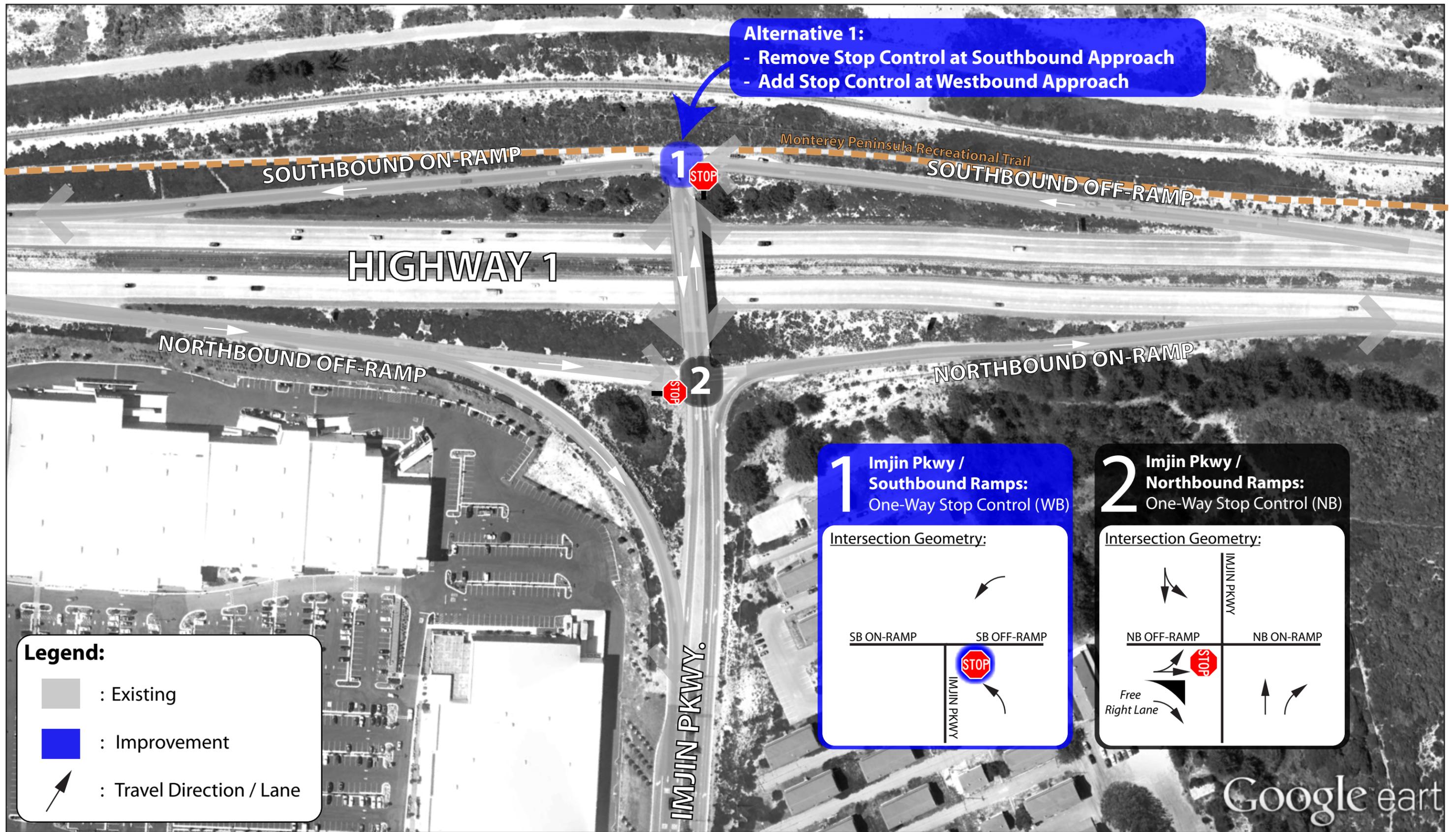
In addition, the existing free-right configuration at the northbound off-ramp would be removed and the off-ramp terminal would be reconstructed into a tight-diamond configuration. This reconfiguration is required to modify the off-ramp geometry to be in compliance with the Caltrans Highway Design Manual. This modification will require vehicles to make a lower speed right-turn movement, and it will increase the distance between the off-ramp terminal and 2nd Avenue for improved weaving.

Alternative 5 (Signals at Both SR 1 Ramp / Imjin Parkway Intersections and Improve Imjin Parkway Overcrossing and the southbound on-ramp)

Alternative 5 is Alternative 4 plus improvements to the Imjin Parkway overcrossing and to the southbound on-ramp. It analyzed the provision of accommodating two westbound left turn lanes onto southbound SR-1, and this includes the widening of the southbound SR 1 on-ramp to two receiving lanes. The on-ramp would connect to southbound SR 1 with a 1,200-foot acceleration lane. The lengthened and widened southbound on-ramp will accommodate the proposed dual westbound to southbound left turn lanes, as well as provide additional acceleration length for vehicles entering the SR 1 mainline. Alternative 5 is presented on Figure 5.

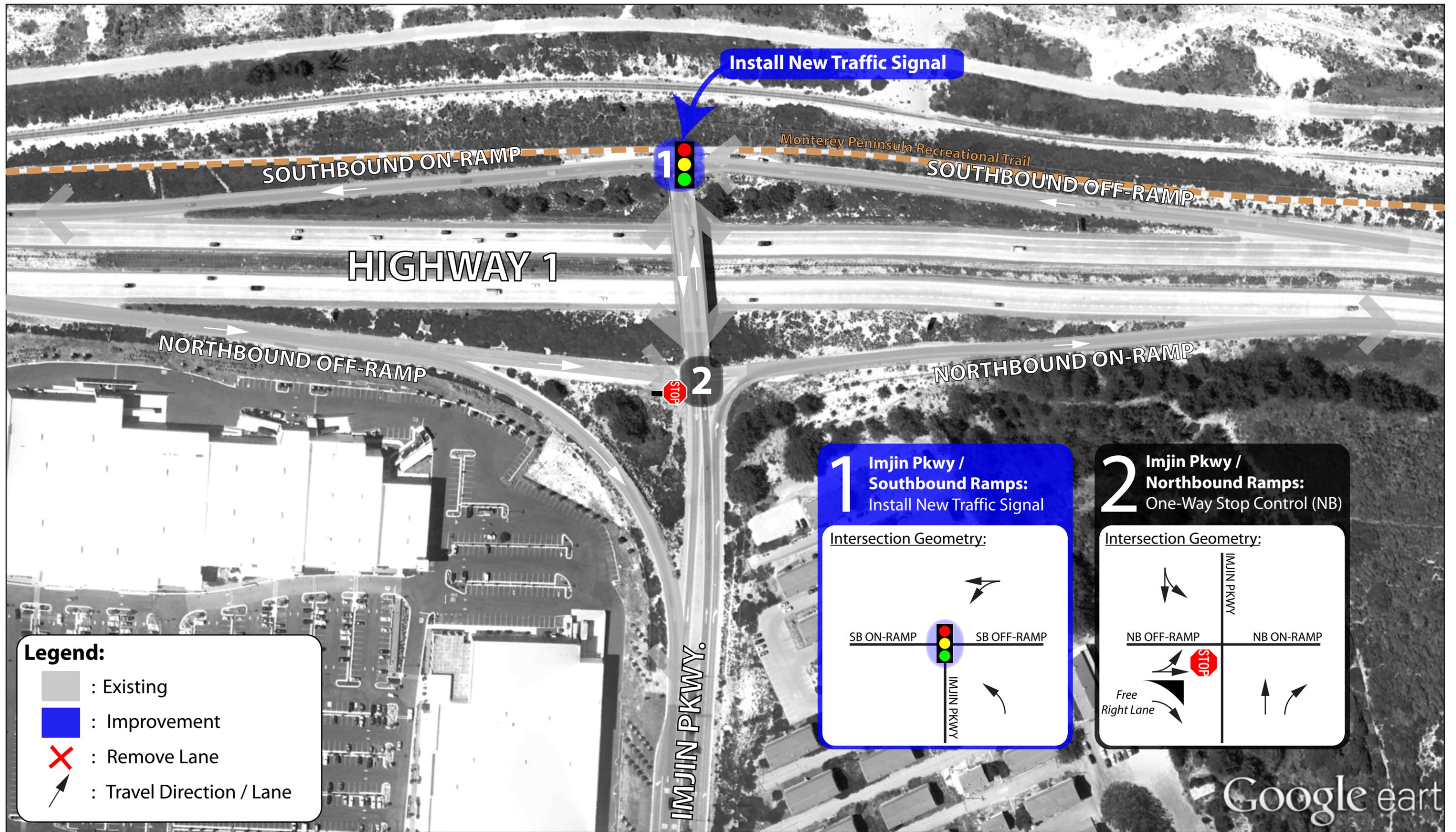
Other Intersection Control Measures

A roundabout was studied for the Southbound SR 1 ramps intersection. The conceptual layout of a single lane roundabout could not be physically placed between the SR 1 mainline and the existing rail line, westerly of the mainline. Therefore, a roundabout was not further developed, as relocating the mainline or the rail line is not feasible.



Source: RBF Consulting (2011)

SR -1 - Imjin Parkway Traffic Study

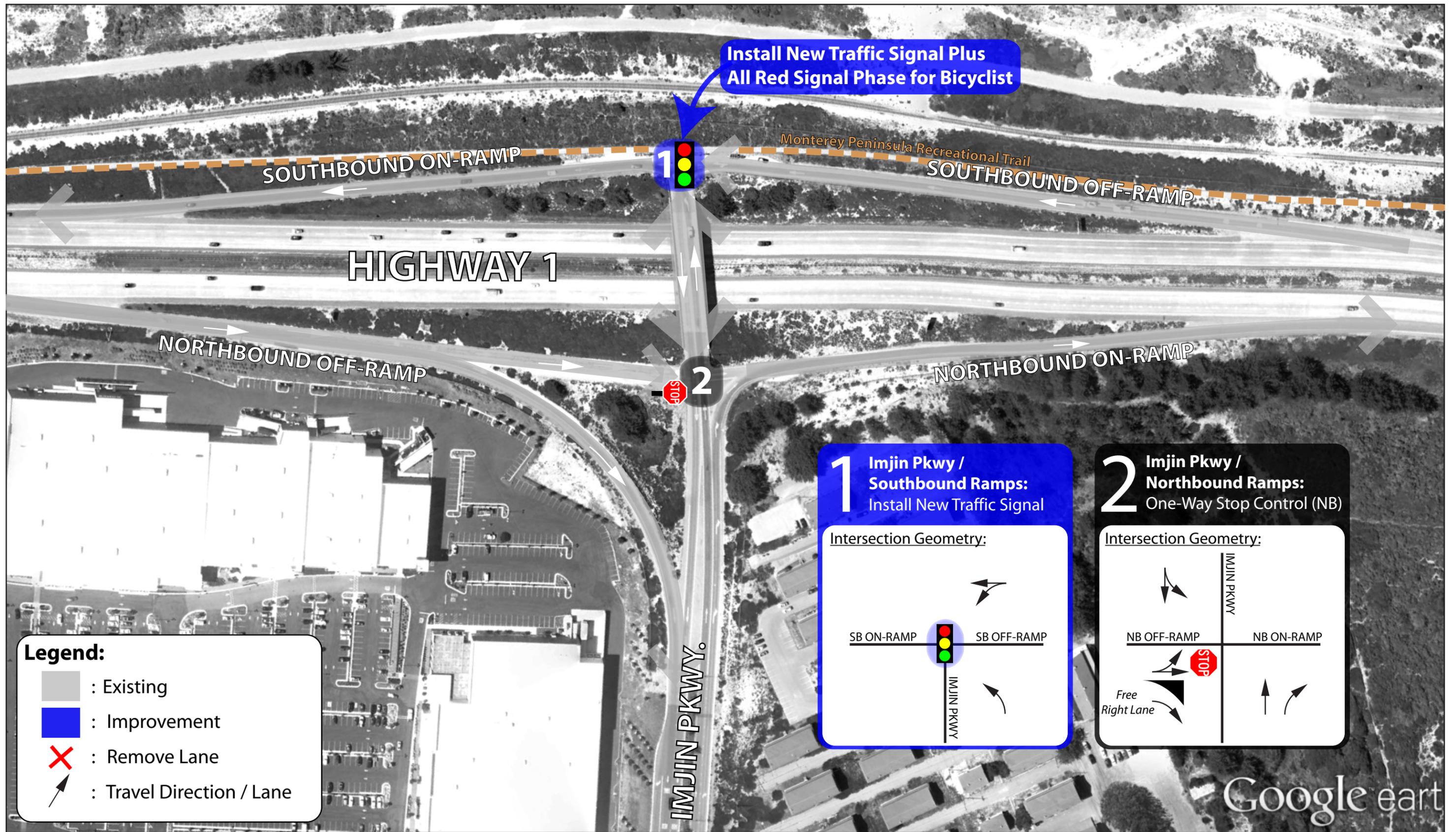


Source: RBF Consulting (2013)

