

**SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY
 REQUEST FOR BOND OWNER CONSENT
 TO INDENTURE AMENDMENTS RELATING TO
 SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY TOLL
 ROAD REFUNDING REVENUE BONDS
 SERIES 1997A**

CUSIPs subject to the Consent as follows:

798111CD0	798111DC1	798111DL1	798111DU1
798111CE8	798111DD9	798111DM9	798111DV9
798111CW8	798111DE7	798111DN7	798111DW7
798111CX6	798111DF4	798111DP2	798111DX5
798111CY4	798111DG2	798111DQ0	798111DY3
798111CZ1	798111DH0	798111DR8	798111DZ0
798111DA5	798111DJ6	798111DS6	798111EA4
798111DB3	798111DK3	798111DT4	798111EB2
			798111ECO

Voting Record Date: October 2, 2014
Deadline Date: October 31, 2014 by 5:00 P.M. Eastern Time

INTRODUCTION

The San Joaquin Hills Transportation Corridor Agency (the “Agency”) has heretofore issued its San Joaquin Hills Transportation Corridor Agency, Toll Road Revenue Bonds, Series 1993 (the “1993 Bonds”) and its San Joaquin Hills Transportation Corridor Agency, Toll Road Refunding Revenue Bonds, Series 1997A (the “1997 Bonds”) for the purpose of financing and refinancing the costs of constructing the San Joaquin Hills Transportation Corridor (the “Toll Road”). In order to improve its overall financial position by establishing a long-term sustainable debt structure that will, among other things, reduce its annual debt service growth rate and its maximum annual debt service, strengthen its debt service coverage ratios, and improve its ability to withstand any future economic downturns, the Agency is considering issuing additional bonds (the “2014 Bonds”) to refund all of the outstanding 1993 Bonds and a portion of the outstanding 1997 Bonds and to finance the purchase of some or all of the 1997 Bonds that cannot be refunded. In connection with such possible refunding and purchase, the Agency is requesting that the owners of the 1997 Bonds consent to amendments (the “2014 Amendments”) to the 1997 Master Indenture of Trust, dated as of September 1, 1997, by and between the Agency and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “Trustee”), (as heretofore amended and supplemented “1997 Master Indenture”). Capitalized terms used in this Request that are not otherwise defined herein shall have the respective meanings assigned to them in the 1997 Master Indenture.

The 2014 Amendments are set forth in the First Amended and Restated Master Indenture of Trust by and between the Agency and the Trustee, a copy of which is attached as Exhibit 1 to the form of “Bond Owner’s Consent to Amendment to 1997 Indenture” attached hereto as Appendix A; and some of the 2014 Amendments are discussed in detail below under caption “PROPOSED 2014 AMENDMENTS.” In addition, a comparison of the 1997 Master Indenture and the First Amended and Restated Master Indenture of Trust highlighting the changes that would be made to the 1997 Master Indenture by the 2014 Amendments is attached as Exhibit 2 to the form of “Bond Owner’s Consent to Amendment to 1997 Indenture”.

In order for the 2014 Amendments to take effect they must be approved by the owners of not less than a majority of the aggregate Principal Obligation (as defined in the 1997 Master Indenture) of the Outstanding 1997 Bonds and by National Public Finance Guarantee Corporation, as successor to MBIA Insurance Corporation (the “Bond Insurer”). **The 2014 Amendments do not change the principal amounts, interest rates, maturity dates or redemption provisions of any 1997 Bond, nor would they change the provisions of the First Supplemental Indenture of Trust, dated as of September 1, 1997, by and between the Agency and the Trustee or the Second Supplemental Indenture of Trust, dated as of April 1, 2011, by and between the Agency and the Trustee. Moreover, the 2014 Amendments will expire and be of no force or effect if the Senior Lien 2014 Bonds and the 1997 Bonds that are not defeased or purchased with the proceeds thereof are not assigned investment grade ratings by two rating agencies and if the 2014 Bonds are not issued prior to June 30, 2015.**

BACKGROUND INFORMATION

1993 Bonds

In 1993, the Agency issued \$1,078,629,411.05 initial principal amount of its Senior Lien Toll Road Revenue Bonds and \$90,947,437.00 initial principal amount of its Junior Lien Toll Road Revenue Bonds, the proceeds of which were used to finance a portion of the costs associated with the design and construction of the Toll Road, an approximately 15 mile controlled access, multi-lane toll highway in Orange County, California.

1997 Bonds

In 1997, the Agency issued its Toll Road Refunding Revenue Bonds, consisting of \$604,885,000 principal amount of Series 1997A Current Interest Bonds, \$404,289,150 initial principal amount of Series 1997A Convertible Capital Appreciation Bonds and \$439,100,165.10 initial principal amount of Series 1997A Capital Appreciation Bonds. The 1997 Bonds were issued for the principal purpose of providing funds, together with certain funds available under the 1993 Indenture, to refund all of the 1993 Bonds other than \$220,180,000 principal amount of 1993 Bonds maturing on January 1, 2033. Payment of the 1997 Bonds is subordinate to the payment of the \$220,180,000 principal amount of the Outstanding 1993 Bonds and to the maintenance of certain reserves under the 1993 Indenture. The Agency’s purposes in issuing the 1997 Bonds were to achieve debt service savings as well as to restructure debt service to reflect the then current projections of toll road revenues, which projections were lower than those made at the time of issuance of the 1993 Bonds. In 2011, the maturity dates of some of the 1997 Convertible Capital Appreciation Bonds were extended with the consent of the owners thereof, but the interest rates applicable to such Bonds were not increased.

2011 Amendments

In May, 2011, the 1997 Master Indenture as originally executed and delivered (the “Original 1997 Master Indenture”) was amended with the then owners of at least a majority of the aggregate Principal Obligation (as defined in the 1997 Master Indenture) of the Outstanding 1997 Bonds and the Bond Insurer (said amendments collectively, the “2011 Amendments”). The terms of the three most significant 2011 Amendments, those that pertained to the Toll Rate Covenant, the Toll Stability Fund and Junior Lien Interest, are described below.

Toll Rate Covenant. Among other things, the 2011 Amendments changed the toll rate covenant contained in the Original 1997 Master Indenture (the “Original Toll Rate Covenant”). In general, the Original Toll Rate Covenant required the Agency to fix and prescribe Tolls so that Adjusted Net Toll Revenues (i.e., the sum of the Tolls and certain investment earnings, less Current Expenses) for the following Fiscal Year would be at least equal to the lesser of 1.3 times the sum of annual debt service (determined in accordance with the provisions of the 1997 Indenture) on the 1997 Bonds and the 1993 Bonds (“Annual Debt Service”) or 1.1 times Annual Debt Service for the Fiscal Year in which such amount is the greatest (“Maximum Annual

Debt Service”), provided that if Adjusted Net Toll Revenues for any 12-month period during the most recent 18-month period did not exceed Maximum Annual Debt Service, the Agency was required to fix and prescribe Tolls so that Adjusted Net Toll Revenues for the following Fiscal Year will be at least equal to 1.3 times Annual Debt Service. Under the terms of 2011 Amendments, the Original Toll Rate Covenant was revised (as so revised, the “2011 Amended Toll Rate Covenant”) to require the Agency to fix and prescribe Tolls so that (i) during any period in which there are one or more Outstanding 1993 Bonds, the sum of projected (a) amounts payable to the Trustee by the 1993 Trustee from the “Surplus Revenues Fund” established pursuant to the 1993 Indenture, plus (b) amounts transferred to the Debt Service Fund from the Toll Stabilization Fund, the Reserve Fund and the Use and Occupancy Fund minus (c) Current Expenses will be at least equal each Fiscal Year to 100% of Annual Debt Service on the 1997 Bonds and the Restructured Bonds, and (ii) during any period in which there are no Outstanding 1993 Bonds, the sum of projected (a) Tolls, plus (b) amounts transferred to the Debt Service Fund from the Toll Stabilization Fund, the Reserve Fund and the Use and Occupancy Fund minus (c) Current Expenses will be at least equal each Fiscal Year to 100% of Annual Debt Service on the 1997 Bonds and the Restructured Bonds. Notwithstanding the foregoing, the 2011 Amended Toll Rate Covenant requires the Agency to continue to maintain its efforts to maximize Adjusted Net Toll Revenues each Fiscal Year.

Toll Stabilization Fund. The 2011 Amendments also changed the provisions in the Original 1997 Master Indenture applicable to the Toll Stabilization Fund (the “Original Toll Stabilization Fund Provisions”). The Original Toll Stabilization Fund Provisions merely created a fund into which deposits could be made at the Agency’s direction and applied to defease principal or interest otherwise payable on the 1993 and/or 1997 Bonds. As a result of the 2011 Amendments, the Original Toll Stabilization Fund Provisions were revised (as revised, the “2011 Amended Toll Stabilization Fund Provisions”), to require the Trustee to deposit into the Toll Stabilization Fund each month (i) Net Revenues remaining after satisfying the obligations identified in Section 4.2 (a) through (f) of the 1997 Master Indenture (such obligations would include the payment of Current Expenses, the funding of the Current Expense Reserve, the funding of the Principal Account, the Interest Account and the Junior Lien Interest Account, the funding of the Reserve Fund, the funding of the Use and Occupancy Fund, the payment of amounts due with respect to certain subordinate obligations and the payment of Eligible Additional Costs) and (ii) such amounts as are received by the Trustee with instructions from the Agency to so deposit said amounts. Moneys in the Toll Stabilization Fund are required to be held by the Trustee in trust for benefit of the 1997 Bonds and the 1993 Bonds.

Pursuant to the 2011 Amended Toll Stabilization Fund Provisions, moneys on deposit in the Toll Stabilization Fund are to be withdrawn and transferred or applied by the Trustee for the following purposes in the following order of priority:

(i) the Trustee shall transfer to the 1993 Trustee an amount required by the 1993 Trustee to pay interest coming due on the 1993 Bonds on any interest payment date for the 1993 Bonds if the amount available for such purpose in the Senior Lien Bonds Interest Account of the Senior Lien Bonds Debt Service Fund established pursuant to the 1993 Indenture is insufficient for such purpose, all as set forth in a request from the 1993 Trustee;

(ii) the Trustee shall transfer to the 1993 Trustee an amount required by the 1993 Trustee to pay principal coming due on the 1993 Bonds on any principal payment date for the 1993 Bonds if the amount available for such purpose in the Senior Lien Bonds Principal Account of the Senior Lien Bonds Debt Service Fund established pursuant to the 1993 Indenture is insufficient for such purpose, all as set forth in a request from the 1993 Trustee;

(iii) in the event that the moneys on deposit in any account in the Debt Service Fund (other than the Junior Lien Interest Account) are insufficient, after any transfer of funds thereto from the Surplus Revenues Fund required or permitted under the 1997 Master Indenture but prior to any transfer of funds thereto from the Reserve Fund required or

permitted under the 1997 Master Indenture, to pay the interest coming due on the 1997 Bonds (other than Junior Lien Interest) on any Interest Payment Date or the moneys on deposit in the applicable Series Credit Facility Fund are insufficient to pay, as it becomes due, any Reimbursement Obligation resulting from a draw on a Credit Facility to pay principal of or interest on 1997 Bonds and any obligation under a Parity Swap Agreement relating thereto, in each such case to the extent such interest or principal is payable from such account or such Reimbursement Obligation is payable from a Series Credit Facility Fund on parity therewith, the Trustee shall withdraw from the Toll Stabilization Fund and shall deposit to the credit of such account and/or each such Series Credit Facility Fund, as the case may be, an amount sufficient to remedy said deficiency (and if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of its deficiency); and

(iv) in the event that the moneys on deposit in the Junior Lien Interest Account of the Debt Service Fund are insufficient, after any transfer of funds thereto from the Surplus Revenues Fund required or permitted under the 1997 Indenture but prior to any transfer of funds thereto from the Reserve Fund required or permitted under the 1997 Indenture, to pay the Junior Lien Interest coming due on the Restructured Bonds on any Interest Payment Date, the Trustee shall withdraw from the Toll Stabilization Fund and shall deposit to the credit of the Junior Lien Interest Account an amount sufficient to remedy said deficiency.

Notwithstanding the foregoing, the 2011 Amended Toll Stabilization Fund Provisions allow funds to be released from the Toll Stabilization Fund at the request of the Agency and transferred to the Agency to pay for proposed revenue generating additions, enhancements or other improvements to the San Joaquin Hills Transportation Corridor, but only with the consents of the Bond Insurer, the Owners of a majority in Principal Obligation of the 1993 Bonds and the Owners of a majority in Principal Obligation of the 1997 Bonds (including the Potential Restructured Bonds).

Pursuant to the 2011 Amended Toll Stabilization Fund Provisions the Agency is required to report to the Trustee and the Bond Insurer, within 60 days of the end of each Fiscal Year, the balance remaining on deposit in the Toll Stabilization Fund after accounting for the transfer of funds for any approved project as described above and after accounting for transfers described in Section 4.2 of the 1997 Master Indenture for such Fiscal Year. If such balance is not less than \$500,000 above the "Target Annual Toll Stabilization Amount" for such Fiscal Year shown in Table A below (such amount, as shown in Table A, the "Target Amount"), then as soon as practicable, the Agency shall employ a Traffic Consultant to produce the projection of Tolls and shall complete the work necessary to produce Agency projections of other Revenues and Current Expenses needed to determine if the sum of the balances then on deposit in the Reserve Fund and the Toll Stabilization Fund plus Net Revenues estimated to be received by the Agency prior to January 15, 2028 (said sum, the "Projected Available Funds") exceeds all debt service coming due on the 1997 Bonds (including the Potential Restructured Bonds) prior to and including such date ("Debt Service Through January 15, 2028"). Promptly after completion of such projection and work, the Agency will deliver to the 1997 Trustee and the Bond Insurer a certificate from an Authorized Agency Representative setting forth the results thereof. If such certificate demonstrates that the Projected Available Funds do exceed Debt Service Through January 15, 2028, the Trustee shall transfer to the Prepayment Account of the Debt Service Fund to be applied to the redemption of Outstanding Series 1997A Current Interest Bonds maturing on January 15, 2028 an amount equal to the largest integral multiple of \$5,000 by which the aforesaid balance remaining on deposit in the Toll Stabilization Fund exceeds the aforesaid Target Amount (or such lesser amount as may be permitted by the Bond Insurer).