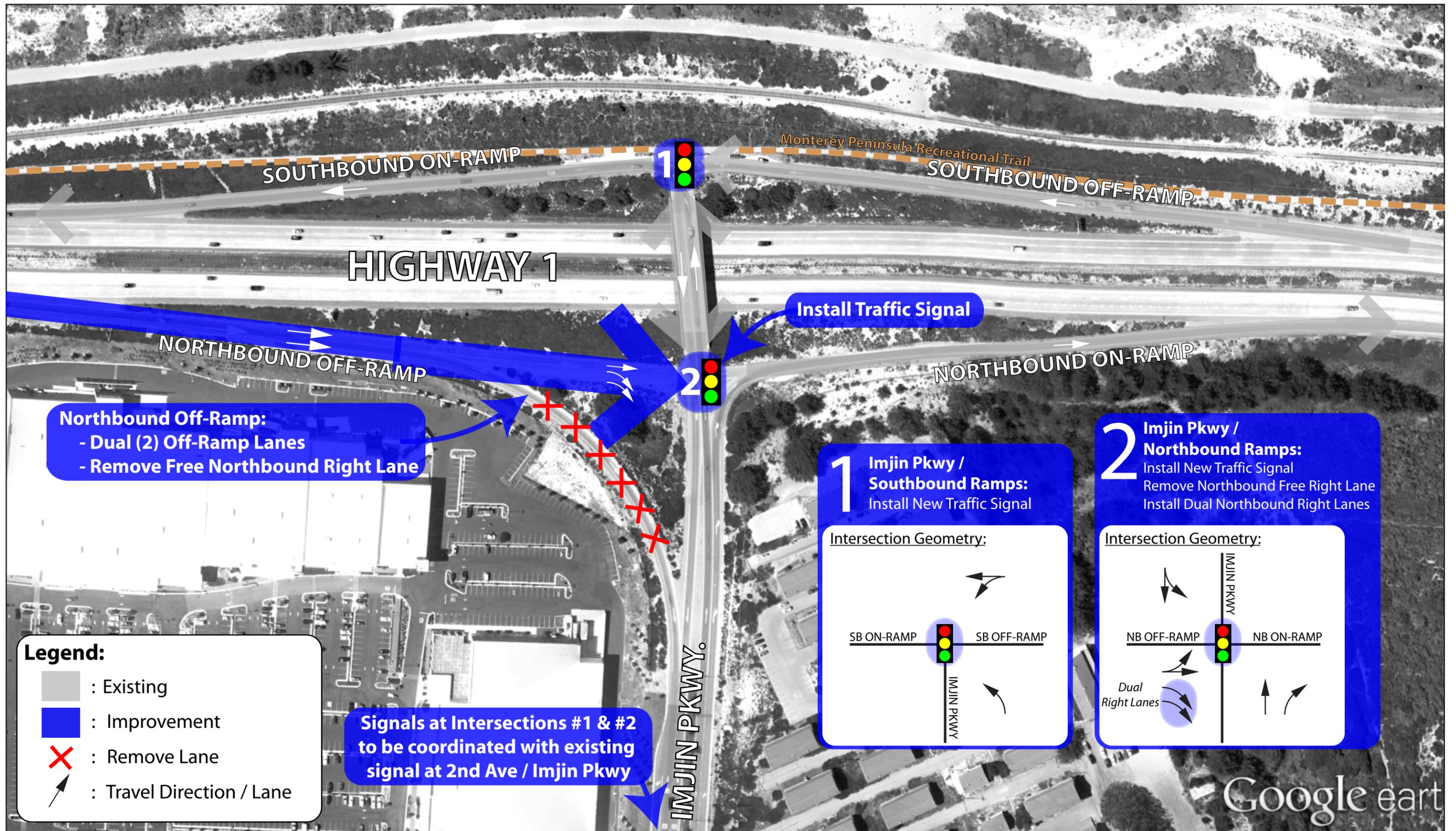
SR -1 - Imjin Parkway Traffic Study

Alternative #2 Improvements

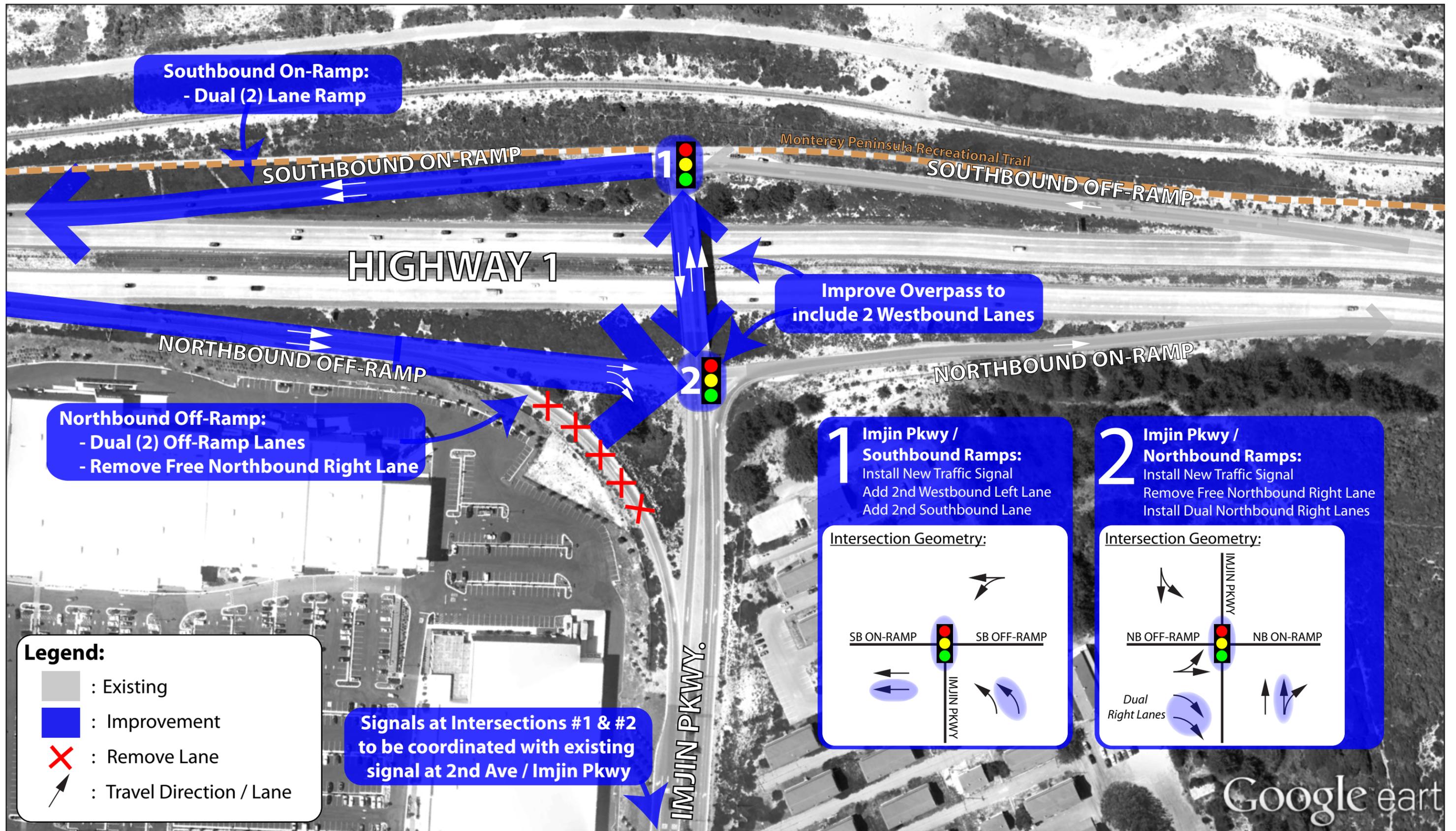
Figure 2



Source: RBF Consulting (2013)



Source: RBF Consulting (2013)



Source: RBF Consulting (2013)

Benefits and Challenges

The benefits and challenges of each alternative are summarized in **Table 1**.

Table 1: Alternative Benefit and Challenges Comparison

ALTERNATIVE	BENEFITS	CHALLENGES
1 - Stop Control for WB Left-turns at SR 1 SB Ramp/Imjin Parkway	<ul style="list-style-type: none"> Eliminates queue on SB Off-ramp Can be implemented within ROW Low cost to implement 	<ul style="list-style-type: none"> Increased queues on Imjin Parkway Substantial delay for heavy westbound left-turns
2 - Signal at SR 1 SB Ramp/Imjin Parkway	<ul style="list-style-type: none"> Provides protected phasing for SB Off-ramp vehicles Can be implemented within ROW Moderate cost to implement 	<ul style="list-style-type: none"> Increased queues on Imjin Parkway but not as extreme as Alt 1 Some delay for heavy westbound left-turns Signal projected to provide near-term capacity
3 – Alternative 2 with All Red Bicycle Phase	<ul style="list-style-type: none"> Same benefits as Alt 2 plus: Exclusive all-red phase for bicyclists to cross Imjin Parkway 	<ul style="list-style-type: none"> Increased queues and delays over Alt 2 Does not address lack of bicycle/pedestrian facilities on Imjin Parkway bridge over SR 1 Bicyclists still required to share road with vehicles Not projected to provide long-term capacity
4 –Improvements – Signals at both SR 1 Ramp/Imjin Parkway intersections, install preemptive traffic queue detection measures at the southbound and northbound off-ramps, provide additional weaving between the NB off-ramp and 2 nd Avenue, and interconnect the three closely spaced intersections.	<ul style="list-style-type: none"> Same benefits as Alt 2 Operational improvements for opening day Manage off-ramp queues to maintain mainline operations and safety Interconnect three closely spaced intersections to optimize the vehicle flows through the interchange 	<ul style="list-style-type: none"> Not projected to provide long-term capacity, as preservation of SR 1 mainline operations (installation of preemption devices) may cause additional delays to the westbound movement.
5 –Improvements - Signals at both SR 1 Ramp/Imjin Parkway intersections, and provide additional weaving between the NB off-ramp and 2 nd Avenue. Also improve Imjin Parkway and widen the SB on-ramp to two lanes	<ul style="list-style-type: none"> Ultimate operational improvements (as identified in the UV EIR) are installed 	<ul style="list-style-type: none"> Supporting regional project improvements must be planned and designed before Alternative 5 can be implemented. Bridge widening triggers the need to implement the regionally-based long term improvements

Note: Alternative 5 is included herein as a potential future scenario. However, Alternative 5 cannot be implemented independently from other regionally based improvements along the corridor.

5. TRAFFIC VOLUMES

Traffic Models and Counts

The following traffic model and counts were used in the traffic analyses performed on the SR 1 mainline, ramps, and intersections.

- The most current Association of Monterey Bay Area Governments (AMBAG) model was used for forecast 2035 traffic volumes along the SR 1 mainline and ramps in the project area.
- 2004, 2005, and 2011 traffic counts along the SR 1 mainline and study intersections were obtained from Higgins and Associates Civil and Traffic Engineers, Wiltec Traffic Engineers, and RBF Consulting, respectively.

Traffic Forecasting Process

The traffic forecasting process was conducted in the following major steps:

- Review of AMBAG model land use and network assumptions
- Review of AMBAG model growth
- Review of historical (2004 and 2006) traffic counts and recent (2011) traffic counts
- Comparison of AMBAG model growth to historical and recent growth rates
- Adjustment of AMBAG model growth based upon current growth patterns

The traffic forecasting memorandum which presents a detailed discussion of the traffic forecasting process is included in **Appendix A**. The following sections summarize this memorandum.

Review of AMBAG Model Land Use and Network Assumptions

Based upon recently approved and pending large development projects (Marina Station, Marina Heights, Dunes (University Villages), California State University Monterey Bay (CSUMB), and several other projects) near the project area, a detailed review of the land uses in the AMBAG model was conducted to verify that the land uses in the City of Marina were correctly coded.

The AMBAG model land use review indicated several concerns: 1) AMBAG 2035 forecasted model growth was not consistent with known specific plans, 2) AMBAG base year 2005 Traffic Analysis Zone (TAZ) was inaccurate in the Fort Ord area, and 3) AMBAG 2035 forecasts were not correctly allocated at the TAZ level. As a result, the TAZ's for CSUMB, Fort Ord, Seaside, East Garrison, and Marina were updated to reflect full build-out of the Cities' and Fort Ord specific plan projects. It should be noted that the housing and employment totals for the cities have not been revised, rather the housing and employment assumptions were reallocated to reflect the specific plan projects.

The City of Marina recently updated their Capital Improvement Program (CIP). AMBAG staff also provided an update on several roadway projects that should be removed or have funding constraints. Thus, changes were made to the 2035 roadway network to reflect Marina's CIP update and AMBAG staff input.

Review of AMBAG Model Growth

A new Year 2035 model run was conducted with the above changes to the land use and roadway network.

The following steps were conducted to extract the projected growth in the AMBAG model from Year 2005 to Year 2035:

- Step 1 - The model was executed with the 2035 roadway network assumptions and 2035 land use assumptions to determine the "raw" (i.e., unadjusted) peak hour demand forecasts for the study area.
- Step 2 - The AM and PM peak-hour growth for each roadway segment was obtained by using the "difference" method formula:

$$\text{Model Growth (2005 to 2035)} = (\text{Year 2035 Model Roadway Segment Volume} - \text{Year 2005 Model Roadway Segment Volume})$$

The NB off-ramp is projected to show zero growth during the AM peak hour and approximately 2% annual growth in the PM peak hour. The other SR 1 ramps at the Imjin Parkway interchange are projected to increase by 3 to just under 5 percent annually during the AM and PM peak-hours, respectively.

Review of Historical and Recent Traffic Counts and Comparison Projected AMBAG Model Growth Rates to Actual Growth Rates

The previous section identified the projected annual compounded growth rate at the interchange ramps and at the 2nd Avenue / Imjin Parkway intersection from Year 2005 to Year 2035. Given the recent downturn in the economy and the relatively slow pace of development in the City of Marina over the past couple of years, a comparison of the projected AMBAG model growth rate to the actual growth rate was conducted.

The actual growth rate from 2005 to 2011 was calculated using a multi-step process:

- Year 2005 volumes were estimated based upon an average of Year 2004 and 2006 traffic counts.
- Year 2011 traffic counts were collected at the study locations (refer to **Figure 6** for volumes at the SR 1 Ramp intersections with Imjin Parkway and 2nd Avenue / Imjin Parkway).
- New 2035 forecasts were developed by adding AMBAG model growth to 2005 estimated volumes. **Figure 7** presents the revised 2035 forecasts.
- The annual compounded growth between Year 2005 and 2011 volumes was calculated by comparing the growth between the two years.

2011 Traffic Counts

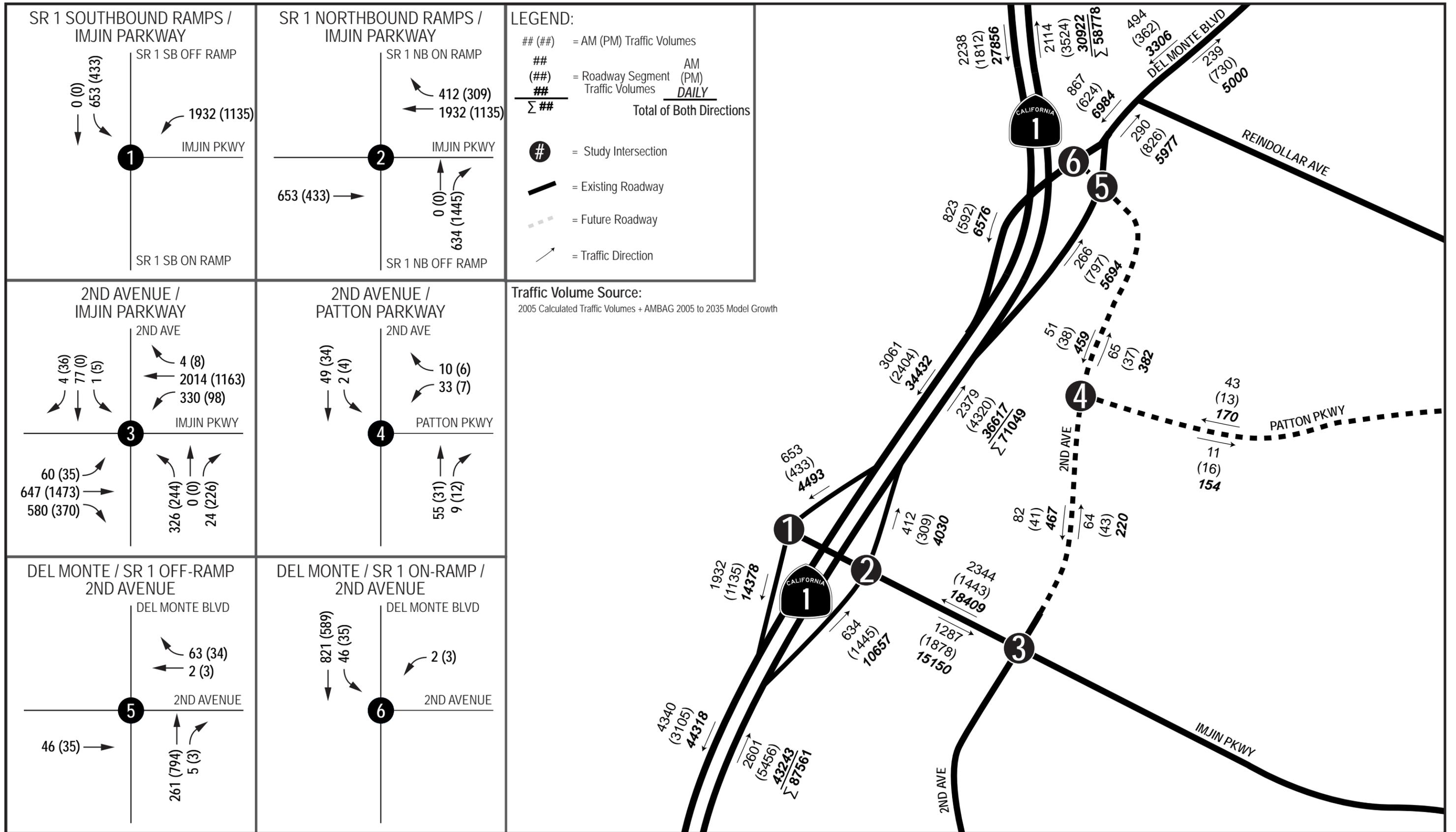


*Source: Conducted 4/27/11 by RBF Consulting

LEGEND:

(###) = AM (PM) Peak Hour Traffic Volumes





Source: RBF Consulting (2011)

In certain cases, the actual growth on the Imjin Parkway ramps (southbound off- and on-ramps during the AM peak hour) has been lower than the projected AMBAG growth rate. However, in the PM peak hour, all Imjin Parkway ramps have experienced much higher growth rates than the projected AMBAG growth rate. This could be due to the retail center that opened at the southwest corner of 2nd Avenue/Imjin Parkway which would draw substantial traffic during the PM peak hour.

Adjustment of AMBAG Model Growth Rates to Reflect Current Growth Rates and Forecasting of New Year 2035 Volumes

As noted previously, the annual AMBAG growth rate (from 2005 to 2035) can be higher or lower than the rate of actual growth (from 2005 to 2011). Assuming that the new forecasted 2035 volumes would remain constant, the growth rate between 2011 and 2035 was calculated. This growth rate would be used to project Year 2011 turning movements to future horizon years.

6. OPERATIONS ANALYSIS

Traffic analyses were conducted to assess the relative operational benefits that the proposed alternatives will provide to the transportation system. In addition, the anticipated horizon year when each alternative ceases to provide acceptable roadway operations according to their level of service standard was estimated. The following sections describe the level of service methodology, the traffic volume forecasts, and the operations analysis conducted.

Level of Service Methodology

The operations of roadway facilities are described with the term Level of Service (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions. LOS E represents “at-capacity” operations. When volumes exceed capacity, stop-and-go conditions result, and operations are designated as LOS F.

According to the *Guide for Preparation of Traffic Impact Studies* (Caltrans, December 2002), “Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. If an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE should be maintained.” Caltrans also prepared a *Transportation Concept Report for SR 1 in District 5* (Caltrans, April 2006) which identified LOS D or better as the acceptable LOS for SR 1 through Monterey County. Thus, LOS D or better for SR 1 will be considered acceptable operations.

Freeway Mainline Segments

Freeway mainline segments were evaluated using the method presented in Caltrans' Guide for the Preparation of Traffic Impact Studies (December 2002). This method was used for the segments of SR 1, between Light Fighter Drive and Reservation Road. Caltrans' analysis procedure is based on the density of the traffic flow using methods described in the *2000 Highway Capacity Manual* (HCM). Density is expressed in vehicles per mile per lane (veh/mi/ln). **Table 2** presents the range of densities for freeway mainline segment levels of service. The HCS+ analysis software was used to calculate the freeway mainline levels of service.

Table 2: Freeway Mainline Level of Service Criteria

LOS	DENSITY (PASSENGER CARS / MILE / LANE)
A	≤ 11
B	> 11 to 18
C	> 18 to 26
D	> 26 to 35
E	> 35 to 45
F	Demand Flow Exceeds Capacity

Source: *2000 Highway Capacity Manual*, Transportation Research Board, Washington, D.C., 2000.

Freeway Weave Analysis

Weaving analyses were performed for northbound and southbound SR 1 mainline between the Del Monte Boulevard on-ramp and Imjin Parkway off-ramp. The analyses utilized the Leisch methodology outlined in the *Caltrans Highway Design Manual*. The Leisch method uses a nomograph that takes into account weaving distance, traffic volumes along the mainline and ramps, and lane geometry.

Freeway Ramp Merge and Diverge Analysis

Operations on freeways are affected by merge and diverge areas where vehicles enter and exit the freeway mainline. **Table 3** provides the LOS criteria for merge and diverge areas at the on/off-ramps based on methodologies in the *2000 Highway Capacity Manual* (HCM). The LOS for merge and diverge sections is determined by density and is represented by LOS of A through E. LOS F occurs when the demand exceeds the freeway capacity, regardless of density.

Density for merge and diverge sections is determined by several factors; including, freeway and ramp volume, freeway and ramp configurations, and ramp deceleration/acceleration lengths. The HCS+ analysis software was used to calculate the freeway ramp levels of service.

Table 3: Freeway Ramp Level of Service Criteria for Merge and Diverge Areas

LOS	MERGE AND DIVERGE AREAS (PASSENGER CARS / MILE / LANE)
A	≤ 10
B	> 10 to 20
C	> 20 to 28
D	> 28 to 35
E	> 35
F	Demand Exceeds Capacity

Source: 2000 Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2000.

Intersections

For intersections, average control delay per vehicle is utilized to define intersection LOS. **Table 4** presents the LOS criteria for signalized and unsignalized intersections. The LOS calculations for signalized intersections correspond to the average total delay for all approaches. The LOS calculations for side-street stop controlled intersections correspond to the turning movement/approach with the highest total delay.

Table 4: Intersection Level of Service Criteria

LOS	AVERAGE CONTROL DELAY PER VEHICLE	
	SIGNALIZED INTERSECTIONS	UNSIGNALIZED INTERSECTIONS
A	≤ 10	≤ 10
B	> 10 to 20	> 10 to 15
C	> 20 to 35	> 15 to 25
D	> 35 to 55	> 25 to 35
E	> 55 to 80	> 35 to 50
F	> 80	> 50

Source: 2000 Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2000.

Operations Analysis Results

The following section describes the operations analysis conducted for the SR 1 freeway mainline, SR 1 weaving section, SR 1 on- and off-ramps, and the local study intersections.

Freeway Mainline

Tables 5a and **5b** present the SR 1 mainline analysis during the AM and PM peak hours, respectively. Under Existing (2011) Conditions, all mainline segments of SR 1, between Light Fighter Drive and Reservation Road, are projected to operate at an acceptable LOS D or better. The calculation worksheets are contained in **Appendix B**. The table also shows the required year of implementation for improvements to offset impacts of traffic growth.

Table 5b - Level of Service Summary (PM Peak Hour)

Year	Study Alternative	SR 1 - Main Line LOS Analysis												SR 1 - Ramp LOS Analysis								SR 1 - Weaving Analysis					
		Lightfighter Dr & Imjin Pkwy				Imjin Pkwy & Del Monte Blvd				Del Monte Pkwy & Reservation Rd				Imjin Pkwy & SR 1 NB Ramps		Imjin Pkwy & SR 1 SB Ramps		Del Monte Blvd & SR 1 Ramps		Southbound Del Monte Blvd to Imjin Pkwy	Northbound Del Monte Blvd to Imjin Pkwy						
		NB		SB		NB		SB		NB		SB		On-Ramp	Off-Ramp	On-Ramp	Off-Ramp	On-Ramp	Off-Ramp								
		Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS	Density	LOS						
2011	No Build	25.6	C	18.0	C	20.3	C	14.4	B	19.4	C	16.1	B	22.2	C	23.3	C	17.3	B	17.0	B	17.2	B	9.5	A		
2016	No Build													23.2	C	22.5	C	18.2	C	17.5	B	16.9	B	11.4	B		
	Alternative 5 ¹													13.7	B	6.0	A										
2020	No Build																									D	D
2021	No Build																									D/E	D
2026	No Build													24.8	C	29.1	D	19.6	B	18.5	B	16.7	B	15.8	B		
2027	No Build													25.0	C	29.3	C	19.7	B	18.8	B	16.7	B	16.3	B		
	Alternative 5 ¹													19.3	B	12.3	B										
2028	No Build	29.4	D	16.5	B	23.6	C	13.7	B	25.8	C	16.0	B														
2029	No Build	29.6	D	16.4	B	23.9	C	13.7	B	26.3	D	16.0	B														
2035	Alternative 5														20.6	C	11.8	B									D

Notes: ¹ Widen Imjin Parkway/SR 1 NB Off and SB On Ramps to two lanes (Alternative 5)
Deficient LOS (LOS E or F) highlighted in **Bold**.