Notwithstanding the foregoing, the 2011 Amended Toll Stabilization Fund Provisions permits the amount required to be transferred to the Prepayment Account of the Debt Service Fund and applied to the redemption of Outstanding Series 1997A Current Interest Bonds maturing on January 15, 2028 to be reduced

or eliminated altogether if the Trustee receives the written consent thereto of the Owners of a majority in Principal Obligation of the Series 1997A Current Interest Bonds maturing on January 15, 2028.

Table A

Target Annual Toll Stabilization Amount

June 30, 2011	\$ 27,500,000
June 30, 2012	27,500,000
June 30, 2013	30,500,000
June 30, 2014	33,500,000
June 30, 2015	37,500,000
June 30, 2016	31,500,000
June 30, 2017	32,000,000
June 30, 2018	57,500,000
June 30, 2019	83,000,000
June 30, 2020	114,000,000
June 30, 2021	139,500,000
June 30, 2022	147,500,000
June 30, 2023	176,500,000
June 30, 2024	166,000,000
June 30, 2025	80,500,000
June 30, 2026	82,000,000

After all Series 1997A Current Interest Bonds maturing on January 15, 2028 have been paid, either at maturity or by earlier redemption, money on deposit in the Toll Stabilization Fund may be used to redeem other Outstanding 1997 Bonds and the Outstanding 1993 Bonds subject to the consent of the Bond Insurer.

The 2011 Amended Toll Stabilization Fund Provisions direct that amounts on deposit in the Toll Stabilization Fund in excess of the Toll Stabilization Fund Requirement following any transfer to the Prepayment Account described above and the payment of principal of and interest on the 1997 Bonds (including the Restructured Bonds) and the 1993 Bonds shall be withdrawn therefrom and deposited to the credit of the Surplus Fund.

Junior Lien Interest. In order to provide for the amendment of the terms of certain 1997 Bonds (and treating such amended 1997 Bonds as if they were additional Bonds under the 1997 Master Indenture) the 2011 Amendments permitted the issuance of Bonds a portion of the interest on which would be payable as Junior Lien Interest (as defined in the 2011 Amendments). The 2011 Amendments provide that such Bonds could be issued to refund 1997 Bonds without the need to satisfy the tests for the issuance of new money obligations if there is delivered to the Trustee a certificate of an Authorized Agency Representative showing that Annual Debt Service (exclusive of Junior Lien Interest) payable on all Bonds Outstanding after the issuance of the refunding Bonds will not exceed Annual Debt Service (exclusive of Junior Lien Interest) on all 1997 Bonds Outstanding prior to the issuance of such Bonds in each Fiscal Year in which any such Bonds would have been Outstanding but for the issuance of such refunding Bonds.

Mitigation Payment and Loan Agreement

In 2005, in order to offset any potential adverse impacts on the Agency's Revenues that might be caused by the future construction by the Foothill/Eastern Transportation Corridor Agency ("Foothill/Eastern") of an extension of Foothill/Eastern's toll road system referred to as "Foothill South," the Agency and Foothill/Eastern entered into a Mitigation Payment and Loan Agreement, dated as of November 10, 2005 (the

“Original Mitigation Payment and Loan Agreement”). Pursuant to the Original Mitigation Payment and Loan Agreement, Foothill/Eastern made mitigation payments of \$120,000,000 to the Agency, and the Agency applied a substantial portion thereof to the defeasance of some of its debt. Foothill/Eastern also agreed to make loans to the Agency in an aggregate amount of up to \$1 billion under certain conditions if and to the extent that such funds were required to meet the Agency’s Toll Rate Covenant and if and to the extent that Foothill/Eastern had surplus funds. However, as long as Foothill/Eastern still intended to construct Foothill South, it was not required to make any such loans prior to securing the funds necessary to pay for such construction. Moreover, the Agency agreed to repay the \$120,000,000 mitigation payments to Foothill/Eastern if either Foothill/Eastern gave the Agency notice that it would not construct Foothill South or if construction of Foothill South had not commenced and was not being diligently pursued by December 31, 2015.

In connection with the 2011 Amendments, the Agency and Foothill/Eastern agreed to certain changes to the Original Mitigation Payment and Loan Agreement in order to conform it to the 2011 Amendments. These changes were set forth in an Amended and Restated Mitigation Payment and Loan Agreement. The Amended and Restated Mitigation Payment and Loan Agreement retained the provisions relating to Foothill/Eastern’s potential obligation to make loans to the Agency. However, Foothill/Eastern still intends to construct Foothill South at some point in the future, but it has not secured the funds with which to do so. Thus, Foothill/Eastern is not currently required to make the loans contemplated by the Amended and Restated Mitigation Payment and Loan Agreement. Moreover, even after the funds necessary to complete Foothill South have been secured there can be no assurance that the other conditions to the making of such loans (including the availability of surplus revenues) will be satisfied.

Among other things, the Amended and Restated Mitigation Payment and Loan Agreement provides that the Agency cannot incur any additional indebtedness without the prior written approval of Foothill/Eastern. In order to enable the Agency to proceed with the issuance of the 2014 Bonds, the Agency and Foothill/Eastern have agreed to terminate the Amended and Restated Mitigation Payment and Loan Agreement effective upon the issuance of the 2014 Bonds; and the Agency has agreed to repay to Foothill/Eastern the \$120,000,000 mitigation payments that it received from Foothill/Eastern, together with interest thereon, such repayment to be made starting January 15, 2025 from 50% of the Agency’s surplus revenues.

PROPOSED 2014 AMENDMENTS

Certain of the 2014 Amendments are summarized below. *These summaries do not purport to be complete or definitive and are qualified in their entirety by reference to the full First Amended and Restated Master Indenture of Trust, a copy of which is attached as Exhibit 1 to the form of “Bond Owner’s Consent to Amendment to 1997 Indenture” attached hereto as Appendix A. (In addition, a comparison of the 1997 Master Indenture and the First Amended and Restated Master Indenture of Trust highlighting the changes that would be made to the 1997 Master Indenture by the 2014 Amendments is attached as Exhibit 2 to the form of “Bond Owner’s Consent to Amendment to 1997 Indenture”.) Owners of 1997 Bonds are referred to and encouraged to read the complete text of the First Amended and Restated Master Indenture of Trust.*

Capitalized terms that are used and not otherwise defined in the following summaries have the respective meanings ascribed to them in the First Amended and Restated Master Indenture of Trust.

Toll Rate Covenant. The 2014 Amendments would change the toll rate covenant back to one that embodies the basic concepts contained in the Original Toll Rate Covenant described above under “BACKGROUND INFORMATION – 2011 Amendments – *Toll Rate Covenant*” but with two enhancements added thereto. Thus, the basic language of the covenant would provide that prior to the commencement of each Fiscal Year the Agency will fix and prescribe toll rates so that Adjusted Net Toll Revenues for such Fiscal Year are forecasted to be at least equal to: (i) 1.3 times Annual Debt Service on the Senior Lien Bonds and (ii) 1.1 times Annual Debt Service on all Bonds for as long as it is permitted to do so pursuant to the Caltrans Agreement. Pursuant to the Caltrans Agreement the Agency has the right to maintain Toll Facilities

(as defined in the Caltrans Agreement) and to continue toll collection operations until December 31, 2050; and the 2014 Amendments include a covenant requiring the Agency to use its best efforts to extend the term of the Caltrans Agreement if necessary to provide for the payment of any Bonds that remain Outstanding after January 15, 2050.

The first of the two enhancements referred to above will provide that prior to January 31 of each Fiscal Year the Agency will cause its Chief Financial Officer to (i) review the Adjusted Net Toll Revenues received by it in the first half of such Fiscal Year and the Adjusted Net Toll Revenues that the Chief Financial Officer expects the Agency will receive in the second half of such Fiscal Year, (ii) determine whether the sum of those Adjusted Net Toll Revenues is less than 1.3 times Annual Debt Service on the Senior Lien Bonds or less than 1.1 times Annual Debt Service on all Bonds, in each case calculating Annual Debt Service without any adjustment thereto otherwise permitted pursuant to the provisions of subdivision (i) of the definition thereof, and (iii) if the Chief Financial Officer so determines, promptly notify the Board of such determination. As soon as reasonably practicable following the Board's receipt of any such notification, the Agency will retain a Traffic Consultant to provide it with a review of its current toll rate schedule, multiple possible toll rate schedules for at least the upcoming Fiscal Year, their respective impacts on transactions and toll revenues and recommended changes in toll rates to maximize toll revenues while minimizing negative long term impacts from traffic diversion resulting from potential toll increases. The Agency may adopt any of the Traffic Consultant's recommended toll rate schedules that are forecasted to produce Adjusted Net Toll Revenues (as projected by the Agency) for such upcoming Fiscal Year of at least 1.3 times Annual Debt Service on the Senior Lien Bonds and 1.1 times Annual Debt Service on all Bonds. If none of the Traffic Consultant's recommended toll rate schedules produce Adjusted Net Toll Revenues (as projected by the Agency) for such upcoming Fiscal Year of at least 1.3 times Annual Debt Service on the Senior Lien Bonds and 1.1 times Annual Debt Service on all Bonds, the Agency shall adopt the toll rate structure recommended by the Traffic Consultant that produces the maximum amount of Adjusted Net Toll Revenues unless either (i) the Agency both (x) identifies an alternative toll rate structure that the Traffic Consultant agrees will produce not less than 97.5% of the Adjusted Net Toll Revenues that the Traffic Consultant projects would be generated by the Traffic Consultant's recommended toll rate structure and (y) forecasts (and the Traffic Consultant concurs) that the Agency can generate at least the 2.5% difference from operating sources in addition to tolls themselves (including but not limited to account fees or violation fees and penalties) or (ii) both the Bond Insurer and the Owners of a majority in Principal Obligation of the Bonds consent to the adoption of an alternative toll rate schedule.

Toll Stabilization Fund/Supplemental Reserve Fund. The 2014 Amendments would change the name of the Toll Stabilization Fund to the Supplemental Reserve Fund; and, once there are no longer any 1993 Bonds Outstanding, the 2014 Amendments would (a) reduce the Supplemental Reserve Fund Requirement (referred to in the 2011 amendments as the "Toll Stabilization Fund Requirement") from \$664,000,000 to an amount equal to 50% of Maximum Annual Debt Service and (b) completely revise the 2011 Amended Toll Stabilization Fund Provisions. Pursuant to the 2014 Amendments, if the balance on deposit in the Supplemental Reserve Fund is less than the Supplemental Reserve Fund Requirement, the Trustee will be required to deposit in the Supplemental Reserve Fund 50% of the Revenues remaining after making the transfers and deposits described in Section 4.2(a) through (g) of the First Amended and Restated Master Indenture of Trust (as described in the following paragraph) or, if the report filed by the Agency with the Trustee for the preceding Fiscal Year pursuant to the toll rate covenant 5.2 indicates that the Enhanced Adjusted Net Toll Revenues for such Fiscal Year were less than either (i) 1.3 times Annual Debt Service on the Senior Lien Bonds or (ii) 1.1 times Annual Debt Service on all Bonds, 100% of such remaining Revenues.

In general terms, the transfers and deposits of Revenues that must be made each month prior to any deposit of Revenues in the Toll Stabilization Fund, include the amounts required to: (a) pay Current Expenses and maintain a reserve for the payment of Current Expenses, (b) cover Accrued Interest and Accrued Principal on the Senior Lien Bonds and make deposits to the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account, (c) deposit in the Senior Lien Bonds Reserve Fund one-sixth of any amount previously withdrawn therefrom until the full amount of such withdrawal has been

deposited in such fund, (d) cover Accrued Interest and Accrued Principal on the Junior Lien Bonds, (e) deposit in the Senior Lien Bonds Reserve Fund any additional amount necessary in order that any amount previously withdrawn therefrom is deposited in such fund and, in addition to such amount, the lesser of (1) 50% of the Revenues remaining after the foregoing transfers and deposits have been made and (2) the amount necessary to cause the balance on deposit in such fund to equal Maximum Annual Debt Service on the Senior Lien Bonds, (f) deposit in the Junior Lien Bonds Reserve Fund the amount necessary to cause the balance on deposit in such fund to equal the Junior Lien Bonds Reserve Fund Requirement, (g) deposit in the Use and Occupancy Fund the amount necessary to cause the balance on deposit in such fund to equal the Use and Occupancy Fund Requirement, and (g) to make provision for any payments then required to be made pursuant to the Agreement Terminating First Amended and Restated Mitigation Payment and Loan Agreement described above under the caption "BACKGROUND INFORMATION - Mitigation Payment and Loan Agreement."