Year	Study Alternative	Movement	Intersection LOS Analysis																				
			Imjin Pkwy & SR 1 SB Ramps				Imjin Pkwy & SR 1 NB Ramps				Imjin Pkwy & 2nd Ave		Patton Pkwy & 2nd Ave		Del Monte Blvd (NB) & 2nd Ave			Del Monte Blvd (SB) & 2nd Ave					
			Delay	LOS	95th Queue	Storage Length	Delay	LOS	95th Queue	Storage Length	Delay	LOS	95th Queue	Delay	LOS	95th Queue	Delay	LOS	95th Queue	Delay	LOS	95th Queue	
			> 100	F	125	-	> 100	F	125	-													
2011	No Build	SB LT	9.9	A	75	250																	
		WB LT	9.9	A	75	250																	
		NB LT/TH	23.8	C	25	275																	
		Overall	> 100	F			0.2	A					16.8	B									
	WB Stop Sign, Remove SB Stop (Alternative 1)	SB LT	7.3	A	25	-																	
		WB LT	> 100	F	2275	250																	
		NB LT/TH	> 100	F																			
		Overall	> 100	F																			
	Signal at Imjin/SR 1 SB Ramp (Alternative 2)	SB LT	31.6	C	100	-																	
		WB LT	8.2	A	400	250																	
		NB LT/TH					23.5	C	50	-													
		Overall	12.1	B			0.2	A					17.7	B									
Signal at Imjin/SR 1 SB Ramp (w/ All Ped Phase) (Alternative 3)	SB LT	16.0	B	150	-																		
	WB LT	39.6	D	425	250																		
	NB LT/TH					23.5	C	25	-														
	Overall	21.9	C			0.2	A					17.7	B										
2015	Signal at Imjin/SR 1 SB Ramp (Alternative 2)	SB LT	36.2	D	150	-																	
		WB LT	9.7	A	400	250																	
		NB LT/TH					25.5	D	25	-													
		Overall	14.9	B			0.2	A					18.2	B									
2016	Signal at Imjin/SR 1 SB Ramp (Alternative 2)	SB LT	42.2	D	150	-																	
		WB LT	9.8	A	425	250																	
		NB LT/TH					26.4	D	50	-													
		Overall	15.2	B			0.2	A					18.4	B									
	Signal at Imjin/SR 1 SB Ramps & Imjin SR 1 NB Ramps (Alternative 4)	SB LT	26.8	C	125	-																	
		WB LT	11.8	B	250	250																	
		WB TH/RT					8.2	A	575	985													
		NB LT/TH					22.4	C	175	-													
	Final EIR & Modified Improvements ¹ (Alternative 5)	EB LT/TH					3.9	A	125	240													
		Overall	10.2	A			14.6	B					17.9	B									
		SB LT	21.1	C	150	-																	
		WB LT	7.4	A	100	250																	
2032	Signal at Imjin/SR 1 SB Ramps & Imjin SR 1 NB Ramps (Alternative 4)	WB TH/RT				9.2	A	325	985														
		NB LT/TH					18.5	B	200	-													
		EB LT/TH					11.6	A	200	240													
		Overall	10.2	A			13.8	B					17.9	B									
	Final EIR & Modified Improvements ¹ (Alternative 5)	SB LT	46.4	D	350	-																	
		WB LT	49.8	D	250	250																	
		WB TH/RT					3.5	A	350	985													
		NB LT/TH					20.7	C	225	-													
	2035	Future Side Street Stop Control	EB LT/TH				7.4	A	100	240													
			Overall	48.7	D			11.4	B					19.5	B								
			SB LT	21.4	C	200	-																
			WB LT	6.3	A	250	250																
2035	Future Side Street Stop Control	WB TH/RT				14.8	B	350	985														
		NB LT/TH					24.0	C	200	-													
		EB LT/TH					22.6	C	225	240													
		Overall	11.1	B			19.9	C					19.5	B									
2035	Future Side Street Stop Control	WB Approach																					
		Overall																					
		EB TH																					
		WB TH/RT																					
2035	Future Side Street Stop Control	Overall																					
		WB LT																					
		Overall																					
		Overall																					

Notes: ¹ Final EIR improvements included signalization and addition of a 2nd WB LT at the SR 1 SB/Imjin Parkway ramp intersection. The Final EIR improvement at the SR 1 NB /Imjin Parkway ramp intersection (closure of median island) was modified to include traffic signalization, addition of a 2nd NB RT, and addition of a 2nd WB TH lanes.
95th Percentile Queues obtained from microsimulation (SimTraffic) results and rounded to nearest 25 feet.
Storage Length indicates length (in feet) of available queue storage.
Deficient LOS (LOS E or F) highlighted in **Bold**.
95th Queue Lengths Exceeding Available Lane Capacity highlighted in **Bold**.
Assumed 10 bike calls per hour at Imjin / SB Ramps

The proposed alternatives, as described in **Section 4**, would not modify the existing geometric layout to the mainline segments of SR 1. Thus, a sensitivity analysis was conducted to determine the future horizon year that segments of SR 1 would fall below the SR 1 Transportation Concept Report (TCR) target LOS D threshold. The calculated growth rates in **Section 6** were used to extrapolate volumes between Year 2011 and Year 2035. Then an iterative process was conducted to determine when LOS E is met. The results in Table 5A indicate that the southbound segment of SR 1, between Light Fighter Drive and Imjin Parkway, would degrade to LOS E during the AM peak hour between **Years 2028 and 2029**. This degradation in the mainline level of service is due to increased volumes on SR 1 from local and regional growth in the adjacent communities. Implementation of ramp metering, when warranted in the future, would improve mainline level of service on opening day, but would have the undesirable effect of vehicles queuing back to the ramp intersections and causing additional intersection delay. Thus, the freeway ramp and intersection analyses presented in the following sections do not include the effects of ramp metering.

Freeway Weave

The southbound SR 1 mainline weaving section, between the Del Monte Boulevard on-ramp and Imjin Parkway off-ramp, is operating at LOS D under Existing Conditions as shown in **Tables 5a and 5b**. The calculation worksheets are contained in **Appendix B**.

The northbound SR 1 mainline weaving section, between the Imjin Parkway on-ramp and the Del Monte Boulevard off-ramp, is operating at LOS A during the AM peak hour and LOS C during the PM peak hour under Existing Conditions as shown in **Tables 5a and 5b**.

As with the freeway mainline analysis, the potential alternatives also do not modify the existing geometric layout to SR 1. Therefore, a sensitivity analysis was conducted to determine the anticipated horizon year that the SR 1 mainline weaving sections would degrade to unacceptable operations. The results indicate that the unacceptable LOS E operations are anticipated to occur in **Year 2021** for the southbound weaving between the Del Monte Boulevard on-ramp and Imjin Parkway off-ramp. This degradation in the mainline level of service is due to increased volumes on SR 1 from local and regional growth in the adjacent communities, combined with the fact that the Imjin Parkway and Del Monte Boulevard interchanges are physically too close together. The freeway ramp and intersection analyses presented in the following sections do not include the effects of ramp metering. The northbound weaving segment between the Imjin Parkway on-ramp and the Del Monte Boulevard off-ramp is projected to operate at LOS C during the AM peak hour and LOS D during the PM peak hour through Year 2035.

Freeway Ramps

The results of the freeway ramp analysis are presented in **Tables 5a and 5b**. Under Existing (Year 2011) Conditions, all study SR 1 ramps are operating at acceptable levels of service, LOS C or better, during both peak hours. The calculation worksheets are contained in **Appendix B**.

Based upon the intersection LOS analysis (see next section) assuming a straight line increase in traffic volumes, the proposed interim improvements at the SB ramps intersection (Alternative 2 and 4) operate at an acceptable LOS on opening day. Over time, the SR 1 SB Ramp/Imjin Parkway intersection degrades to a LOS E. To improve the LOS at this intersection, a second westbound left-turn lane would likely be needed and the SB on-ramp widened to accommodate the two receiving lanes (Alternative 5).

Implementation of a second westbound left turn-lane by restriping the lane configuration on the existing Imjin Parkway overcrossing structure (see University Villages Mitigation Measure TR 1.3(b.)) will not be approved on an interim basis. See Caltrans letter dated September 5, 2012. Improvements to accommodate two WB lanes on the bridge can only be implemented as part of the long term improvement project. The project has been included in the TAMC work plan to begin the PID in 2015/16 fiscal year. The City of Marina has included the project in their CIP to implement their portions of the ultimate configuration of this interchange.

If no improvements are constructed at the Imjin Parkway SB ramps intersection, operations at the SR 1 SB on-ramp at Imjin Parkway (operating as a single lane on-ramp) are anticipated to degrade to an unacceptable LOS E during the AM peak hour in **Year 2027**.

Alternatives 4 and 5 would add a second lane to the SR 1 NB off-ramp terminal at Imjin Parkway. The LOS for the SR 1 NB off-ramp would improve from LOS B and C (AM and PM peak hour, respectively, with one lane) to LOS A and B (AM and PM peak hour, respectively, with two lanes).

Intersections

Intersection level of service calculations were conducted for the two SR 1 ramp intersections with Imjin Parkway, the Imjin Parkway / 2nd Avenue intersection, and the three future 2nd Avenue extension intersections (at Patton Parkway and at Del Monte Boulevard). The results are summarized in **Tables 5a** and **5b**. The calculation worksheets are contained in **Appendix B**.

Bicycle and Trail Access

Access to bicycle and pedestrian trail facilities within the project area was also considered. An evaluation of how bicycle and pedestrian access is planned to be maintained through land development and roadway improvements is presented in **Appendix C**.

Existing Conditions (Year 2011)

No Build Alternative

Currently, the SB approach to the Imjin Parkway / SB SR 1 one-way stop-controlled intersection operates at LOS F during both the AM and PM peak hours. The micro-simulation component of the Synchro software program, SimTraffic, was used to confirm the 95th percentile queue length as the Synchro queue report did not provide an estimate. The 95th percentile queue length is projected to be 400 feet during the AM peak hour and 125 feet during the PM peak hour.

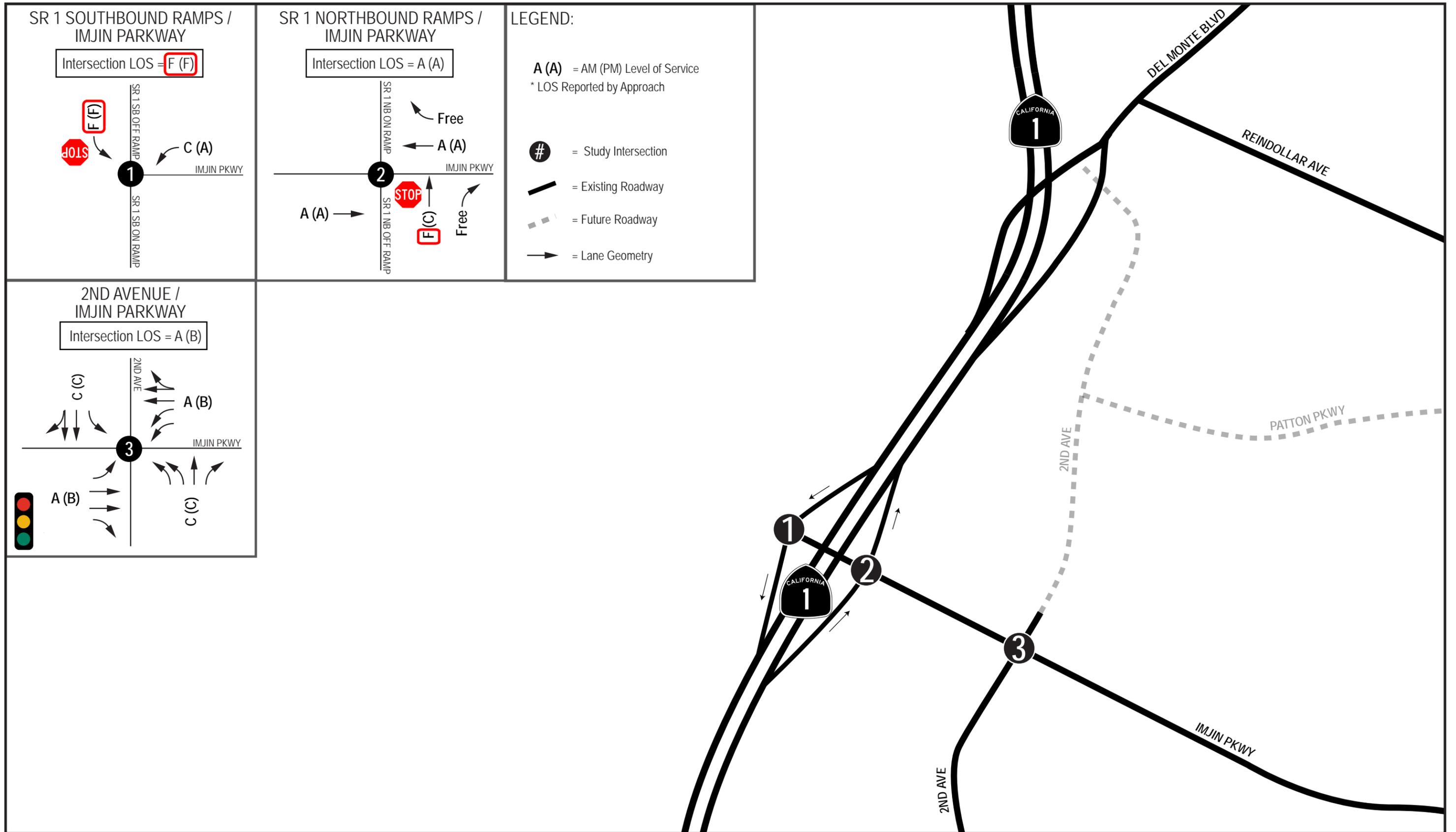
The WB approach to the Imjin Parkway / SB SR 1 is uncontrolled and operates at LOS C or better. The 95th percentile queue is 100 feet and 75 feet during the AM and PM peak hour, respectively.

The NB approach to the Imjin Parkway / NB SR 1 ramp intersection is also projected to operate at LOS F during the AM peak hour. However, the vehicular demand is relatively low, thus the 95th percentile queue is one vehicle. The northbound right-turn movement is uncontrolled and vehicles exiting this ramp have their own dedicated lane to continue east on Imjin Parkway. However, northbound off-ramp vehicles experience weaving issues with eastbound Imjin Parkway vehicles (coming from the southbound off-ramp) because

vehicles in either lane merge over to turn north or south onto 2nd Avenue which is only 700 feet downstream from the off-ramp.

The 2nd Avenue/Imjin Parkway intersection is currently operating at acceptable levels of service, LOS B or better during either peak hour.

Figure 8 presents the Year 2011 level of service for key movements/approaches and overall operations at the study intersections.



Source: RBF Consulting (2011)

Alternative 1 (Stop Control for WB Left-turns at SR 1 SB Ramp/Imjin Parkway)

With this alternative, the SB approach to the Imjin Parkway / SB SR 1 ramp intersection would be uncontrolled and operations of the intersection would improve from LOS F to LOS A during both peak hours. However, the westbound left-turn movement would now incur substantial delay or LOS F operations and the projected 95th percentile queue is estimated to be 2,750 feet or extending past the NB ramp intersection.

Alternative 2 (Signal at SR 1 SB Ramp / Imjin Parkway)

With implementation of a traffic signal at the SR 1 SB Ramp/Imjin Parkway intersection, overall operations would improve to LOS D during the AM peak hour and LOS B during the PM peak hour. The southbound off-ramp movement would also operate at LOS D with a projected 95th queue of 225 feet during the AM peak hour. Although the westbound left-turn movement would operate at LOS D, the projected 95th percentile queue is still anticipated to be 825 feet or extending past the NB ramp intersection.

Figure 9 presents the Year 2011 level of service for key movements/approaches and overall operations at the study intersections with Alternative 2.

Alternative 3 (Signal with Exclusive Bicycle Phase at SR 1 SB Ramp/Imjin Parkway)

This alternative would further degrade operations for each movement and for the overall intersection (as compared to Alternative 2) because an extra signal phase is provided to accommodate bicycle crossings through the intersection. During this exclusive bicycle phase, no vehicles are allowed to enter the intersection thus contributing to added delay for all vehicles.

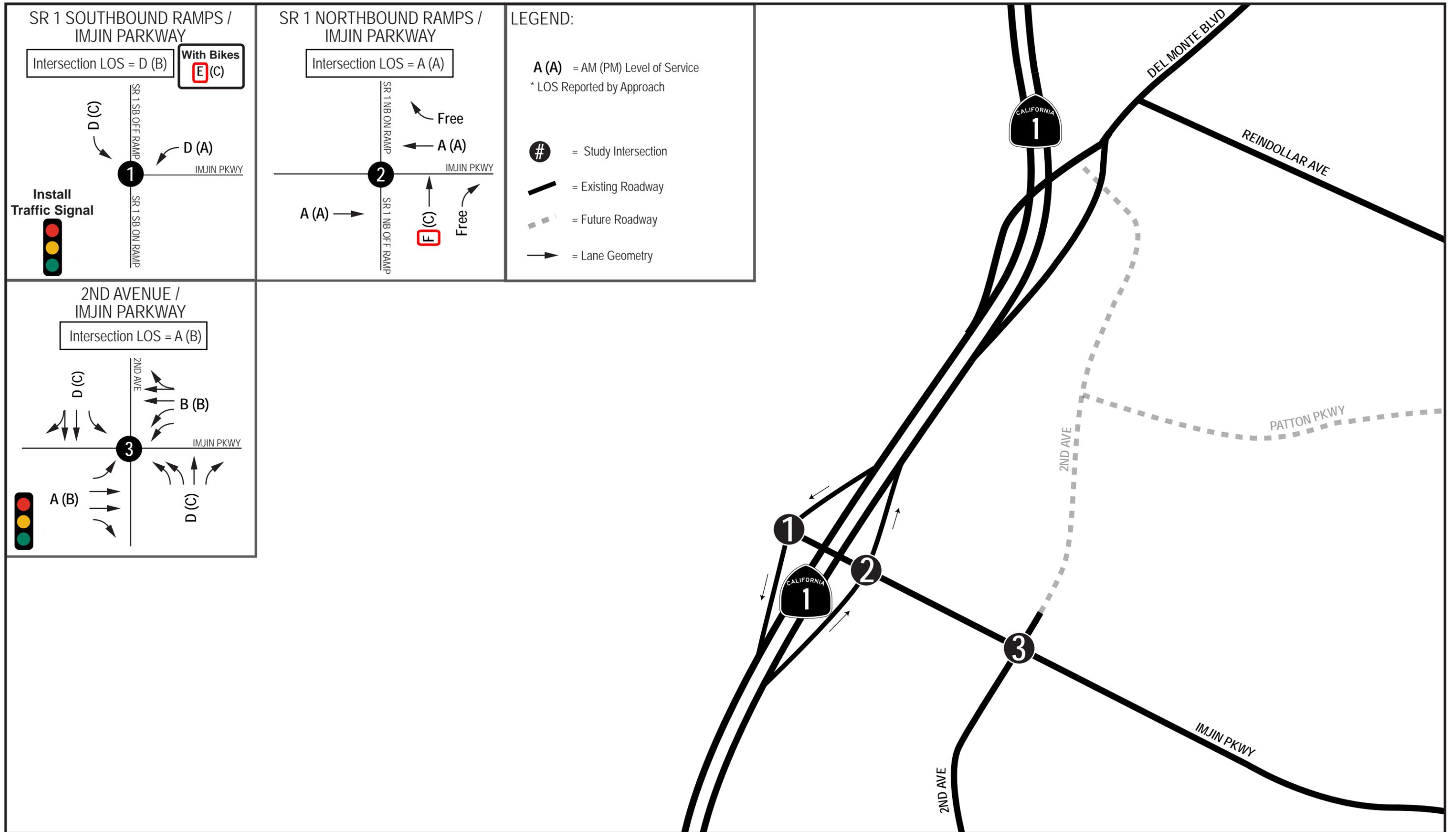
Year 2015 Conditions

Alternative 2 (Signal at SR 1 SB Ramp / Imjin Parkway)

As indicated on **Tables 5a** and **5b**, this future horizon year is the anticipated time horizon where Alternative 2, signal at SR 1 SB Ramp/Imjin Parkway, continues to provide acceptable LOS D operations at the SR 1 SB Ramp/Imjin Parkway intersection. The projected 95th percentile queues on the southbound off-ramp ranges between 150 and 225 feet. The projected 95th percentile queues for the westbound movement is 950 feet which extends beyond the northbound ramp intersection.

Additional intersection improvements would be required to minimize queuing and to provide acceptable LOS D operations beyond **Year 2015**.

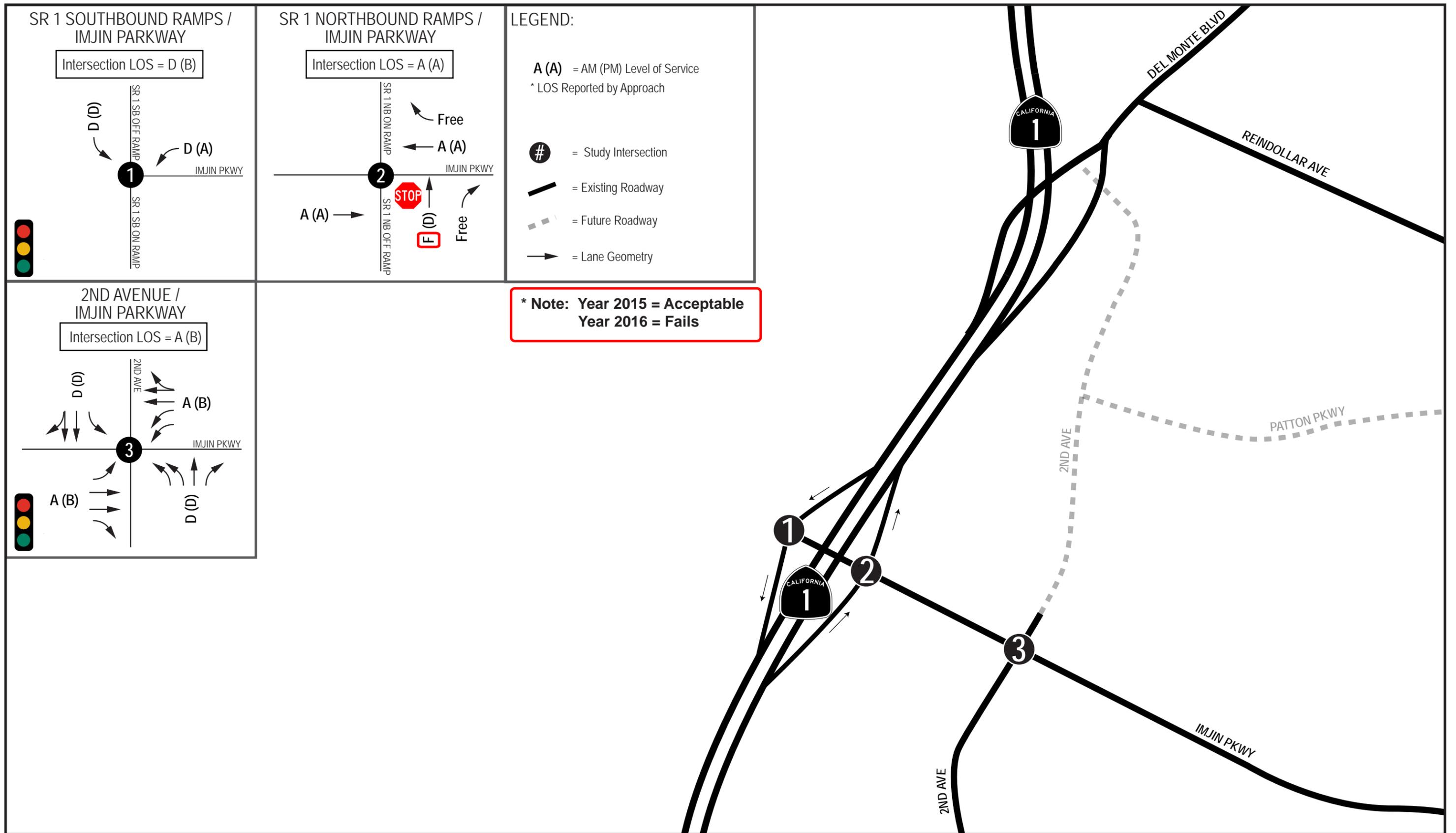
Figure 10 presents the Year 2015 level of service for key movements/approaches and overall operations at the study intersections with Alternative 2.



Source: RBF Consulting (2011)

SR 1 - Imjin Parkway Traffic Study

RBF CONSULTING NOT TO SCALE **2011 with Alternative 2 (Signal at Intersection #1): Level of Service Analysis**



Source: RBF Consulting (2011)

Year 2016 Conditions

Alternative 4 (Signals at both SR 1 Ramp / Imjin Parkway Intersections)

SB SR 1 / Imjin Parkway Intersection

As identified in Alternative 4, the implementation of a traffic signal at the SR 1 SB Ramp/Imjin Parkway intersection would improve the overall operations of this intersection to LOS D during the AM peak hour and LOS A during the PM peak hour. The southbound off-ramp movement would also operate at LOS C with a projected 95th queue of 300 feet during the AM peak hour. Although the westbound left-turn movement would operate at LOS D, the projected 95th percentile queue is anticipated to be 250 feet or extending to the NB ramp intersection.