Moneys in the Supplemental Reserve Fund shall be held by the Trustee in trust for benefit of the Secured Owners and applied as described below; and, pending such application, such moneys shall be subject to a lien and charge in favor of the Secured Owners.

If the Revenues transferred to the Trustee by the Agency pursuant to Section 4.2, are on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Senior Lien Bonds Debt Service Fund or any account therein, less than the aggregate amount of the deposits required by subdivision (a) of Section 4.2 of the First Amended and Restated Master Indenture of Trust, the Trustee shall transfer the aggregate amount of such deficiencies from the Supplemental Reserve Fund to the Senior Lien Bonds Interest Account, the Senior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of the foregoing to the extent set forth above), the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in said subdivision (a) of Section 4.2. Similarly, if the Revenues transferred to the Trustee by the Agency pursuant to Section 4.2, are on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Junior Lien Bonds Debt Service Fund or any account therein, less than the aggregate amount of the deposits required by subdivision (c) of Section 4.2, the Trustee shall transfer (after making any transfers described in the preceding paragraphs) the aggregate amount of such deficiencies from the Supplemental Reserve Fund to the Junior Lien Bonds Interest Account and the Junior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of the foregoing to the extent set forth above) and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in subdivision (c) of Section 4.2.

Junior Lien Interest. Pursuant to the 2014 Amendments, the portion of the interest on the Restructured Bonds that is referred to as "Junior Lien Interest" in the 2011 Amendments would be treated in the same manner as all other interest on Senior Lien Bonds and will therefore cease to be "junior" in any respect.

Sinking Accounts. The 2014 Amendments would establish two sinking accounts in the Senior Lien Bonds Debt Service Fund, the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account. Amounts on deposit in the Capital Appreciation Bonds Sinking Account will be subject to a lien and charge in favor of only the Secured Owners of the 1997 Capital Appreciation Bonds, and amounts on deposit in the Convertible Capital Appreciation Bonds Sinking Account will be subject to a lien and charge in favor of only the Secured Owners of the Restructured Bonds. The amounts that are required to be deposited in these two accounts pursuant to a Supplemental Indenture will be included in the calculation of Annual Debt Service; but, for purposes of such calculation, the otherwise scheduled payments of Accreted Amounts with respect to 1997 Capital Appreciation Bonds and of debt service on the Restructured Bonds will be reduced by the amount of such required deposits.

Senior Lien Bonds Reserve Fund Requirement. Once there are no longer any 1993 Bonds Outstanding, the 2014 Amendments would reduce the Senior Lien Bonds Reserve Fund Requirement from an

amount equal to Maximum Annual Debt Service to the least of: (x) 10% of the initial principal amount of the Senior Lien Bonds, as calculated by the Agency pursuant to the Regulations, (y) Maximum Annual Debt Service on the Senior Lien Bonds, and (z) 125% of average Annual Debt Service on the Senior Lien Bonds, as determined on the date each Series of Senior Lien Bonds is issued subject to being reduced (but never increased) thereafter as necessary to reflect reductions in Annual Debt Service on the Senior Lien Bonds resulting only from the redemption or payment at maturity or defeasance of a Senior Lien Bond. However, the 2014 Amendments provide that, if and to the extent the balance on deposit Senior Lien Bonds Reserve Fund is less than the Senior Lien Bonds Reserve Fund Requirement due to a Senior Lien Debt Service Reserve Fund Deficiency Amount, the Trustee will be required to deposit in the Senior Lien Bonds Reserve Fund the lesser of (1) 50% of the Revenues remaining after making all of the transfers and deposits described in Section 4.2(a) through (c) of the First Amended and Restated Master Indenture of Trust and (2) the amount necessary to fully fund the Senior Lien Debt Service Reserve Fund Deficiency Amount. The phrase “Senior Lien Debt Service Reserve Fund Deficiency Amount” is defined as, “. . . the difference between Maximum Annual Debt Service on the Senior Lien Bonds and the amount on deposit in the Senior Lien Bonds Reserve Fund as of the date of execution and delivery of [the] First Amended and Restated Master Trust Indenture, as such deficiency may be reduced in accordance with the provisions of Section 4.2(d)(ii) [of the First Amended and Restated Master Trust Indenture].”

In the event that any money is withdrawn from the Senior Lien Bonds Reserve Fund to pay interest on or principal of Senior Lien Bonds, the 2014 Amendments would provide that one-sixth of the amount of such withdrawal shall be deposited in the Senior Lien Bonds Reserve Fund each month from Revenues remaining after (a) the payment of Current Expenses and the setting aside of reserve for the payment of Current Expenses, (b) the payment of Accrued Interest and Accrued Principal on the Senior Lien Bonds and (c) making the required deposits to the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account. In addition, the 2014 Amendments would provide that the Revenues remaining after making the foregoing payments and deposits and the payment of Accrued Interest and Accrued Principal on the Junior Lien Bonds must be deposited in the Senior Lien Bonds Reserve Fund until the entire amount of any such withdrawal is returned to the Senior Lien Bonds Reserve Fund.

Use and Occupancy Fund Requirement. Under the terms of the 1997 Master Indenture, the amount that is required to be maintained in the Use and Occupancy Fund is \$25,000,000 of which \$15,000,000 must be in the form of cash or Permitted Investments and \$10,000,000 may be satisfied through insurance. The 2014 Amendments would change the Use and Occupancy Fund Requirement to \$15,000,000, all of which would be required to be maintained in the form of cash or Permitted Investments.

Junior Lien Bonds. The 2014 Amendments will permit the issuance of Junior Lien Bonds pursuant to the First Amended and Restated Master Indenture of Trust. Payment of debt service with respect to Junior Lien Bonds were be subordinate in every way to the payment of debt service with respect to Senior Lien Bonds and to one-sixth of any amount required in order to restore the balance on deposit in the Senior Lien Bonds Reserve Fund to the Senior Lien Bonds Reserve Fund Requirement following any withdrawal of money from said fund. Any failure to make timely payment of debt service on Junior Lien Bonds will not constitute an Event of Default with respect to Senior Lien Bonds and will not give the Secured Owners of Junior Lien Bonds the right to require any acceleration of the Agency’s indebtedness.

Development Impact Fees. Development Impact Fees, which are *not* included in the definition of “Revenues” in the 1997 Master Indenture would be included in the definition of said term pursuant to the 2014 Amendments if and to the extent that they are transferred to the Trustee from the Development Impact Fee Account that would be established by the 2014 Amendments. Such a transfer would be required to be made if and to the extent that the balances on deposit in certain other funds and accounts were insufficient to enable the payment of debt service on the Bonds.

As noted above, the foregoing summaries do not address all of the 2014 Amendments. *These summaries do not purport to be complete or definitive and are qualified in their entirety by reference to the full*

First Amended and Restated Master Indenture of Trust, a copy of which is attached as Exhibit 1 to the form of “Bond Owner’s Consent to Amendment to 1997 Indenture” attached hereto as Appendix A. *Owners of 1997 Bonds are referred to and encouraged to read the complete text of the First Amended and Restated Master Indenture of Trust.*

PERFORMANCE OF THE TOLL ROAD

Cautionary Statement. While the Agency believes the material presented herein relating to the performance of the San Joaquin Hills Transportation Corridor (the “Toll Road”) is accurate, such material does not purport to include all of the information which may be important to bondholders in connection with their decisions regarding the Agency’s requests, nor does it purport to present “full and fair disclosure” with respect to the Bonds within the meaning of applicable federal and state securities laws. Each bondholder is urged to seek independent advice and counsel on the giving of any consent requested hereunder.

Historic Performance. Set forth below is a table showing the annual toll transactions, average toll rates and annual gross transactional toll revenue since the San Joaquin Hills Toll Road began operations.

HISTORICAL FISCAL YEAR TRAFFIC AND GROSS TRANSACTIONAL TOLL REVENUES

Fiscal Year ended June 30	Annual Transactions	Growth Over Previous Year(1)	Average Toll Rate	Growth Over Previous Year(1)	Annual Gross Transactional Toll Revenue(2)	Growth Over Previous Year(3)
1997	11,153,013	-	\$1.51	-	\$16,868,231	-
1998	20,902,595	87.4%	1.62	7.3%	33,927,997	101.1%
1999	24,853,673	18.9	1.72	5.7	42,646,223	25.7
2000	26,660,797	7.3	1.76	2.3	46,818,996	9.8
2001	26,054,876	-2.3	1.95	11.2	50,901,371	8.7
2002	26,055,147	0.0	2.18	11.7	56,864,910	11.7
2003	27,024,334	3.7	2.26	3.7	61,147,501	7.5
2004	29,416,339	8.9	2.28	0.7	67,031,360	9.6
2005	29,585,828	0.6	2.56	12.2	75,645,139	12.9
2006	30,622,020	3.5	2.68	4.6	81,928,005	8.3
2007	31,096,854	1.6	2.86	7.0	89,058,936	8.7
2008	30,057,878	-3.3	3.04	6.2	91,434,068	2.7
2009	26,810,468	-10.8	3.22	6.0	86,419,923	-5.5
2010	25,308,372	-5.6	3.44	6.8	87,095,815	0.8
2011	25,451,120	0.6	3.46	0.6	88,103,663	1.2
2012	25,424,605	-0.1	3.66	5.6	92,972,084	5.5
2013	24,984,196	-1.7	4.02	10.0	100,528,366	8.1
2014	26,459,758	5.9	4.43	10.0	117,138,365	16.5

(1) Percentages may vary from the Traffic and Revenue Study due to rounding.

(2) Does not reflect lost revenues or include violation penalty revenues, account maintenance fees or other revenues from toll operations.

(3) Percentages may vary from the Traffic and Revenue Study due to rounding.

Source: Traffic And Revenue Study and the Agency.

The following table shows historical revenues (including toll revenues, violation penalty revenues, account maintenance fees, and other revenues from the operation of the toll system), Current Expenses, investment earnings and other sources of revenue, historical debt service coverage and debt service coverage ratios for the fiscal years ended June 30, 2005 through June 30, 2014. Development Impact Fee revenues are not included in table.

Coverage is calculated on a basis consistent with the 1993 Master Indenture, the 1997 Master Indenture and the 2011 Amendments.

Transfers from the Toll Stabilization Fund (as defined in the 1993 Master Indenture and the 1997 Master Indenture, respectively) were used through FY 2010-11 to reduce debt service payments and the need for toll rate increases necessary to satisfy the Agency's rate covenant. During these same periods, the Board also raised toll rates to increase revenues and satisfy the Agency's rate covenant.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

HISTORICAL OPERATING REVENUES AND DEBT SERVICE COVERAGE

	<i>Fiscal Years Ended June 30,</i>									
	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>
Revenues										
Net Collectable Tolls ⁽¹⁾	\$ 73,007,633	\$ 79,048,785	\$ 85,993,265	\$ 88,349,685	\$ 83,677,467	\$ 84,210,110	\$ 85,357,236	\$ 89,993,293	\$ 97,308,055	\$ 110,700,466
Account Maintenance Fees	1,248,608	1,305,140	1,400,964	1,513,061	1,637,289	3,319,345	3,091,275	3,059,853	3,032,572	3,033,834
Violation Penalty Revenue	4,955,957	5,625,115	6,371,276	6,275,321	6,402,275	6,940,464	7,592,194	9,076,763	9,285,230	14,501,373
Other Revenue from Toll Operations	280,919	216,517	227,223	235,037	240,294	312,439	386,471	412,856	772,157	867,456
Total Tolls, Fines and Fees ⁽²⁾	<u>\$ 79,493,117</u>	<u>\$ 86,195,557</u>	<u>\$ 93,992,728</u>	<u>\$ 96,373,104</u>	<u>\$ 91,957,325</u>	<u>\$ 94,782,358</u>	<u>\$ 96,427,176</u>	<u>\$ 102,542,765</u>	<u>\$ 110,398,014</u>	<u>\$ 129,103,129</u>
Total Interest Income	6,817,593	7,966,266	10,343,754	9,180,816	6,249,986	6,864,643	6,710,398	5,442,428	4,996,875	2,186,200
Federal Line of Credit ⁽³⁾	<u>12,000,000</u>	<u>12,000,000</u>	<u>12,000,000</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
Total Revenues	<u>\$ 98,310,710</u>	<u>\$ 106,161,823</u>	<u>\$ 116,336,482</u>	<u>\$ 105,553,920</u>	<u>\$ 98,207,311</u>	<u>\$ 101,647,001</u>	<u>\$ 103,137,574</u>	<u>\$ 107,985,193</u>	<u>\$ 115,394,889</u>	<u>\$ 131,289,329</u>
Total Current Expenses ⁽⁴⁾	<u>\$ (11,123,082)</u>	<u>\$ (12,145,738)</u>	<u>\$ (13,128,101)</u>	<u>\$ (12,997,514)</u>	<u>\$ (12,657,670)</u>	<u>\$ (12,000,684)</u>	<u>\$ (11,669,847)</u>	<u>\$ (11,187,348)</u>	<u>\$ (11,056,273)</u>	<u>\$ (12,093,947)</u>
Adjusted Net Toll Revenues	<u>\$ 87,187,628</u>	<u>\$ 94,016,085</u>	<u>\$ 103,208,381</u>	<u>\$ 92,556,406</u>	<u>\$ 85,549,641</u>	<u>\$ 89,646,317</u>	<u>\$ 91,467,727</u>	<u>\$ 96,797,845</u>	<u>\$ 104,338,616</u>	<u>\$ 119,195,382</u>
Annual Debt Service										
Series 1993 Bonds Debt Service	\$ 11,009,000	\$ 11,009,003	\$ 11,009,003	\$ 11,009,001	\$ 11,009,000	\$ 11,009,000	\$ 11,009,000	\$ 11,009,000	\$ 11,009,000	\$ 11,009,000
Less Capitalized Interest on Series 1993 Bonds ⁽⁵⁾	(11,009,000)	(10,639,223)	-	-	-	-	-	-	-	-
Series 1997A Bonds Debt Service	71,750,768	68,505,768	73,059,518	74,978,263	79,698,268	84,593,268	87,773,268	79,123,269	82,178,269	83,758,268
Less 1997 Escrow Defeasance Fund ⁽⁶⁾	(8,515,000)	(940,000)	(5,465,000)	-	-	-	-	-	-	-
Less Toll Stabilization Defeasance	<u>(2,000,000)</u>	<u>(1,000,000)</u>	<u>(2,000,000)</u>	<u>(15,400,000)</u>	<u>(27,500,000)</u>	<u>(28,700,000)</u>	<u>(32,900,000)</u>	<u>-</u>	<u>-</u>	<u>-</u>
Annual Debt Service	<u>\$ 61,235,768</u>	<u>\$ 66,935,549</u>	<u>\$ 76,603,521</u>	<u>\$ 70,587,264</u>	<u>\$ 63,207,268</u>	<u>\$ 66,902,268</u>	<u>\$ 65,882,268</u>	<u>\$ 90,132,269</u>	<u>\$ 93,187,269</u>	<u>\$ 94,767,268</u>
Debit Service Coverage Ratio	1.42	1.40	1.35	1.31	1.35	1.34	1.39	1.07	1.12	1.26
Average Toll Rate Change	12.2%	4.6%	7.0%	6.2%	6.0%	6.8%	0.6%	5.6%	10.0%	10.0%
Unrestricted Funds ⁽⁷⁾	\$ 10,280,366	\$ 38,794,855	\$ 56,931,006	\$ 29,954,211	\$ 27,589,507	\$ 19,016,572	\$ 8,603,338	\$ 21,344,701	\$ 23,706,357	\$ 23,681,559