Alternative 4 also includes the implementation of preemptive traffic detection measures at the SR 1 SB Ramp/Imjin Parkway that would give signal priority to the southbound off-ramp approach before traffic queues can fill the off-ramp capacity. This improvement would provide a means to prevent queues from spilling onto southbound mainline SR 1 until the ultimate improvements are constructed.

NB SR 1 / Imjin Parkway Intersection

The University Villages EIR identified the appropriate mitigation measure (TR-1.4 (b.)) at this intersection as construction of a median across the intersection, or approved equivalent. Alternative 4 includes the proposed modified mitigation measure improvement at this intersection to signalize the intersection, eliminate the free right turn and provide an additional right turn lane. Eliminating the free right turn movement is an additional requirement imposed by Caltrans and this modification would degrade the right turn movement to LOS C during the 2016 AM peak hour. This is considered acceptable.

The Imjin Parkway / 2nd Avenue intersection is projected to continue to operate at an acceptable level.

The three signals in the vicinity of SR 1 and Imjin Parkway will be interconnected. Providing interconnection between the three signals will improve the operations of these three intersections until such time the ultimate improvements are constructed.

Figure 11 presents the Year 2016 level of service for key movements/approaches and overall operations at the study intersections with Alternative 5.

Year 2032 Conditions

Alternative 5 (Signals and Additional Lanes at Both SR 1 Ramp / Imjin Parkway Intersections) improvements provide overall acceptable delay at the SR 1 SB Ramp/Imjin Parkway intersection, the southbound left-turn is projected to degrade to an unacceptable LOS E with a 95th percentile queue of 375 feet. Thus, it can be concluded that Alternative 5 will provide acceptable operations until approximately **Year 2032**.

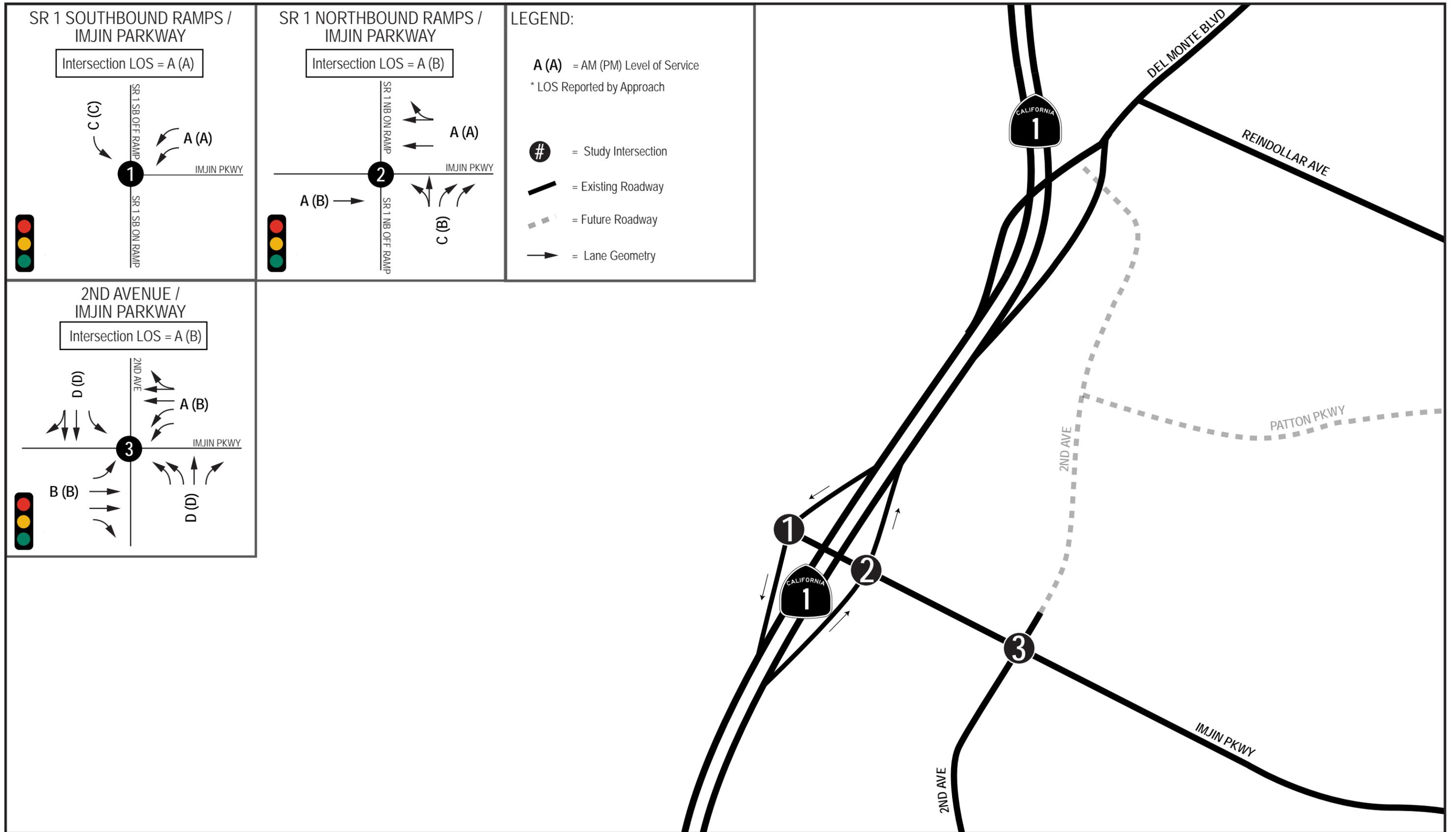
It is assumed that the long term project identifying the ultimate improvements would be underway and the preferred alternative is constructed prior to 2032. The long term mitigation portion of the University Villages EIR mitigation measures would be included in the construction of this project. The City of Marina also anticipates contributing a shared portion of the ultimate improvements to the SB off-ramp to mitigate the forecast deficiencies noted herein.

The other study intersections are projected to operate at acceptable levels of service.

Figure 12 presents the Year 2032 level of service for key movements/approaches and overall operations at the study intersections with Alternative 5.

Year 2035 Conditions

Although the extension of 2nd Avenue is anticipated to be completed by Year 2014/2015 according to City of Marina's Capital Improvement Program, the study intersections on 2nd Avenue at Patton Parkway, Del Monte Boulevard (northbound), and Del Monte Boulevard (southbound) were only evaluated for Year 2035 Conditions as the future traffic forecasts indicated that the peak-hour volumes on these side street approaches were fairly low. As shown in **Tables 5a** and **5b**, all three intersections are projected to operate at acceptable levels, LOS A.



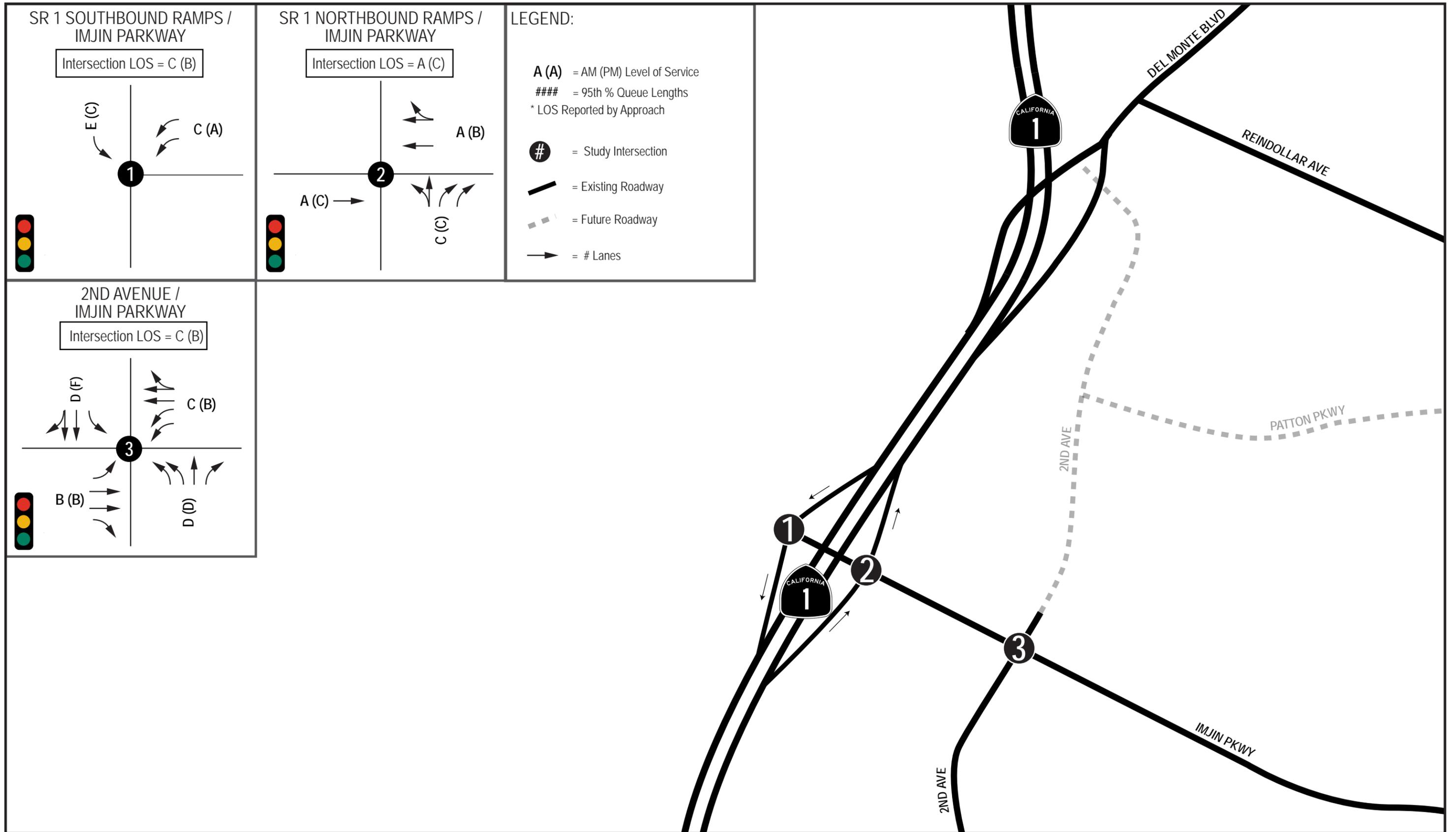
Source: RBF Consulting (2011)

SR 1 - Imjin Parkway Traffic Study



2016 with Alternative 5 (Modified EIR Improvements): Level of Service Analysis

Figure 11



Source: RBF Consulting (2011)

SR 1 - Imjin Parkway Traffic Study



2032 with Alternative 5 (Modified EIR Improvements): Level of Service Analysis

Figure 12

Alternative Phasing

Based on the intersection operations analysis presented in the above section, **Table 6** summarizes the anticipated timeframe when the proposed Alternatives will provide acceptable intersection operations at the SR 1 Southbound Ramp / Imjin Parkway intersection. It should be noted that the northbound approach at the SR 1 Northbound Ramp / Imjin Parkway intersection would still continue to operate at an unacceptable LOS F through Year 2015, however the volume for this movement is extremely low.

Table 6: Alternative Phasing to Provide Acceptable LOS at SR 1 SB/Imjin Parkway

ALTERNATIVE	TIME HORIZON WHEN ALTERNATIVE PROVIDES ACCEPTABLE LOS
1 - Stop Control for WB Left-turns at SR 1 SB Ramp/Imjin Parkway	N/A – Does not provide acceptable LOS
2 - Signal at SR 1 SB Ramp/Imjin Parkway	2014-2016
3 – Alternative 2 with All Red Bicycle Phase	N/A – Does not provide acceptable LOS
4 – (Signals at Both SR 1 Ramp / Imjin Parkway Intersections)	2014-2016
5 – (Signals and reconfiguration of NB SR 1 Ramps/Imjin Parkway intersection)	2016-2032

7. CONCLUSION

The traffic analyses in this report evaluated potential alternatives to improving access at the SR 1 / Imjin Parkway interchange in the City of Marina. The alternatives consist of near-term improvements anticipated to be constructed prior to Year 2015 (opening day) and are anticipated to be constructed within the State right-of-way limits. Long-term/ultimate improvements, anticipated to be constructed between Year 2016 and 2035. The long-term improvements associated with the University Villages EIR mitigation measures will be incorporated in the long term project to address the regional impacts to SR 1 and the two interchanges (Imjin and Del Monte Boulevard).

The analyses was conducted according to the type of facility evaluated (freeway mainline, freeway weaving, freeway ramps, and local intersections). The results are summarized below.

Freeway Mainline

The potential alternatives focused on improvements to the freeway ramps and local intersections. Therefore, improvements to the mainline segments of SR 1 were not evaluated. However, a sensitivity analysis was conducted to determine when the mainline segment of SR 1 would degrade to an unacceptable LOS E. The results indicate that the southbound segment of SR 1, between Light Fighter Drive and Imjin Parkway, would degrade to LOS E during the AM peak hour between **Years 2028 and 2029**. An improved freeway facility would be required to improve mainline traffic operations. The future improvements associated with the mainline are to be integrated into the interchange near-term and long-term improvements in the vicinity of Imjin Parkway and Del Monte Boulevard.