⁽¹⁾ See "THE SAN JOAQUIN HILLS TOLL ROAD—Net Collectible Tolls."

⁽²⁾ Does not include Development Impact Fees.

⁽³⁾ The Federal Line of Credit was never used by the Agency. However, the available \$12.0 million line of credit was a component of the debt service coverage calculation under the 1993 Master Indenture and the 1997 Master Indenture, as applicable.

⁽⁴⁾ See "THE SAN JOAQUIN HILLS TOLL ROAD—Current Expenses."

⁽⁵⁾ A portion of the 1997A Toll Road Refunding Revenue Bonds was used to purchase U.S. government securities, which were placed in an irrevocable escrow fund to be used for debt service payments related to the 1993 Bonds.

⁽⁶⁾ In March 2000 Orange County bankruptcy settlement funds and development impact fees were used to purchase U.S. government securities that were placed in an irrevocable escrow fund for future debt service payments related to the 1997A Capital Appreciation Bonds.

⁽⁷⁾ As of June 30. Includes the following funds earmarked to build a maintenance facility for Caltrans: \$2.8 million in 2005 and 2006, \$5.1 million in 2007 and 2008, and approximately \$8 million in 2009 through 2014.

Source: The Agency.

Requests for additional information concerning the past performance of the Toll Road may be submitted by email to apotter@thetollroads.com.

Traffic and Revenue Study. The Agency has retained the firm of Stantec Consulting Services Inc. (the “Traffic and Revenue Consultant”), New York, New York, to conduct a traffic and revenue study to forecast future traffic and potential revenue-generating capability of the Toll Road through Fiscal Year 2049-50 (the “Traffic and Revenue Study”). A copy of the Traffic and Revenue Study is included as Appendix B hereto. *As stated in the Traffic and Revenue Study, the future toll revenue requirements are based upon assumptions regarding future conditions, including, without limitation, annual toll rate increases and toll rate structure. The Traffic and Revenue Consultant believes the revenue toll requirements contained in the Traffic and Revenue Study are reasonable, assuming the projected toll rate increases and toll rate structure assumed in the Traffic and Revenue Study are in fact implemented by the Agency. Because the Agency has not approved any toll rates assumed in the Traffic and Revenue Study, the actual revenues will likely be different, based in part on what future toll rates are approved by the Agency. Investors are advised to review carefully the Traffic and Revenue Study in its entirety, including the assumptions made by the Traffic and Revenue Consultant therein.*

INSTRUCTIONS RE CONSENT

If you own any Outstanding 1997 Bonds and you wish to consent to the 2014 Amendments as described herein, please refer to Appendix B hereto, and contact your Bank, Broker, or Nominee through which your Bonds are custodied at DTC, your “DTC Participant,” so that they may execute the Letter of Consent on your behalf.

If you have any questions concerning any of the foregoing please contact:

Amy Potter, Chief Financial Officer
Transportation Corridor Agencies
125 Pacifica, Suite 100
Irvine, California 92618
apotter@thetollroads.com

OTHER MATTERS

The Agency intends to file a notice with the Municipal Securities Rulemaking Board through its Electronic Municipal Market Access system if and when it is notified that the owners of a majority of the aggregate Principal Obligation of the 1997 Bonds have consented to the 2014 Amendments.

Prior to or concurrently with the issuance of the 2014 Bonds, the Agency will pay certain legal fees and expenses incurred by the Bond Insurer in connection with its review of the applicable documents and may pay compensation to certain broker-dealers for their assistance in securing the consents necessary to enable the execution of the First Amended and Restated Master Indenture of Trust.

APPENDIX A

BOND OWNER'S CONSENT TO AMENDMENT TO 1997 INDENTURE

LETTER OF CONSENT

**CONSENT TO
AMENDMENTS TO 1997 INDENTURE**

**SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY
TOLL ROAD REFUNDING REVENUE BONDS
SERIES 1997A**

CUSIPs subject to the Consent as follows:

798111CD0	798111DC1	798111DL1	798111DU1
798111CE8	798111DD9	798111DM9	798111DV9
798111CW8	798111DE7	798111DN7	798111DW7
798111CX6	798111DF4	798111DP2	798111DX5
798111CY4	798111DG2	798111DQ0	798111DY3
798111CZ1	798111DH0	798111DR8	798111DZ0
798111DA5	798111DJ6	798111DS6	798111EA4
798111DB3	798111DK3	798111DT4	798111EB2
			798111EC0

Voting Record Date: **October 2, 2014**
Deadline Date: **October 31, 2014 by 5:00 P.M. Eastern Time**

INSTRUCTIONS

- **Mark the applicable box** to provide your consent to the Amendments to the 1997 Indenture as described in the Request for Consent dated October 1, 2014.
- **Execute this Letter of Consent.** This Letter of Consent must be executed by the registered holder or Participant in exactly the same manner as the name appears on the Bonds Certificates or DTC's records, as applicable, and the signature must be notarized or Medallion Guaranteed. If you are a Beneficial Owner of the Bonds, please contact your bank or broker so that they may complete this Letter of Consent on your behalf
- **DELIVERY:** This executed Letter of Consent must be **received** by the Tabulation Agent, Globic Advisors, **no later than 5:00 p.m. on October 31, 2014** (or such later date to which the consent may be extended), via e-mail or facsimile with originals to follow by mail, via overnight courier or second-day delivery, to the following:

Globic Advisors
Attn: Robert Stevens
880 Third Avenue, 12th Floor, New York, NY 10022
Fax: 212-271-3252 E-Mail: rstevens@globic.com

- Capitalized terms used but not defined herein shall have the meanings set forth in the Request for Consent dated October 1, 2014 to which this Letter of Consent is attached and of which it is a part.

STEP 1: CONSENT

The undersigned is the owner of \$ _____ principal amount or accreted amount, as the case may be, of the San Joaquin Hills Transportation Corridor Agency Toll Road Refunding Revenue Bonds, Series 1997A (the “1997 Bonds”) as listed below, (the “Beneficial Owner’s 1997 Bonds”), which were issued pursuant to a Master Indenture of Trust, dated as of September 1, 1997, by and between the San Joaquin Hills Transportation Corridor Agency (the “Agency”), a joint powers agency existing under and pursuant to the laws of the State of California, and The Bank of New York Mellon Trust Company, N.A., a national banking association organized and existing under the laws of the United States, as successor trustee (the “Trustee”), (as heretofore amended, the “1997 Master Indenture”).

The undersigned has reviewed the amendments to the 1997 Master Indenture set forth in the form of the First Amended and Restated Master Indenture of Trust set forth in Exhibit 1 hereto (the “2014 Amendments”). In connection therewith, the undersigned understands that the 2014 Amendments, if approved, would facilitate the issuance by the Agency of bonds (the “2014 Bonds”) whose proceeds would be used to refund all of the Agency’s outstanding Toll Road Revenue Bonds, Series 1993 and certain of the 1997 Bonds and possibly purchase some of the other 1997 Bonds. While the Agency may also seek the consent of the owners of some 1997 Bonds to amendments to the terms thereof, the undersigned understands that the 2014 Amendments would not change the principal amounts, interest rates, maturity dates or redemption provisions of any 1997 Bond, nor would they change the provisions of the First Supplemental Indenture of Trust, dated as of September 1, 1997, by and between the Agency and the Trustee or the Second Supplemental Indenture of Trust, dated as of April 1, 2011, by and between the Agency and the Trustee. Finally, the undersigned understands that the 2014 Amendments will expire and be of no force or effect if the senior lien 2014 Bonds and the 1997 Bonds that are not defeased or purchased with the proceeds thereof are not assigned investment grade ratings by two rating agencies and if the 2014 Bonds are not issued prior to June 30, 2015. Based thereon, the undersigned consents to and approves the execution and delivery by the Agency and the Trustee of the First Amended and Restated Master Indenture of Trust in substantially the form set forth in Exhibit 1 hereto.

The undersigned hereby certifies that the undersigned does not control, is not controlled by and is not under common control with, the Agency and does not own or hold any of the Bonds by or for the account of the Agency.

Please complete the following summary schedule for each separate CUSIP that you act as custodian. Additional schedules may be attached as necessary, including a summarization of multiple CUSIPs that this Letter of Consent may apply.

CUSIP: _____

AMOUNT: _____

Please mark the appropriate box below:

<input type="checkbox"/> The undersigned <u>CONSENTS</u> to the Amendments to the 1997 Indenture as described in the Request for Consent dated October 1, 2014.
--

STEP 2: EXECUTION BY AUTHORIZED SIGNATORY

By signing below, the nominee hereby certifies that (i) the summary is a true and accurate schedule of the beneficial owners of the Bonds who have delivered their consent to the undersigned nominee and (ii) the undersigned nominee is the holder, through a position held at a securities depository, or in Street Name, of the Securities set forth above.

Date Submitted: _____, 2014

DTC Participant Number: _____

Print Name of Company: _____

Authorized Employee Contact (Print Name): _____

Title: _____ **E-Mail:** _____

Tel. No.: _____ **Fax No.:** _____

Signature: X _____

MEDALLION STAMP:

Please deliver the Letter of Consent via both facsimile transmission and U.S. mail to the following address by the Deadline Date:

Globic Advisors
Attn: Robert Stevens
880 Third Avenue, 12th Floor, New York, NY 10022
Fax: 212-271-3252 E-Mail: rstevens@globic.com

EXHIBIT 1

FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST

FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST

Dated as of November 1, 2014

By and Between

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY

and

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.
as Trustee

Relating to the

**SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY
TOLL ROAD REFUNDING REVENUE BONDS**

TABLE OF CONTENTS

	Page
ARTICLE I	DEFINITIONS; INTERPRETATION 2
ARTICLE II	FORM, EXECUTION, DELIVERY AND REGISTRATION OF BONDS 24
Section 2.1	Issuance of Bonds; Forms..... 24
Section 2.2	Terms of the Bonds..... 24
Section 2.3	Execution and Authentication..... 24
Section 2.4	Bond Register 25
Section 2.5	Mutilated, Lost, Stolen or Destroyed Bonds..... 25
Section 2.6	Registration and Transfer and Exchange of Bonds; Persons Treated as Owners 25
Section 2.7	Destruction of Bonds 26
Section 2.8	Temporary Bonds 26
Section 2.9	Issuance of Series of Bonds; Supplemental Indenture; Application of Bond Proceeds 27
Section 2.10	Refunding Bonds 28
Section 2.11	Tests for Issuance of Certain Bonds 29
Section 2.12	Certain Contracts and Swaps 30
ARTICLE III	REDEMPTION OF BONDS 31
Section 3.1	Bonds Redeemable 31
Section 3.2	Selection of Bonds To Be Redeemed 31
Section 3.3	Notice of Redemption..... 31
Section 3.4	Effect of Call for Redemption 32
Section 3.5	Purchase in Lieu of Redemption..... 32
Section 3.6	Mandatory Tender for Repurchase 32
ARTICLE IV	REVENUES AND FUNDS 33
Section 4.1	Construction Fund and Certain Accounts..... 33
Section 4.2	Revenue Fund 33
Section 4.3	Senior Lien Bonds Debt Service Fund and Certain Accounts..... 38
Section 4.4	Junior Lien Bonds Debt Service Fund and Certain Accounts 39
Section 4.5	Senior Lien Bonds Reserve Fund 40
Section 4.6	Junior Lien Bonds Reserve Fund..... 42
Section 4.7	Use and Occupancy Fund 43
Section 4.8	Surplus Revenues Fund 44
Section 4.9	Rebate Fund 45
Section 4.10	Moneys Held by Paying Agents in Trust; Unclaimed Moneys 45
Section 4.11	Additional Funds and Accounts..... 46
Section 4.12	Additional Security 46
Section 4.13	Supplemental Reserve Fund 46
Section 4.14	Additional Moneys Not To Be Commingled..... 49
ARTICLE V	COVENANTS OF THE AGENCY 49
Section 5.1	Payment of Principal, Premium and Interest 49
Section 5.2	Tolls 50
Section 5.3	Annual Operating Budget 51