Freeway Weave

The southbound SR 1 mainline weaving section, between the Del Monte Boulevard on-ramp and Imjin Parkway off-ramp is operating at LOS D under Existing Conditions and is anticipated to degrade to unacceptable LOS E operations in **Year 2021** without any improvements to the mainline. It is anticipated that the Project Initiation Document (PSR/PDS) to design improvements within the project area will correct the nonstandard weave between Del Monte Boulevard and Imjin Parkway. An improved freeway facility may be required to improve mainline traffic operations and said improvement may include a new overcrossing at Imjin Parkway and revised ramp layouts. Alternatively, ramp metering could be implemented to improve the weaving conditions, especially during the interim period when the Project Initiation Document (PSR/PDS) is being prepared.

The northbound SR 1 mainline weaving section is projected to operate at acceptable levels through Year 2035.

Freeway Ramp

All study SR 1 ramps are operating at acceptable levels of service, LOS C or better, during both peak hours under Existing (Year 2011) Conditions. Without any improvements to the freeway ramps, operations at the SB SR 1 on-ramp at Imjin Parkway are anticipated to degrade to an unacceptable LOS E during the AM peak hour in **Year 2027**.

Intersections

The following alternatives were considered to improve operations at the study intersections:

- No Build Alternative – No roadway improvements are proposed with this alternative. The southbound approach at the SR 1 SB Ramp / Imjin Parkway intersection operates at an unacceptable LOS F during both peak hours. Similarly, the northbound left-turn / through

movement at the SR 1 NB Ramp / Imjin Parkway intersection operates at LOS F during the AM peak hour.

- Alternative 1 (Stop Control for WB Left-turns at SR 1 SB Ramp / Imjin Parkway) – this alternative eliminates the stop control for the SR 1 SB off-ramp to Imjin Parkway and improves operations to LOS A. However, westbound left-turn vehicles would be required to stop and the resulting operations would degrade to unacceptable LOS F operations with projected queues that extend past the SR 1 NB Ramp/Imjin Parkway intersection.
- Alternative 2 (Signal at SR 1 SB Ramp / Imjin Parkway) – This alternative would provide acceptable LOS D operations at the SR 1 SB Ramp / Imjin Parkway intersection through **Year 2015**. Additional improvements would be required to maintain acceptable operations beyond Year 2015.
- Alternative 3 (Signal with Exclusive Bicycle Phase at SR 1 SB Ramp / Imjin Parkway) – This improvement would provide a dedicated signal phase to accommodate bicycle crossings through the intersection. During this exclusive bicycle phase, no vehicles are allowed to enter the intersection thus resulting in unacceptable LOS F operations under Existing (Year 2011) Conditions.
- Alternative 4 (Signals at both SR 1 Ramp/Imjin Parkway Ramps) - This alternative would be required to provide acceptable intersection operations to address the impact of future development on opening day. The two ramp/Imjin Parkway intersections and the Imjin Parkway/2nd Avenue intersection are required to be interconnected and preemptive traffic detection measures are required at the northbound and southbound off-ramp intersections with Imjin Parkway in order to prevent queues from spilling onto mainline SR 1. These improvements are expected to provide interim mitigation until the Project Initiation Document (PSR/PDS) ultimate improvements are completed.
- During the interim period, queues on the westbound approach on Imjin Parkway towards SR 1 will likely extend back to 2nd Avenue when the intersection operations at the southbound ramps fail during the AM peak. This is assuming the volumes increase beyond current levels before the ultimate improvements are installed.

Conclusion to the mitigation requirement of the University Villages EIR

The improvements identified in this report are adequate mitigation for the University Villages EIR, inclusive of the Settlement Agreement. The Settlement Agreement identified requirements as follows:

- Interim improvements to the Highway 1 NB off-ramp, Mitigation Measure TR-2.1 (b) and the Highway 1 SB on-ramp, Mitigation Measure TR-2.2 (b) (“the Interim Improvements”).
- Funding for a Caltrans Project Study Report (the “Project Study Report”) on improvements to the interchange, Mitigation Measure TR-3.2 (a).
- Long term improvements to the Interchange to be completed in fiscal year 2020, to convert the SB Highway 1 off-ramp to become an off-ramp loop at the Highway 1 SB ramps/Imjin Parkway intersection, or its functional equivalent, as determined following completion of the Project Study Report, Mitigation Measure TR-3.2 (b) (the “Long Term Improvements”). The specific modifications to the Interchange that will be included within the Long Term Improvements will be determined based upon the Project Initiation Document (PSR/PDS).

- The agency partners also agree that the need to address the nonstandard interchange spacing and other regionally beneficial improvements should not delay the implementation of the required and warranted mitigation measures associated with the University Villages EIR. Therefore, the alternatives identified herein that are required improvements associated with the University Villages mitigation measures include a forecast date when each of the alternatives should be completed. This will allow the agency partners to annually monitor the traffic volumes and accelerate or delay implementation of the required improvements until such time they are warranted. This strategy is particularly important as portions of the project area are within the Coastal Zone, as some improvements within the Coastal Zone will require approval from the California Coastal Commission.
- The agency partners (the City of Marina, TAMC and Caltrans), have also acknowledged that there is a long term need to address the existing nonstandard interchange spacing between Imjin Parkway and Del Monte Boulevard. This existing interchange configuration, along with the forecasted increases in regional traffic volumes, has triggered the agency partners to program funding for a Project Initiation Document (PSR/PDS) that will consider options to improve mainline and local traffic operations in the vicinity of these two interchanges. The funding is programmed for starting the Project Initiation Document (PSR/PDS) prior to 2020.
- As noted elsewhere in this report, the agency partners have programmed funding for a Project Initiation Document (PSR/PDS) that will consider options to improve mainline and local traffic operations in the vicinity of Imjin Parkway. Furthermore, Caltrans stated in a letter dated September 5, 2012 that accommodating interim improvements on the existing Imjin Parkway overcrossing will not be approved. Therefore, Alternative 5 is presented herein for informational purposes, with the acknowledgement that the Project Initiation Document (PSR/PDS) will address the ultimate configuration of the interchange.

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
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FAX (805) 549-3077
TDD (805) 549-3259
<http://www.dot.ca.gov/dist05/>



*Flex your power!
Be energy efficient!*

February 12, 2014

Christine Di Iorio
Community Development Director
City of Marina
209 Cypress Avenue
Marina, CA 93933

Dear Ms. Di Iorio:

COMMENTS TO SR1/IMJIN PARKWAY DRAFT OPERATIONAL IMPROVEMENT OPTIONS STUDY

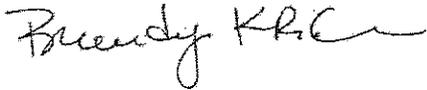
The California Department of Transportation (Caltrans) has received your SR1/Imjin Parkway Operational Improvement Options Draft Report and offers the following comments.

1. Consistent with the Caltrans letter dated September 5, 2012 (attached), we accept this report as compliance with the University Villages (The Dunes) mitigation measures TR-1.3(a), TR-1.4(a), TR-2.1(a), TR-2.2(a), TR-3.2(a), and TR-3.3(a).
2. Caltrans concurs that the improvement ultimately selected should be constructed prior to occupancy of the University Villages (The Dunes) development. Please also note that while there are advantages/disadvantages with each of the alternatives studied, we observed on Table 5a & 5b (page 23 & 24) of your document that the improvements proposed will create operational issues on Imjin Parkway which impact 2nd Avenue by 2016.
3. The acceptance of these mitigation measures is conceptual; the ultimate approval of any improvements will be based on complete drawings, technical studies, etc., as reviewed during the encroachment permit process. Any work within the State right-of-way will need to be built consistent with all the Caltrans' operations and design standards. Specifically related to Level of Service (LOS) and the 95th percentile queuing analysis, changes proposed will need to adhere to the Caltrans LOS C/D cusp standard. Queuing analysis methodology shall be based on Synchro (HCM 2010) plus SimTraffic of a minimum 10 simulation runs (version 8.0.805.881 and newer).

If you have any questions, or need further clarification on items discussed above, please don't hesitate to contact John Olejnik at (805) 542-4751 or Claudia Espino at (805) 549-3640.

Christine Di Iorio
February 12, 2014
Page 2

Sincerely,

A handwritten signature in black ink that reads "Brandy K. Rider". The signature is written in a cursive style with a large, sweeping "B" and "R".

BRANDY K. RIDER, Branch Chief
Transportation Planning, North

cc: Debbie Hale (TAMC)
Carl Holm (MonCoPlng)

Attachment

DEPARTMENT OF TRANSPORTATION

50 HIGUERA STREET
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*Flex your power!
Be energy efficient!*

September 5, 2012

Christine Di Iorio
Community Development Director
City of Marina
209 Cypress Avenue
Marina, CA 93933

Dear Ms. Di Iorio:

CALTRANS REVIEW OF MITIGATION MEASURES FOR THE DUNES DEVELOPMENT

The California Department of Transportation (Caltrans) wishes to respond to your July 20, 2012 letter and provide additional clarification on the matter of mitigation measures for the University Villages (The Dunes) development project. Hopefully this correspondence will allow the City to proceed with the entitlements for the development and implement the transportation improvements which are necessary prior to occupancy.

The numbering sequence of this letter follows the format and issues of your July 20th reply. As an overall statement, however, Caltrans wants to reiterate that neither the City of Marina nor the regional partners should presume that restriping the Imjin/12th Street bridge over Highway 1 to a three lane configuration on the existing structure is a feasible option presently, or "at a future date when traffic volumes increase" as your letter implies. Unfortunately, by continuing to make this reference in the hope of a Caltrans design exception, the matter of settling mitigation measures remains somewhat convoluted.

Secondly, on several of the items below you will note that Caltrans conceptually agrees with the proposals as outlined in the SR-1/Imjin Parkway Operational and Safety Improvements Options Report (The Report). Other than Item 2, we have not been provided the necessary background data, synchro files, etc., to perform a more thorough review and agree to the changes proposed therein. As stated below for those in question, Caltrans can agree to concepts, but ultimate approval will come when all of the necessary operational analysis has been provided in The Report and concurred with.

1. TR-1.3 (a). Caltrans accepts The Report as compliance with the mitigation measure to produce a Project Study Report (PSR). Further, Caltrans acknowledges that TR-1.3(a), TR-1.4(a), TR-2.1(a), TR-2.2(a), TR-3.2(a), and TR-3.3(a) are identical and are likewise in compliance.

Note: While Caltrans conceptually accepts The Report in lieu of the PSR, the findings and technical outputs as it relates to the operations/design of the new signals and configuration changes will still need to be evaluated.

2. TR-1.3(b). Caltrans conceptually accepts the signalization of the Imjin/12th Street southbound Highway 1 on and off ramps as meeting the mitigation requirements. As mentioned above, Caltrans does not accept the notion of reevaluating the potential of restriping the existing structure to three lanes in the future. Further, the "functional equivalent" as stated in the mitigation measure would constitute a standard Stop sign as opposed to signals.

Note: Improvements shall be in place prior to occupancy, and final Caltrans approval will come with the issuance of an encroachment permit.

3. TR-1.4 (b). Caltrans conceptually accepts the signalization of the Imjin/12th Street northbound Highway 1 on and off ramps as meeting the requirement to close the median at this location.

Note: Caltrans has not evaluated the operational feasibility of signals at this location. Final approval will come with the issuance of an encroachment permit and approval of The Report.

4. TR-2.1 (b). Caltrans conceptually accepts widening the Imjin/12th Street northbound Highway 1 off ramp to two lanes and eliminating the free-right turn to a 'diamond' configuration as meeting the requirement of this condition of approval.

Note: Final approvals include such things as Caltrans support of a traffic analysis that supports this configuration change, full environmental clearance, and landscape design. This configuration change is contingent on the successful acquisition of a Caltrans encroachment permit. Alternatives should be provided that do not seek a design exception.

5. TR-2.2(b). Caltrans concurs that widening the Imjin/12th Street southbound on ramp to Highway 1 is not required at this time since the restriping of the existing bridge to three lanes is not a feasible option. The ultimate reconstruction of the interchange will evaluate alternatives, including the possible widening on and off ramps.
6. TR-3.2(b). Caltrans concurs that converting the southbound Highway 1 off ramp to a loop ramp configuration is not required at this time since the project-specific impacts for the development are being mitigated through the items listed above. The loop ramp is out of context with current proposals in The Report and Caltrans' conceptual approval of the items as listed above. The ultimate reconstruction of the interchange will evaluate alternatives, including the possibility of loop ramp configurations.
7. TR-3.3 (b). Caltrans will need additional traffic data from The Report to support changes to the Imjin Parkway/2nd Avenue intersection. Of concern is that proposed changes do not adversely affect traffic operations at any of the interchange ramps and nodes.