TABLE OF CONTENTS
(Continued)

	Page
Section 5.4	Use and Operation of Facilities 52
Section 5.5	Payment of Lawful Charges 52
Section 5.6	Construction or Maintenance Permitted from Other Funds..... 52
Section 5.7	Insurance..... 52
Section 5.8	Inspection of Insurance Policies 53
Section 5.9	Accurate Records; Reports; Audits..... 53
Section 5.10	Covenant Against Sale or Encumbrance; Exceptions..... 54
Section 5.11	Performance of Covenants by Agency; Authority; Due Execution..... 55
Section 5.12	Instruments of Further Assurance..... 55
Section 5.13	Receipt and Deposit of Cash Advances 55
Section 5.14	Receipt and Deposit of Revenues - Revenue Fund..... 56
Section 5.15	No Inconsistent Action 56
Section 5.16	Other Obligations..... 56
Section 5.17	Maintenance of Powers..... 56
Section 5.18	Limitation on Use of Surplus Revenues - Competing Facilities..... 56
Section 5.19	Development Impact Fees 56
Section 5.20	Modifications of the 1993 Indenture..... 57
Section 5.21	Modifications of the 1993 Use and Occupancy Fund..... 57
Section 5.22	Covenants of Agency Binding on Agency and Successors 57
Section 5.23	Indenture of Trust To Constitute a Contract..... 57
ARTICLE VI	INVESTMENTS 57
ARTICLE VII	DEFEASANCE 59
ARTICLE VIII	DEFAULTS AND REMEDIES 60
Section 8.1	Events of Default 60
Section 8.2	Remedies..... 61
Section 8.3	Restoration to Former Position 63
Section 8.4	Bond Owners' Right To Direct Proceedings 63
Section 8.5	Limitation on Bond Owners' Right To Institute Proceedings 63
Section 8.6	No Impairment of Right To Enforce Payment..... 63
Section 8.7	Proceedings by Trustee Without Possession of Bonds 64
Section 8.8	No Remedy Exclusive 64
Section 8.9	No Waiver of Remedies..... 64
Section 8.10	Application of Moneys 64
Section 8.11	Severability of Remedies 67
Section 8.12	Additional and Other Events of Default and Remedies..... 67
Section 8.13	Subordination (Junior Lien Bonds Subordinate to Senior Lien Bonds) 67
Section 8.14	Subordination (Subordinated Obligations Subordinated to Senior and Junior Lien Bonds)..... 68
ARTICLE IX	TRUSTEE, PAYING AGENT AND CO PAYING AGENTS; REGISTRAR 70
Section 9.1	Acceptance of Trusts 70
Section 9.2	Duties of Trustee..... 70

TABLE OF CONTENTS
(Continued)

	Page
Section 9.3	Rights of Trustee..... 71
Section 9.4	Individual Rights of Trustee 72
Section 9.5	Trustee’s Disclaimer 72
Section 9.6	Notice of Defaults 73
Section 9.7	Compensation of Trustee 73
Section 9.8	Eligibility of Trustee 73
Section 9.9	Replacement of Trustee 73
Section 9.10	Successor Trustee or Agent by Merger..... 74
Section 9.11	Paying Agent..... 74
Section 9.12	Registrar..... 74
Section 9.13	Other Agents 74
Section 9.14	Several Capacities..... 74
Section 9.15	Accounting Records and Reports of the Trustee 75
ARTICLE X	MODIFICATION OF THIS INDENTURE 75
Section 10.1	Limitations 75
Section 10.2	Supplemental Indentures Not Requiring Consent of Bond Owners 75
Section 10.3	Supplemental Indentures Requiring Consent of Bond Owners 77
Section 10.4	Effect of Supplemental Indenture 78
Section 10.5	Supplemental Indentures To Be Part of This Indenture..... 79
ARTICLE XI	MISCELLANEOUS PROVISIONS 79
Section 11.1	Parties in Interest 79
Section 11.2	Severability 79
Section 11.3	No Personal Liability of Agency Officials; Limited Liability of Agency to Bond Owners 79
Section 11.4	Execution of Instruments; Proof of Ownership 79
Section 11.5	Governing Law 80
Section 11.6	Notices 80
Section 11.7	Holidays..... 80
Section 11.8	Validity of Bonds Not Affected by Acts of Agency 81
Section 11.9	Payment on Municipal Bond Insurance Policy..... 81
Section 11.10	Payment Procedure Pursuant to Municipal Bond Insurance Policy 81
Section 11.11	Municipal Bond Insurance..... 83
Section 11.12	Rights of the Bond Insurer Limited 83
Section 11.13	Incorporation of Future Covenants 84
Signatures.....	S-1

FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST

This FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST (this “Indenture”), dated as of November 1, 2014, is between the SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY, a joint powers agency existing under and pursuant to the laws of the State of California (the “Agency”), and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a banking corporation organized and existing under the laws of the United States, as trustee (the “Trustee”).

WITNESSETH:

WHEREAS, in order to finance the costs of constructing the San Joaquin Hills Transportation Corridor, the Agency has heretofore issued its San Joaquin Hills Transportation Corridor Agency, Toll Road Revenue Bonds, Series 1993 (the “1993 Bonds”) pursuant to an Indenture of Trust, dated as of March 1, 1993 (as heretofore supplemented or amended, the “1993 Indenture”), by and between the Agency and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “1993 Trustee”) and its San Joaquin Hills Transportation Corridor Agency, Toll Road Refunding Revenue Bonds, Series 1997A (collectively, and as the terms of some of them have been heretofore amended, the “1997 Bonds”) pursuant to a Master Indenture of Trust, dated as of September 1, 1997, by and between the Agency and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “Trustee”), (as heretofore supplemented or amended, the “1997 Indenture”);

WHEREAS, in order to improve its financial position by establishing a long-term sustainable debt structure that will, among other things, reduce the rate of growth of its annual debt service and its maximum annual debt service, strengthen its debt service coverage ratios and improve its ability to withstand any future economic downturns the Agency wishes to redeem the currently outstanding 1993 Bonds and some of the currently outstanding 1997 Bonds and, if and to the extent that owners thereof consent thereto, to amend the terms of certain of the other outstanding 1997 Bonds;

WHEREAS, in order to redeem 1997 Bonds as described above, the Agency wishes to issue additional bonds pursuant to the 1997 Indenture;

WHEREAS, in order to facilitate the issuance of such additional bonds pursuant to the 1997 Indenture and the amendment of the terms of certain of the outstanding 1997 Bonds, the Agency wishes to amend the 1997 Indenture;

WHEREAS, the 1997 Indenture provides that it may be amended in the manner described herein if the Owners of at least a majority of the aggregate Principal Obligation of the 1997 Bonds then Outstanding and the Bond Insurer (as each capitalized term is defined in the 1997 Indenture) consent thereto; and

WHEREAS, the Owners of at least a majority of the aggregate Principal Obligation of the 1997 Bonds currently Outstanding and the Bond Insurer have filed with the Agency their written consent to and approval of the amendments contained herein; and

WHEREAS, Stradling Yocca Carlson & Rauth, a Professional Corporation, Bond Counsel, has filed with the Agency its legal opinion in satisfaction of the requirements of Section 10.3 of the 1997 Master Indenture;

NOW, THEREFORE, the Agency and the Trustee agree that the 1997 Indenture is amended and restated in its entirety to read as set forth below, provided that the amendments to the 1997 Indenture made herein shall expire and be of no force or effect if the first series of Senior Lien Bonds issued subsequent to the date hereof and any 1997 Bonds that are not defeased or purchased with the proceeds thereof are not initially assigned investment grade ratings by at least two Rating Agencies and if such Senior Lien Bonds are not issued prior to June 30, 2015.

GRANTING CLAUSE

To secure the payment of the Bonds, Parity Swap Agreements and Reimbursement Obligations (each as defined below) and the other obligations incurred by the Agency pursuant hereto and the performance and observance by the Agency of all the covenants, agreements and conditions expressed or implied herein and contained in the Bonds, the Reimbursement Obligations, Parity Swap Agreements and such other obligations, the Agency pledges and assigns to the Trustee and grants to the Trustee, subject to the rights therein of the owners of the 1993 Bonds, a security interest in all right, title and interest of the Agency in and to the Pledged Funds for the equal and proportionate benefit and security of all Bonds, Parity Swap Agreements and Reimbursement Obligations, all of which, regardless of the time or times of their delivery or maturity, shall be of equal rank without preference, priority or distinction as to lien or otherwise of any Bond over any other Bond, Parity Swap Agreement or Reimbursement Obligation, or of any Reimbursement Obligation over any other Reimbursement Obligation, Parity Swap Agreement or Bond, or of any Parity Swap Agreement over any other Parity Swap Agreement, Reimbursement Obligation or Bond, except as otherwise permitted by or provided for in this Indenture, and except that any funds held by the Trustee for the payment of specific Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) which are deemed to have been paid and any funds deposited with the Trustee hereunder specifically to be held in escrow or otherwise to provide additional security or an additional source of payment for specified Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) or a specified series of Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) shall be held and used only to pay or provide security for the Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) or series of Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) for which such deposit was made and shall not be held as security on parity for all Bonds, Reimbursement Obligations and Parity Swap Agreements.

ARTICLE I

DEFINITIONS; INTERPRETATION

Except as otherwise indicated, references to Articles and Sections are to the Articles and Sections of this Indenture. The terms defined in this Article shall, for all purposes of this Indenture, have the respective meanings specified herein unless the context clearly requires otherwise..

“1993 Bonds” shall have the meaning set forth in the Recitals of this Indenture.

“1993 Indenture” shall have the meaning set forth in the Recitals of this Indenture.

“1993 Trustee” shall have the meaning set forth in the Recitals of this Indenture.

“1997 Bonds” shall have the meaning set forth in the Recitals of this Indenture.

“1997 Indenture” shall have the meaning set forth in the Recitals of this Indenture.

“Accreted Amount” shall mean, with respect to any Capital Appreciation Bond or Convertible Capital Appreciation Bond, the amount representing principal and interest on such Capital Appreciation Bond or Convertible Capital Appreciation Bond at and prior to the maturity thereof, in the case of a Capital Appreciation Bond, or the expiration of the Accretion Period thereof, in the case of a Convertible Capital Appreciation Bond, being, as of any date of computation an amount equal to the principal amount of such Bond at its initial offering plus the interest accrued thereon from the Delivery Date thereof to the January 15 or July 15 next preceding the date of computation (or, if the date of computation is January 15 or July 15, to said date), such interest to accrue at the rate per annum established as provided in a Supplemental Indenture, compounded periodically, plus, with respect to matters relating to the payment upon redemption of such Capital Appreciation Bond or Convertible Capital Appreciation Bond, if such date of computation shall not be January 15 or July 15, the ratable portion of the difference between the Accreted Amount as of the immediately preceding January 15 or July 15 (or the Delivery Date thereof if the date of computation is prior to the first January 15 or July 15 succeeding the Delivery Date) and the Accreted Amount as of the immediately succeeding January 15 or July 15, calculated based on the assumption that the Accreted Amount accrues during any period in equal daily amounts on the basis of a year of twelve 30 day months.

“Accretion Period” shall mean with respect to any particular Convertible Capital Appreciation Bond, the period from the Delivery Date thereof through the date specified in the document providing for the sale of such Convertible Capital Appreciation Bond (which date must be prior to the maturity date thereof), after which interest accruing on such Convertible Capital Appreciation Bond shall be payable semiannually, with the first such payment date being the applicable Interest Payment Date immediately succeeding the expiration of the Accretion Period.

“Accrued Interest” shall mean, for any calendar month, (i) the amount of unpaid interest which has accrued or will accrue during that month on a Series of Bonds (other than Convertible Capital Appreciation Bonds prior to the expiration of the applicable Accretion Period and Capital Appreciation Bonds), less (ii) any amount of interest and any Reimbursement Obligation with respect to interest which is payable (other than upon acceleration) exclusively from a fund or account other than the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund or a Series Credit Facility Fund on parity with either such fund, and less also any amount of interest for which a separate fund or account (including the Convertible Capital Appreciation Bonds Sinking Account) has been established and into which has been deposited moneys or Government Obligations which will be sufficient to pay such interest and which fund or account is irrevocably pledged to the payment of such interest plus (iii) the net amount, if any, payable to a Parity Swap Agreement Counterparty with respect to such period pursuant to Section 2.12. With respect to Bonds (other than Convertible Capital Appreciation Bonds prior to the expiration of the applicable Accretion Period and Capital Appreciation Bonds) the interest rate on which will or may fluctuate during the period from the date of calculation to the end of such calendar month, interest after the

calculation date, for purposes of calculating Accrued Interest for such period, will be assumed to accrue at a rate equal to the maximum rate that such Bonds are permitted to bear.

“Accrued Premium” shall mean, with respect to any Bonds which are to be redeemed or otherwise prepaid, the full amount of the premium or prepayment penalty imposed as a condition of such redemption or prepayment, less any amount of premium or prepayment penalty and any Reimbursement Obligation with respect to premium or prepayment penalty which is payable (other than upon acceleration) exclusively from a fund or account other than the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund or a Series Credit Facility Fund on parity with either such fund. The full amount of the premium or penalty will accrue in the calendar month in which notice of the redemption or prepayment is given by the Agency to the Trustee.

“Accrued Principal” shall mean, with respect to any calendar month, the amount of unpaid principal which has accrued or will accrue on a Series of Bonds during that month, less any amount of principal and any Reimbursement Obligation with respect to principal or interest which is payable (other than upon acceleration) exclusively from a fund or account other than the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund or a Series Credit Facility Fund on parity with either such fund, and less also any amount of principal for which a separate fund or account (including the Capital Appreciation Bonds Sinking Account) has been established and into which has been deposited moneys or Government Obligations which will be sufficient to pay such principal and which fund or account is irrevocably pledged to the payment of such principal. For purposes of this definition, it shall be assumed that (a) for any principal or mandatory sinking account payment (including payments required to be made to the Capital Appreciation Bonds Sinking Account), principal commences to accrue on the later of (i) the date of issue of the Series or (ii) one year prior to the payment date (unless principal is payable more frequently than annually, in which case, principal will, for the first payment, be assumed to accrue from the later of the date of issuance of the Series or one year prior to the first payment date and thereafter principal will accrue from the date of each principal payment); (b) principal shall be assumed to accrue in equal monthly installments during each calendar month or portion of any calendar month occurring from the time of commencement of such accrual to the payment date; and (c) the Accreted Amount of Capital Appreciation Bonds and Convertible Capital Appreciation Bonds shall be treated as principal.

“Act” shall mean, collectively, Section 50029 and Section 66484.3 of the California Government Code, the Joint Exercise of Powers Act, Section 6500 et seq. of the California Government Code, the El Dorado Toll Tunnel Authority Act, Chapter 5 (Section 31100 et seq.) of Division 17 of the California Streets and Highways Code, and any other law, whether general or specific, applicable to the Agency as any of such laws may be amended from time to time.

“Adjusted Net Toll Revenues” shall mean, for any period, the remainder of (i) the Tolls for such period, (ii) the earnings derived from the investment of moneys on deposit in the “Senior Lien Bonds Debt Service Fund,” the “Senior Lien Bonds Reserve Fund” and the “Use and Occupancy Fund” established pursuant to the 1993 Indenture, (iii) the earnings derived in such period from the investment of moneys on deposit in the Senior Lien Bonds Debt Service Fund, the Senior Lien Bonds Reserve Fund, the Junior Lien Bonds Debt Service Fund, the Junior Lien Bonds Reserve Fund and the Use and Occupancy Fund, minus (ii) the Current Expenses for such period paid from Revenues.

“Agency” shall mean the San Joaquin Hills Transportation Corridor Agency created pursuant to the Joint Exercise of Powers Agreement, and any successor to its functions.

“Aggregate Accrued Interest” shall mean, for any calendar month, the sum of the Accrued Interest for all Series of Outstanding Senior Lien Bonds or all Series of Outstanding Junior Lien Bonds, as the case may be.

“Aggregate Accrued Principal” shall mean, for any calendar month, the sum of the Accrued Principal for all Series of Outstanding Senior Lien Bonds or all Series of Outstanding Junior Lien Bonds, as the case may be.

“Annual Debt Service” shall mean (i) the amount of principal and interest becoming due with respect to Outstanding 1993 Bonds in a Fiscal Year, calculated by the Agency or by a Financial Consultant as provided in this definition, plus (ii) the amount of principal and interest becoming due with respect to the Bonds in each Fiscal Year, as calculated by the Agency or by a Financial Consultant based on the assumptions provided in this definition, plus (iii) the amount required to be deposited in the Capital Appreciation Bonds Sinking Account on January 15 of such Fiscal Year pursuant to a Supplemental Indenture, plus (iv) the amount required to be deposited in the Convertible Capital Appreciation Bonds Sinking Account on July 15 and January 15 of such Fiscal Year pursuant to a Supplemental Indenture, plus (v) Reimbursement Obligations payable or estimated by the Agency to be payable in such Fiscal Year (but only to the extent they are not duplicative of such principal and interest), plus (vi) the amounts, if any, payable or estimated by the Agency to be payable by the Agency in such Fiscal Year with respect to Parity Swap Agreements, minus (vii) the amounts, if any, payable or estimated by the Agency to be payable to the Agency in such Fiscal Year with respect to Approved Swap Agreements, provided that the difference between the amounts described in clauses (vi) and (vii) shall be included only to the extent that such difference would not be recognized as a result of the application of the assumptions set forth below. The following assumptions shall be used to determine the Annual Debt Service becoming due in any Fiscal Year:

(a) payments of principal or interest which are due on or before the fifteenth day of a Fiscal Year shall be assumed to be due on the last day of the immediately preceding Fiscal Year;

(b) in determining the principal amount due with respect to Bonds in each Fiscal Year, (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) payment shall be assumed to be made in accordance with any amortization schedule established for such debt, including any scheduled redemption of Bonds on the basis of Accreted Amount, and for such purpose the redemption payment shall be deemed a principal payment;

(c) the Accreted Amount payable at maturity of any Capital Appreciation Bond for which deposits are required to be made to the Capital Appreciation Bonds Sinking Account pursuant to a Supplemental Indenture shall be deemed to be only the portion of such Accreted Amount that will remain to be paid after the last scheduled deposit with respect to such Capital Appreciation Bond is made;

(d) the interest payable on any Interest Payment Date for which deposits are required to be made to the Convertible Capital Appreciation Bonds Sinking Account pursuant to a Supplemental Indenture shall be deemed to be only the portion of such interest that will remain to be paid after the last scheduled deposit with respect to such interest is made;

(e) if any of the Outstanding Bonds constitute Balloon Indebtedness, or if Bonds then proposed to be issued would constitute Balloon Indebtedness, then such amounts thereof as constitute Balloon Indebtedness shall be treated as if such Bonds were to be amortized in substantially equal annual installments of debt service over a term equal to the number of years then remaining to the maturity of such Bonds;

(f) if any Outstanding Bond constitutes Tender Indebtedness or if any Bond then proposed to be issued would constitute Tender Indebtedness, then for purposes of determining the amounts of principal and interest due in any Fiscal Year on such Bond, the options or obligations of the owners of such Bonds to tender the same for purchase or payment prior to their stated maturity or maturities shall be treated as a principal maturity (but any such amount treated as a maturity shall not be eligible for treatment as Balloon Indebtedness) occurring on the first date on which owners of such Bonds may or are required to tender such Bonds, except that any such option or obligation to tender Bonds shall be ignored and not treated as a principal maturity if both (a) such Bonds are rated in one of the four highest long term Rating Categories by each Rating Agency then rating such Tender Indebtedness or such Bonds are rated in the highest short term, note or commercial paper Rating Category by each Rating Agency then rating such Tender Indebtedness, and (b) any obligation the Agency may have, other than its obligation on such Bonds, to reimburse any person for having extended a credit facility or a liquidity facility or a bond insurance policy, or similar arrangement, shall be either a Reimbursement Obligation with respect to an obligation incurred under and meeting the tests and conditions set forth in Article II (in which case the obligations of the Agency to make principal payments thereunder shall be treated as principal maturities) or a subordinate obligation issued pursuant to Section 5.16;

(g) if any Outstanding Senior Lien Bond constitutes Variable Rate Indebtedness, or if any Senior Lien Bond proposed to be issued will constitute Variable Rate Indebtedness, the interest rate on such Senior Lien Bond shall be assumed to be the Assumed Variable Rate, provided that if the maximum interest rate payable by the Agency with respect to any or all of such Senior Lien Bonds has been limited pursuant to an Approved Swap Agreement, then the interest rate to be used for the aforesaid computation with respect to the Variable Rate Indebtedness covered by such Approved Swap Agreement shall not exceed the sum of (A) the maximum interest rate as so limited, and (B) the annual charges payable by the Agency pursuant to said Parity Swap Agreement, expressed as a percentage of the principal amount of the Variable Rate Indebtedness which is covered thereby, and provided further that if any or all of such Variable Rate Indebtedness then constitute Pledged Bonds, the interest rate to be used for the aforesaid computation with respect to the principal amount of such Pledged Bond shall be the rate then applicable to the Agency's Reimbursement Obligation under its Reimbursement Agreement with the Bank in question, and provided still further that if any Outstanding Senior Lien Bond constitutes Term Rate Indebtedness that is rated less than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Senior Lien Bond from the date of the next mandatory tender date applicable thereto to its maturity date shall be the Maximum Legal Rate and if any Senior Lien Bond proposed to be issued will constitute Term Rate Indebtedness which will be rated lower than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, then the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Senior Lien Bond from its dated date to its first mandatory tender date shall be the actual rate to be borne by such Senior Lien Bond and the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Senior Lien Bond from its first mandatory tender date to its maturity date shall be the Maximum Legal Rate;

(h) if any Outstanding Junior Lien Bond constitutes Variable Rate Indebtedness, or if any Junior Lien Bond proposed to be issued will constitute Variable Rate Indebtedness, the interest rate on such Junior Lien Bond shall be assumed to be the Assumed Variable Rate, provided that if the maximum interest rate payable by the Agency with respect to any or all of such Junior Lien Bonds has been limited pursuant to an Approved Swap Agreement, then the interest rate to be used for the aforesaid computation with respect to the Variable Rate Indebtedness covered by such Approved Swap Agreement shall not exceed the sum of (A) the maximum interest rate as so limited, and (B) the annual charges payable by the Agency pursuant to said Parity Swap Agreement, expressed as a percentage of the principal amount of the Variable Rate Indebtedness which is covered thereby, and provided further that if any or all of such Variable Rate Indebtedness then constitute Pledged Bonds, the interest rate to be used for the aforesaid computation with respect to the principal amount of such Pledged Bond shall be the rate then applicable to the Agency's Reimbursement Obligation under its Reimbursement Agreement with the Bank in question, and provided still further that if any Outstanding Junior Lien Bond constitutes Term Rate Indebtedness that is rated in lower than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Junior Lien Bond from the date of the next mandatory tender date applicable thereto to its maturity date shall be the Maximum Legal Rate and if any Junior Lien Bond proposed to be issued will constitute Term Rate Indebtedness which will be rated in lower than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, then the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Junior Lien Bond from its dated date to its first mandatory tender date shall be the actual rate to be borne by such Junior Lien Bond and the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Junior Lien Bond from its first mandatory tender date to its maturity date shall be the Maximum Legal Rate;

(i) if moneys or Government Obligations have been deposited with and are held by the Trustee or another fiduciary to be used solely to pay principal of and/or interest on any specified Bond or Bonds (including, but limited to, amounts designated to be spent in specified Fiscal Years for partial or full payment of principal of and/or interest on any specified Bond or Bonds) or the fees and expenses of a Bank or a remarketing agent, then the principal and/or interest to be paid from such moneys, from Government Obligations or from the earnings thereon shall be disregarded and not included in calculating Annual Debt Service, provided that, for purposes of Section 5.2 of this Indenture, such amounts shall be excluded from Annual Debt Service only if at the time of calculation the Agency has at least \$10,000,000 of Unrestricted Funds; and

(j) there shall be added to Annual Debt Service any principal of or interest on any Bond that was due and payable in a previous Fiscal Year but that has not been paid.

"Annual Operating Budget" shall mean the Agency's budget for a Fiscal Year of Current Expenses adopted pursuant to the provisions hereof.

"Approved Swap Agreement" shall mean either (i) an interest rate swap agreement, interest rate cap or other agreement of a type described in Section 2.12 with respect to which the Agency's obligations to make payments is a subordinate obligation issued pursuant to Section 5.16 or (ii) a Parity Swap Agreement which, in either case, has been approved as not causing a reduction or withdrawal of the rating then assigned to Bonds, by each Rating Agency.

"Assumed Variable Rate" shall mean (a) in the case of Bonds the interest on which was, in the opinion of Bond Counsel delivered at the time of the issuance thereof, excluded from gross

income for federal income tax purposes, the rate which is the sum of fifty (50) basis points plus the average of The Bond Buyer Revenue Bond Index for the 52 weeks ending with the week preceding the date of calculation as such rate is calculated by the Agency, provided that if The Bond Buyer Revenue Bond Index shall cease to be published, the index to be used in its place shall be that index which the Agency (in consultation with the remarketing agent(s) for any Variable Rate Indebtedness then Outstanding) determines most closely replicates it, as set forth in a certificate of an Authorized Agency Representative filed with the Trustee and (b) in the case of Bonds not described in clause (a), the product of the index referred to in clause (a) times the ratio that the Agency determines to best reflect the relative yields of taxable and tax-exempt debt of maturities and credit quality comparable to the bonds used in calculating such index.

“Authorized Agency Representative” shall mean the Chair, the Chief Executive Officer, the Chief Financial Officer, the Director of Finance, the Manager of Treasury Operations or the Controller of the Agency or such other officer or employee of the Agency or other person who has been designated an agent of the Agency with respect to particular matters by a resolution of the Board, except that for purposes of directing the investment of moneys held hereunder, unless otherwise provided by a resolution of the Board, the Controller shall not be an Authorized Agency Representative but a person or entity providing investment management services under a written contract with the Agency shall be an Authorized Agency Representative if and to the extent so designated in writing by the Chief Executive Officer, the Chief Financial Officer, or the Finance Director of the Agency.