Christine Di Iorio
September 5, 2012
Page 3

Thank you for the opportunity to respond to your letter. Hopefully, this information provides the clarity you were seeking. If you have any further questions, please don't hesitate to contact Claudia Espino at (805) 549-3460 or email Claudia_Espino@dot.ca.gov.

Sincerely,



SCOTT EADES
Acting Deputy District Director
Planning and Local Assistance

cc: Debbie Hale (TAMC)

EXHIBIT C

City of Marina Project Impact Fees – Estimated Revenues

Project Name	Roadways	Intersections
Dunes Housing	\$ 544,986.00	\$ 268,983.00
VA Clinic	\$ 795,280.96	\$ 392,372.24
Marina Heights	\$ 465,800.00	\$ 229,900.00
Dialysis MOB	\$ 59,484.90	\$ 29,348.40
Hampton Inn	\$ 357,930.00	\$ 176,580.00
Bayonet Multi-Pur.	\$ 11,216.39	\$ 5,533.89
Bayonet Transition	\$ 1,334.00	\$ 658.00
CHISPA	\$ 84,882.00	\$ 41,877.00
Marina Townhomes	\$ 45,178.00	\$ 22,288.00
CFF Restaurants	\$ 300,886.00	\$ 148,459.00
Left Coast Cardroom	\$ 97,060.00	\$ 47,890.00
AMCAL New Prom.	\$ 314,244.00	\$ 155,034.00
Springhills Marriott	\$ 413,608.00	\$ 204,048.00
Cinema	\$ 219,501.19	\$ 108,303.24
Totals	\$ 3,711,391.44	\$ 1,831,274.77



CITY OF MARINA
Imjin Blvd and SB Route 1 Ramps
 Mitigation Measures
 Preliminary Estimate

6/25/2015
 Prepared By: JH/GG

SOUTHBOUND LOOP OFF-RAMP

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
GENERAL					
1	Mobilization	LS	1	\$60,000.00	\$60,000.00
2	Traffic Control System	LS	1	\$30,000.00	\$30,000.00
	Subtotal				\$90,000.00
EARTHWORK					
3	Clearing and Grubbing	LS	1	\$12,000.00	\$12,000.00
4	Watering	LS	1	\$10,000.00	\$10,000.00
5	Roadway Excavation	CY	4,300	\$40.00	\$172,000.00
6	Structure Backfill (Retaining Wall)	CY	2,150	\$60.00	\$129,000.00
7	Retaining Wall	SF	5,800	\$80.00	\$464,000.00
8	Hydroseed	SF	50,000	\$1.00	\$50,000.00
	Subtotal				\$837,000.00
ROADWAY					
9	Aggregate Base, Class 2 - 12" depth	CY	2,111	\$40.00	\$84,444.44
10	Hot Mix Asphalt (Type A) - 6" depth	TON	2,209	\$150.00	\$331,312.50
11	Cold Plane Asphalt Concrete Pavement	SF	8,000	\$1.00	\$8,000.00
12	AC Path	SF	6,000	\$8.00	\$48,000.00
13	Concrete Barrier	LF	1,770	\$100.00	\$177,000.00
14	Chain Link Fence	LF	400	\$25.00	\$10,000.00
15	Crash Cushion	EA	2	\$10,000.00	\$20,000.00
16	Inlet	EA	1	\$3,000.00	\$3,000.00
	Subtotal				\$681,756.94
TRAFFIC IMPROVEMENTS					
17	Signs	EA	20	\$300.00	\$6,000.00
18	Thermoplastic Traffic Stripes	LF	6,000	\$2.00	\$12,000.00
19	Thermoplastic Pavement Markings	SF	2,000	\$5.00	\$10,000.00
20	Pavement Marker (Retroflective)	EA	30	\$10.00	\$300.00
21	Remove Signal and New Lighting	LS	1	\$50,000.00	\$50,000.00
	Subtotal				\$78,300.00
	Subtotal: All Items				\$1,687,056.94
	Contingency			20%	\$337,411.39
	TOTAL				\$2,024,468.33

Honorable Mayor and Members
of the Marina City Council

City Council Special Meeting
of July 14, 2015

CITY COUNCIL OPEN A PUBLIC HEARING, TAKE ANY TESTIMONY FROM THE PUBLIC, RECEIVE A PRELIMINARY BUDGET FOR, AND REPORT ON LONG TERM IMPROVEMENTS TO THE STATE HIGHWAY 1/IMJIN PARKWAY INTERCHANGE; AND CONSIDER ADOPTING RESOLUTION 2015- , FINDING AND DETERMINING BASED UPON SUBSTANTIAL EVIDENCE, THAT WITH RESPECT TO THE CITY'S CAPITAL IMPROVEMENT PROGRAM AND THE CITY'S PARTICIPATION IN THE FUNDING FOR THE LONG TERM IMPROVEMENTS: (1) CAPITAL IMPROVEMENT PROJECT LISTS WERE UPDATED IN ACCORDANCE WITH THE UNIVERSITY VILLAGES SETTLEMENT AGREEMENT, (2) THE LIKELIHOOD OF FUNDING FOR THE LONG TERM IMPROVEMENTS IS REASONABLY CERTAIN, AND (3) THE LONG TERM IMPROVEMENTS CAN BE BUILT AND COMPLETED BY THE END OF FISCAL YEAR 2020

REQUEST:

It is requested that the City Council:

1. Open a public hearing, take any testimony from the public; and consider:
2. Receiving a preliminary budget for the long term improvements to the interchange at Imjin Parkway and State Highway 1 as set forth in the University Villages Settlement Agreement (the "Long Term Improvements"), dated as of September 15, 2006 (the "Settlement Agreement") and a report on the status of funding available and funding projected for those Long Term Improvements; and
3. Adopting Resolution No. 2015-___, finding and determining, based upon substantial evidence, that with respect to the City's Capital Improvement Program and the City's participation in the funding for the Long Term Improvements: (1) the City updated its 5-year and 1-year Capital Improvement Program project lists substantially in accordance with the Settlement Agreement; (2) funding for the Long Term Improvements is likely and reasonably certain; and (3) the Long Term Improvements can be built and completed by the end of fiscal year 2020.

BACKGROUND:

In May 2005 the City certified an Environmental Impact Report (EIR) and adopted findings pursuant to the California Environmental Quality Act ("CEQA") in approving development of a 420 acre area within the City on former Fort Ord including 390 acres controlled by Marina Community Partners ("MCP"). In July 2005 Save Our Peninsula Committee ("SOP") petitioned the Monterey Superior Court for a writ of mandate to overturn the City's approvals. In March 2006, the court denied SOP's petition and SOP appealed. On September 15, 2006, the City, MCP and SOP entered into the Settlement Agreement to settle all disputes relating to City and FORA approvals and any other claims or disputes relating to the litigation.

In the Settlement Agreement the City agreed to undertake certain actions with respect to construction of improvements to the interchange at Imjin Parkway and State Highway 1 (“SR-1”) as follows:

- a. Updating its 5-year and 1-year Capital Improvement Program (“CIP”) project lists, along with funding sources identified to complete projects included on the project lists, annually between May 1 and July 31 by holding public meetings of the Planning Commission and public hearings and consideration by the City Council relating to adoption of said CIPs; and
- b. Within two years of the completion of a Project Study Report (PSR), preparing and presenting publicly at a City Council meeting a preliminary budget for the Long Term Improvements, a report on the status of funding available and funding projected for the Long Term Improvements; and
- c. Not later than July 31 of 2015, holding a publicly noticed hearing to determine that, with respect to the City’s Capital Improvement Program and the City’s participation in the funding of the Long Term Improvements, the likelihood of funding for the Long Term Improvements is reasonably certain and the Long Term Improvements can be built and completed by the end of fiscal year 2020.

ANALYSIS:

The City updated its 5-year and 1-year CIP annually through City Council approval by Resolutions Nos.: 2007-179, 2008-167, 2009-153, 2010-169, 2011-130, 2012-197, and 2014-11. Council recently approved the 2015 CIP Update on June 23rd, 2015 by Resolution No. 2015-79.

In September 2013 the City completed the SR-1 & Imjin Parkway Operational Improvement Options Report (“Operational Improvement Options Report”), a report equivalent to a Project Study Report. This Report satisfies Mitigation Measure TR-3.2 (a) of the University Villages Specific Plan EIR Mitigation Monitoring Program. The Operational Improvement Options Report is attached as “**EXHIBIT A**” and the entire report with the technical attachments may be downloaded from the Document Center (see Community Development/Public Works) of the City’s website at www.ci.marina.ca.us. Caltrans has reviewed, provided comments and provided a letter of acceptance for the Operational Improvement Options Report (“**EXHIBIT B**”).

As discussed in the Operational Improvement Options Report, Caltrans will be studying future regionally related transportation improvements across a large study area that includes the SR-1 / Imjin Parkway interchange. In coordination with the future regionally related improvements, the City will continue to work closely with Caltrans to coordinate the implementation of the Long Term Improvements, Mitigation Measure TR-3.2(b), per the University Village EIR by the end of fiscal year 2020.

Mitigation Measure TR-3.2(b) is summarized as follows:

- Convert the southbound SR-1 off-ramp to become an off-ramp loop at the SR-1 southbound ramp at the Imjin Parkway intersection (or functional equivalent, to be determined following the completion of a developer funded combined PSR for the SR-1 southbound ramps at the Imjin Parkway intersection and Imjin Parkway and 2nd Avenue at the 2nd Avenue/Imjin Parkway intersection).
 - ✓ City has budgeted and set aside funding for the future installation of a SR-1 / Imjin Parkway southbound loop off-ramp (or functional equivalent). Staff estimated the cost for the development and construction of this loop off ramp to be \$2,025,000. This estimate includes a contingency factor of 20%. The City has set aside \$1,998,579, representing 99% of the estimated amount in the Public Facility Impact Fee, Roadway and Intersection accounts, as set forth below.

In summary:

1. Staff is presenting this evening the preliminary budget for the Long Term Improvements to the interchange at Imjin Parkway and SR-1 and a report on the status of funding available and funding projected for those long term improvements.
2. The City is working with Caltrans to coordinate regionally related transportation improvements with the Long Term Improvements identified in TR-3.2(b). The City has allocated adequate Public Facilities Impact Fee (PFIF) funding in the Capital Improvement Program Project Fund 62 for a conversion of the southbound Highway 1 off-ramp to become an off-ramp loop as specified in TR-3.2(b), based on the City's estimate of construction costs for the Long Term Improvements and the existing balance in CIP Project Fund 62 and estimated future revenue from the PFIF through Fiscal Year 2020. Estimated future revenue is based on the reasonable advancement of currently entitled and planned development projects. (See City of Marina Project Impact Fees – Estimated Revenues attached as “**EXHIBIT C.**”) Therefore the likelihood of funding for the Long Term Improvements is reasonably certain.

The City has programmed \$1,998,579 in the currently adopted 5-Year Capital Improvement Program to fund construction of the Long Term Improvements by the end of Fiscal Year 2020.

3. Funding has been provided through development impact fees paid and allocated into the Capital Improvement Program Project Fund No. 62 for the Long Term Improvements. The City estimates the cost of the Long Term Improvements to be \$2,025,000, as set forth on the cost estimate attached as “**EXHIBIT D.**”

Through current development project advancement, expected PFIF funding is as follows:

CIP Fund 62 Fund Balance by Fee Type	FY 14/15 Fund Balance	Est. Revenue FY15/16 - FY19/20	Est. Balance FY19/20
Roadway PFIF	\$ 2,078,978	\$ 3,711,391	\$ 5,790,369
Intersection PFIF	\$ 756,455	\$ 1,831,275	\$ 2,587,730

Existing and future PFIF funding, demonstrates with reasonable certainty the likelihood of adequate funds being available so that the Long Term Improvements can be built and completed by the end of the 2020 fiscal year, because there is reasonably estimated to be \$8,378,099 available to pay for the Long Term Improvements in the City's FY 2020 5-year Capital Improvement Program.

FINDINGS:

Based upon the information received during the public hearing, the foregoing staff report, and staff's presentations at the meeting on July 14, 2015, it is found and determined on the basis of substantial evidence that:

1. The City updated its 5-year and 1-year Capital Improvement Program(s) project lists substantially in accordance with the University Villages Settlement Agreement; and
2. With respect to the City's Capital Improvement Programs and the City's participation in the funding of the Long Term Improvements, the likelihood of funding for the Long Term Improvements is reasonably certain; and
3. The Long Term Improvements can be built and completed by the end of fiscal year 2020.

REQUEST:

Open a public hearing, receive public comment and reports by City staff, close the public hearing and consider adopting the attached Resolution.

Respectfully submitted,

Nourdin Khayata, P.E.
Acting City Engineer
City of Marina

REVIEWED/CONCUR:

Theresa Szymanis, AICP CTP
Acting Director
Community Development Department
City of Marina

Layne P. Long
City Manager
City of Marina