“Balloon Indebtedness” shall mean a Series of Bonds 25% or more of the principal of which matures in the same Fiscal Year and is not required by the documents pursuant to which such Series was issued to be amortized by payment or redemption prior to that Fiscal Year, provided that such Series of Bonds will not constitute Balloon Indebtedness if the Annual Debt Service in the Fiscal Year referred to above is less than 125% of the Annual Debt Service for the immediately preceding Fiscal Year.

“Bank” shall mean, as to any particular Series of Bonds, each person (other than a Bond Insurer) providing a letter of credit, a line of credit, a guaranty or another credit or liquidity enhancement facility as designated in the Supplemental Indenture providing for the issuance of such Bonds.

“Bank Fee” shall mean any commission, fee or expense payable to a Bank pursuant to a Reimbursement Agreement (but not amounts payable as reimbursement for amounts drawn under a Credit Facility or interest on such amounts).

“Board” shall mean the governing body of the Agency.

“Bond” or “Bonds” shall mean indebtedness and securities of any kind or class, whether such Bonds are Senior Lien Bonds or Junior Lien Bonds, including bonds, notes, bond anticipation notes, commercial paper, and other obligations issued under the provisions of Article II of this Indenture, and including Initial Bonds, Restructured Bonds and Refunding Bonds.

“Bond Counsel” shall mean a firm of attorneys who are nationally recognized as experts in the area of municipal finance and who are familiar with the transactions contemplated under this Indenture and who are acceptable to the Agency and the Bond Insurer.

“Bond Insurer” shall mean, as to the Initial Insured Bonds, National Public Finance Guarantee Corporation, and as to any particular maturity or any particular Series of Bonds, other than the Initial Insured Bonds, the person undertaking to insure such Bonds as designated in a Supplemental Indenture providing for the issuance of such Bonds.

“Bond Owner,” “holder,” “Owner” or “registered owner” shall mean the person in whose name any Bond or Bonds are registered on the books maintained by the Registrar; provided that, when used in reference to a 1993 Bond, “Owner” shall have the meaning ascribed to it in the 1993 Indenture.

“Bond Register” shall mean the register maintained pursuant to Section 2.4.

“Book Entry Only System” shall mean a system similar to the system described herein pursuant to which Bonds are registered in book-entry form.

“Business Day” shall mean any day other than a Saturday, a Sunday, or a day on which banking institutions are authorized or required by law to be closed in either the State of New York or the State of California; provided that such term may have a different meaning for any specified Series of Bonds if so provided by a Supplemental Indenture.

“Caltrans” shall mean the California Department of Transportation, a department of the Business, Transportation and Housing Agency of the State of California, or any successor.

“Caltrans Agreement” shall mean that agreement relating to the San Joaquin Hills Transportation Corridor System entered into on or about November 14, 1988 by and between the Agency and Caltrans pursuant to Section 66484.3 of the California Government Code, as heretofore amended and supplemented and as it may be further supplemented from time to time.

“Capital Appreciation Bond” shall mean a Bond, the interest on which shall be compounded periodically, shall be payable only at maturity or redemption prior to maturity, and shall be determined by subtracting from the Accreted Amount thereof the original principal amount thereof.

“Capital Appreciation Bonds Sinking Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Capitalized Interest” shall mean the portion of the proceeds from the sale of each Series of Bonds and any cash on hand at the Delivery Date which is designated as such at the time of issuance of each such Series.

“Chair” shall mean the Chair of the Agency and his or her successors.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and the United States Treasury Regulations proposed or in effect with respect thereto.

“Construction Fund” shall mean the fund created and so designated by Section 4.1.

“Convertible Capital Appreciation Bond” shall mean any Bond as to which interest accruing is not paid prior to the expiration of the specified Accretion Period and, prior thereto, is compounded periodically on certain designated dates.

“Convertible Capital Appreciation Bonds Sinking Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Cost” shall mean with respect to any Facility, to the extent permitted by the Act, all or any part of:

(a) the cost of construction, reconstruction, restoration, repair and rehabilitation of such facility or portion thereof;

(b) the cost of acquisition of all real or personal property, rights, rights of way, franchises, easements and interests acquired or used for such facility or portion thereof;

(c) the cost of demolishing or removing any structures on land so acquired, including the cost of acquiring any land to which the structures may be removed;

(d) any cost necessary or desirable to satisfy conditions associated with the issuance of any permit for the construction thereof (including the costs of environmental mitigation required in connection therewith);

(e) the cost of all machinery and equipment, vehicles, materials and rolling stock;

(f) financing charges (including costs associated with the issuance of Bonds (including fees for any policy of bond insurance relating thereto and the initial fees for any Credit Facility relating thereto), as well as the initial costs of obtaining one or more contracts which the Agency determines to be necessary or appropriate to place the Bonds in question, or any of them, on the interest rate, currency, cash flow, or other basis desired by the Agency, including, without limitation, interest rate swap agreements, currency swap agreements, forward payment conversion agreements, futures, contracts providing for payments based on levels of or changes in interest rates, currency exchange rates, stock or other indices, or contracts to exchange cash flows or a series of payments, and contracts including, without limitation, interest rate floors or caps, options puts or calls to hedge payment, currency rate, spread or similar exposure, and all fees and expenses payable by the Agency pursuant to any Reimbursement Agreement), interest on Bonds and on any Reimbursement Obligation for the period prior to, during and for a period after completion of construction as determined by the Agency, provisions for working capital, reserves for principal and interest and for extensions, enlargements, additions, replacements, renovations and improvements;

(g) the cost of architectural, engineering, environmental, financial and legal services;

(h) plans, specifications, estimates and administrative and other expenses which are necessary or incidental to the determination of the feasibility of constructing such facility or portion thereof or incidental to the obtaining of construction contracts or to the construction (including construction administration and inspection), acquisition or financing thereof and which constitute capital costs;

(i) Current Expenses, provided that the Trustee has received an opinion of Bond Counsel (which opinion may address either specific Current Expenses or categories of Current Expenses) to the effect that the treatment of such Current Expenses as a Cost will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes;

(j) the repayment of any loan or advance for any of the foregoing; and

(k) with respect to the use of Bond proceeds, such other costs and expenses as are permitted by the Act at the time such Bonds are issued.

“Credit Facility” shall mean, as to any particular Series of Bonds, a letter of credit, a line of credit, a guaranty or another credit or liquidity enhancement facility (other than an insurance policy issued by a Bond Insurer), as described in the Supplemental Indenture providing for the issuance of such Bonds.

“Current Expenses” shall mean the Agency’s reasonable and necessary current operating expenses (but only to the extent that such expenses are not payable from the “Maintenance and Operations Fund” established pursuant to the 1993 Indenture), determined in accordance with generally accepted accounting principles, with respect to the Facilities (excluding the administration, maintenance, repair and operation of the Facilities, which is provided by Caltrans pursuant to the Caltrans Agreement), which may include payments with respect to financing leases and installment purchase agreements (but only leases and installment purchase agreements pertaining to toll collection and revenue management systems, including transponders), transponder purchases, annually recurring premiums and reserves for insurance, fees and expenses of the Trustee, the Registrar, the Paying Agent, remarketing agents, auction agents, tender agents, and broker-dealers and amounts required to be deposited into the Rebate Account pursuant hereto and any other such operating expenses required or permitted to be paid by the Agency under the provisions of this Indenture and the Act, but shall not include depreciation or any reserves for extraordinary maintenance or repair.

“Current Interest Bond” shall mean a Bond the interest on which is payable periodically and which is not a Convertible Capital Appreciation Bond.

“Default” or “Event of Default” shall mean any occurrence or event specified in Section 8.1.

“Defeasance Securities” shall mean:

1. Cash,
2. U.S. Treasury Certificates, Notes and Bonds (including State and Local Government Series – “SLGs”),
3. Direct obligations of the Treasury which have been stripped by the Treasury itself, CATS, TIGRS and similar securities,
4. Resolution Funding Corp. strips which have been stripped by request to the Federal Reserve Bank of New York in book entry form are acceptable
5. Pre-refunded municipal bonds rated Aaa by Moody’s, AAA by S&P and, if rated by Fitch, AAA by Fitch. (If, however, the issue is only rated by S&P (i.e., there is no Moody’s or Fitch rating), then the pre-refunded bonds must have been pre-refunded with cash, direct U.S. or U.S. guaranteed obligations, or AAA rated pre-refunded municipals), and
6. Obligations issued by the following agencies which are backed by the full faith and credit of the U.S.:
 - a. U.S. Export Import Bank (Eximbank)
Direct obligations or fully guaranteed certificates of beneficial ownership
 - b. Farmers Home Administration (FmHA)

- Certificates of beneficial ownership
- c. Federal Financing Bank
- d. General Services Administration
Participation certificates
- e. U.S. Maritime Administration
Guaranteed Title XI financing
- f. U.S. Department of Housing and Urban Development (HUD)
Project Notes
Local Authority Bonds
New Communities Debentures - U.S. government guaranteed debentures
U.S. Public Housing Notes and Bonds - U.S. government guaranteed public housing notes and bonds

“Deficiency” shall mean, depending on the context, the difference between the amount on deposit in one of the accounts for the payment of principal of or interest on Bonds established in either the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund or in a Series Credit Facility Fund on parity with either such fund and the applicable Accrued Interest or Accrued Principal and Accrued Premium or the applicable Reimbursement Obligation, as the case may be, which is payable and which is unpaid as of the date on which the calculation is being made.

“Delivery Date” shall mean the date on which a Series of Bonds is delivered to the original purchasers thereof.

“Development Impact Fee Account” shall mean the account in the Revenue Fund created and so designated by Section 4.2.

“Development Impact Fees” shall mean those fees with respect to the San Joaquin Hills Transportation Corridor System collected by the Members pursuant to the Joint Powers Agreement, Section 66484.3 of the California Government Code and the ordinances of each of the Members adopted pursuant to the authority thereof.

“Enhanced Adjusted Net Toll Revenues” shall mean, for any Fiscal Year, the sum of the Adjusted Net Toll Revenues for such Fiscal Year plus the Development Impact Fees in excess of \$5,000,000 received by the Agency in such Fiscal Year.

“Excess Deposit” shall mean, with respect to a calendar month, the amount, if any, by which the sum of the Net Revenues deposited into an account for the payment of interest on Bonds in the Senior Lien Bonds Debt Service Fund over the Junior Lien Bonds Debt Service Fund plus the amount on deposit in any related capitalized interest account exceeds the amount of interest which actually accrued on the applicable Outstanding Bonds during such calendar month.

“Existing San Joaquin Hills Transportation Corridor System” shall mean the portion of the San Joaquin Hills Transportation Corridor System in operation as of the date of this Indenture.

“Facilities” shall mean the Existing San Joaquin Hills Transportation Corridor System and the Special Project.

“Financial Consultant” shall mean any financial advisor or firm of financial advisors of favorable national reputation for skill and experience in performing the duties for which a Financial

Consultant is required to be employed pursuant to the provisions hereof and who is retained by the Agency as a Financial Consultant for the purposes hereof.

“Fiscal Year” shall mean the period of time beginning on July 1 of each given year and ending on June 30 of the immediately subsequent year, or such other similar period as the Agency designates as its fiscal year.

“Fitch” shall mean Fitch Ratings and its successors and assigns and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, “Fitch” shall be deemed to refer to any other nationally recognized rating agency designated by the Agency.

“Fixed Rate Indebtedness” shall mean (i) any indebtedness incurred pursuant to this Indenture other than Variable Rate Indebtedness and (ii) indebtedness incurred pursuant to this Indenture which, except for this clause (ii), would be Variable Rate Indebtedness but with respect to which the Agency has entered into an Approved Swap Agreement pursuant to which agreement the Agency makes interest payments based on one or more rates of interest each of which is established at a single numerical rate for the entire remaining term of such agreement, provided that such Variable Rate Indebtedness shall be deemed to be Fixed Rate Indebtedness only while such Approved Swap Agreement remains in effect and only if the counterparty thereto is not in default thereunder, and provided further that, for purposes of determining whether the conditions set forth in Section 2.11 have been satisfied, such Variable Rate Indebtedness shall be deemed to be Fixed Rate Indebtedness only if the terms of such Approved Swap Agreement provide that it will remain in effect as long as any Bond to which such agreement relates is Outstanding. Notwithstanding the foregoing, if two series of Bonds constituting Variable Rate Indebtedness, or one or more maturities within a Series, are issued simultaneously with inverse floating interest rates providing a composite fixed interest rate for such Bonds taken as a whole, such Bonds shall constitute Fixed Rate Indebtedness.

“Government Obligations” shall mean (a) direct obligations of the United States of America (including obligations issued or held in book entry form on the books of the Department of the Treasury of the United States of America) or obligations the payment of the principal of and the interest on which is fully guaranteed by the United States of America; (b) obligations of the Resolution Funding Corporation (“REFCORP”); (c) obligations of state or local government municipal bond issuers, provision for the payment of the principal of and the premium, if any, and the interest on which shall have been made by deposit with a trustee or escrow agent of Government Obligations described in (a) or (b) above, the maturing principal of and interest on which, when due and payable, will provide sufficient money to pay the principal of, premium, if any, and interest on such obligations of state or local government municipal bond issuers, provided that such obligations shall be rated in the highest Rating Category by each and every Rating Agency; (d) U.S. Treasury Strips; and (e) REFCORP Strips (stripped by the Federal Reserve Bank of New York).

“Indenture” shall mean this Master Indenture of Trust together with all amendments and supplements hereto.

“Information Services” shall mean such services providing information with respect to called bonds as the Agency may designate in a certificate of an Authorized Agency Representative delivered to the Trustee.

“Initial Bonds” shall mean the Outstanding 1997 Bonds (including the Restructured Bonds) and any Bonds issued in calendar year 2014.

“Initial Insured Bonds” shall mean the Outstanding Initial Bonds that are Current Interest Bonds with maturity dates of January 15, 2029 and January 15, 2030 and all the Outstanding Initial Bonds that are Capital Appreciation Bonds.

“Interest Payment Date” shall mean each January 15 and July 15, commencing for each Series of Bonds, on the date or dates set forth in the document providing for the issuance thereof, provided that in the case of Variable Rate Indebtedness “Interest Payment Date” shall mean each date on which interest thereon is payable, as set forth in the document providing for the issuance thereof.

“Joint Exercise of Powers Agreement” shall mean that certain first amended and restated joint exercise of powers agreement dated as of January 30, 1986, among the Members, pursuant to which the Agency was formed, as amended and restated from time to time.

“Junior Indebtedness” shall have the meaning ascribed to it in Section 8.13.

“Junior Lien Bond” shall mean (i) any Bond which is expressly designated as a Junior Lien Bond by the Supplemental Indenture pursuant to which it is issued and (ii) any Bond issued on parity therewith.

“Junior Lien Bonds Capitalized Interest Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.

“Junior Lien Bonds Debt Service Fund” shall mean the fund so designated established pursuant to Section 4.4.

“Junior Lien Bonds Interest Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.

“Junior Lien Bonds Prepayment Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.

“Junior Lien Bonds Principal Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.

“Junior Lien Bonds Reserve Fund” shall mean the fund so designated established pursuant to Section 4.6.

“Junior Lien Bonds Reserve Fund Requirement” shall mean an amount equal to the least of (i) 10% of the initial principal amount of the Junior Lien Bonds, as calculated by the Agency pursuant to the Regulations, (ii) Maximum Annual Debt Service on the Junior Lien Bonds or (iii) 125% of average Annual Debt Service on the Junior Lien Bonds, determined on the date each Series of Junior Lien Bonds is issued, subject to being reduced (but never increased) thereafter as necessary to reflect reductions in Annual Debt Service on the Junior Lien Bonds resulting only from the redemption or payment at maturity or defeasance of a Junior Lien Bond.

“Mail” shall mean by first class United States mail, postage prepaid.

“Maximum Annual Debt Service” shall mean at any point in time the maximum amount of Annual Debt Service becoming due in the then current or any future Fiscal Year.

“Maximum Legal Rate” shall mean twelve percent (12%) per year calculated on the basis of a 360 day year consisting of twelve 30-day months.

“Members” shall mean the member entities of the Agency under the Joint Exercise of Powers Agreement, as identified from time to time and which, on the date of execution of this Indenture, are the County of Orange and the Cities of Costa Mesa, Dana Point, Irvine, Laguna Hills, Laguna Niguel, Mission Viejo, Newport Beach, San Clemente, San Juan Capistrano, and Santa Ana.

“Moody’s” shall mean Moody’s Investors Service, a corporation organized and existing under the laws of the State of Delaware, its successors and their assigns, and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, “Moody’s” shall be deemed to refer to any other nationally recognized rating agency designated by the Agency.

“Municipal Bond Insurance Policy” shall mean the policy of insurance issued by National Public Finance Guarantee Corporation insuring the Initial Insured Bonds.

“Net Revenues” shall mean, for any period, the excess, if any, of Revenues for such period over Current Expenses for such period paid from Revenues for such period.

“Outstanding” or “Bonds Outstanding” or “Outstanding Bonds,” when used in reference to any 1993 Bond, shall have the meaning ascribed thereto in the 1993 Indenture and otherwise shall mean all Bonds which have been authenticated and delivered under this Indenture, except:

(a) Bonds cancelled or purchased by the Trustee for cancellation or delivered to or acquired by the Trustee for cancellation and, in all cases, with the intent to extinguish the debt represented thereby;

(b) Bonds deemed to be paid in accordance with Article VII;

(c) Bonds in lieu of which other Bonds have been authenticated under Section 2.5;

(d) Bonds that have become due (at maturity, on redemption, by acceleration or otherwise) and for the payment of which sufficient moneys, including interest accrued to the due date, are held by the Trustee or a Paying Agent;

(e) Bonds which, under the terms of the Supplemental Indenture pursuant to which they were issued, are deemed to be no longer Outstanding; and

(f) for purposes of any consent or other action to be taken by the Owners of a specified percentage of Bonds under this Indenture, Bonds held by or for the account of the Agency or by any person controlling, controlled by or under common control with the Agency, unless such Bonds are pledged to secure a debt to an unrelated party, in which case such Bonds shall, for purposes of consents and other Bond Owner action, be deemed to be Outstanding and owned by the party to which such Bonds are pledged. Upon request of the Trustee, the Agency shall specify in a certificate to the Trustee those Bonds disqualified hereunder; and the Trustee may conclusively rely on such certificate.

“Parity Swap Agreement” shall mean an interest rate swap agreement, interest rate cap or other agreement of a type described in Section 2.12 which satisfies the requirements established in Section 2.12 in order that some or all of the amounts payable by the Agency pursuant to such agreement may be secured by the Pledged Funds on parity with the Bonds to which such agreement relates.

“Parity Swap Agreement Counterparty” shall mean the counterparty to a Parity Swap Agreement with the Agency or with the Trustee.

“Paying Agent” or “Paying Agents” shall mean the Trustee and/or any entity appointed by the Agency as a Paying Agent pursuant to Section 9.11.

“Permitted Investments” shall mean Government Obligations and:

(a) Bonds, debentures or notes or other evidence of indebtedness issued by any one or a combination of any of the following federal agencies and provided such obligations are backed by the full faith and credit of the United States of America: U.S. Export Import Bank (direct obligations or fully guaranteed certificates of beneficial ownership), Federal Financing Bank, Farmer’s Home Administration (certificates of beneficial ownership), Federal Housing Administration Debentures, General Services Administration (participation certificates) U.S. Maritime Administration (guaranteed Title XI financing), U.S. Department of Housing and Urban Development (project notes, local authority bonds, new communities debentures U.S. government guaranteed debentures, U.S. public housing notes and bonds U.S. government guaranteed public housing notes and bonds) and Government National Mortgage Association (GNMA guaranteed mortgage backed bonds, GNMA guaranteed pass-through obligations);

(b) Bonds, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following non full faith and credit U.S. government agencies (stripped securities are only permitted if they have been stripped by the agency itself): Federal Home Loan Bank System (Senior debt obligations); Federal Home Loan Mortgage Corporation (Participation Certificates, Senior debt obligations); Federal National Mortgage Association (Mortgage backed securities and senior debt obligations); Student Loan Marketing Association (Senior debt obligations); Resolution Funding Corp. (obligations); and Farm Credit System (Consolidated systemwide bonds and notes);

(c) Money market funds registered under the Federal Investment Company Act of 1940, whose shares are registered under the Federal Securities Act of 1933, and which have a rating by S&P of AAAm G; AAAm; or AAm and, if rated by Moody’s, rated Aaa, Aa1 or Aa2 and, if rated by Fitch, rated AAA or AA including such funds for which the Trustee, its affiliates or subsidiaries provide investment advisory or other management services or for which the Trustee or an affiliate of the Trustee serves as investment administrator, shareholder servicing agent, and/or custodian or subcustodian, notwithstanding that (i) the Trustee or an affiliate of the Trustee receives fees from funds for services rendered, (ii) the Trustee collects fees for services rendered pursuant to this Indenture, which fees are separate from the fees received from such funds, and (iii) services performed for such funds and pursuant to this Indenture may at times duplicate those provided to such funds by the Trustee or an affiliate of the Trustee;

(d) Certificates of deposit secured at all times by collateral described in (A) and/or (B) above. Such certificates must be issued by commercial banks (including the Trustee, its parent, its affiliates or its subsidiaries), savings and loan associations or mutual savings banks. The

collateral must be held by a third party and the Bondholders must have a perfected first security interest in the collateral.

(e) Certificates of deposit, savings accounts, deposit accounts or money market deposits which are fully insured by the FDIC;

(f) Investment Agreements, including guaranteed investment contracts (“GIC’s”), Forward Purchase Agreements and Reserve Fund Put Agreements acceptable to the Bond Insurer.

(g) Commercial paper rated, at the time of purchase, Prime - 1 or better by Moody’s and A-1 or better by S&P and, if rated by Fitch, rated F-1 or better.

(h) Bonds or notes issued by any state or municipality which are rated by Moody’s and S&P in one of the two highest rating categories assigned by such agencies and, if rated by Fitch, in one of the two highest rating categories assigned by it.

(i) Federal funds or bankers acceptance with a maximum term of one year of any bank, including the Trustee and its affiliates, which has an unsecured, uninsured and unguaranteed obligation rating of Prime 1 or A3 or better by Moody’s and A 1 or A or better by S&P and, if rated by Fitch, a rating of F-1 or A or better.

(j) Repurchase Agreements (“Repos”) meeting the following criteria:

1. Repos must be between the Agency or Trustee and a dealer bank or securities firm
 - a. Primary dealers on the Federal Reserve reporting dealer list which are rated A or better by S&P and Moody’s and, if rated by Fitch, rated A or better, or
 - b. Banks rated “A” or above by S&P and Moody’s and, if rated by Fitch, rated A or above.
2. The written repo contract must include the following:
 - a. Securities which are acceptable for transfer are:
 - (1) Direct U.S. governments, or
 - (2) Federal agencies backed by the full faith and credit of the U.S. government (and FNMA & FHLMC),
 - b. The term of the repo may not exceed 30 days unless approved by the Bond Insurer,
 - c. The collateral must be delivered to the Agency or the Trustee (if Trustee is not supplying the collateral) or third party acting as agent for the Trustee (if the Trustee is supplying the collateral) before/simultaneous with payment (perfection by possession of certificated securities),

d. Valuation of Collateral

- (1) The securities must be valued weekly, marked to market at current market price plus accrued interest,
- (2) The value of collateral must be equal to 104% of the amount of cash transferred by the Agency or the Trustee to the dealer bank or security firm under the repo plus accrued interest. If the value of securities held as collateral slips below 104% of the value of the cash transferred by the Agency or the Trustee, then additional cash and/or acceptable securities must be transferred. If, however, the securities used as collateral are FNMA or FHLMC, then the value of collateral must equal 105%, and

3. Legal opinion which must be delivered to the Agency and Trustee:

- a. Repo meets guidelines under state law for legal investment of public funds;

(k) Medium-term obligations of a maximum maturity of five years issued by corporations organized and operating within the United States, or by depository institutions licensed by the United States or any state and operating in the United States, which are rated in one of the three highest applicable Rating Categories, or approved in writing, by S&P and, if rated by Fitch, rated in one of the three highest applicable Rating Categories; and

(l) Investment agreements, including guaranteed investment contracts, forward purchase agreements and reserve fund put agreements, and any such other investment as an Authorized Agency Representative shall certify to the Trustee or the Agency, as the case may be, as being permitted by the Act, provided that the Rating Agency Condition shall have been satisfied.

“Pledged Bonds” shall mean Bonds purchased by the Paying Agent with amounts received pursuant to a drawing under a Credit Facility and pledged to or registered in the name of a Bank which is a provider of such Credit Facility or its designee.

“Pledged Funds” shall mean (i) the Net Revenues, (ii) amounts transferred to the Trustee by the 1993 Trustee from the “Senior Lien Bonds Reserve Fund” and the “Use and Occupancy Fund” established under the 1993 Indenture and (iii) moneys on deposit in any fund or account held by or for the benefit of the Trustee hereunder except (y) the Rebate Fund and any Series Credit Facility Fund and (z) such other funds and accounts as may be established pursuant to a Supplemental Indenture which provides that the moneys therein shall not constitute Pledged Funds.

“Principal Obligation” shall mean the sum of the principal amount of Current Interest Bonds and the Accreted Amount of Capital Appreciation Bonds and Convertible Capital Appreciation Bonds Outstanding hereunder as of any date of calculation.

“Principal Office” shall mean, in the case of the Trustee, the Trustee’s principal corporate trust office in Los Angeles, California, and in the case of a Paying Agent or a Registrar, the office so designated pursuant to Section 9.11 or 9.12, as the case may be, provided that, with respect to the

presentation of Bonds for payment or for registration of transfer and exchange, such term shall mean the office or agency of the Trustee, Paying Agent or Registrar at which, at any particular time, its corporate trust agency business is being conducted.

“Rating Agency” shall mean each of Fitch, Moody’s, S&P and such other nationally recognized securities rating agency as may be so designated in writing to the Trustee by an Authorized Agency Representative but only in each case if such firm has assigned a rating to any Outstanding Bond at the request of the Agency.

“Rating Agency Condition” shall mean, with respect to any action, that the Agency shall have received and delivered or caused to be delivered to the Trustee written confirmation from each Rating Agency that such action will not result in a suspension, reduction or withdrawal of the then current rating of any of the Bonds by such Rating Agency.

“Rating Category” shall mean each major rating classification established by a Rating Agency, determined without regard to gradations such as “1,” “2” and “3” or “plus” and “minus.”

“Rebate Fund” shall mean the fund created and so designated pursuant to Section 4.9.

“Rebate Regulations” shall mean the Treasury Regulations issued under Section 148(f) of the Code.

“Record Date” shall mean, with respect to any Series of Bonds, the date so specified in the document providing for the issuance of such Series.

“Refunding Bond” shall mean any Bond which is issued solely for the purposes of (i) providing funds for the payment of principal, interest and redemption premium with respect to all Outstanding 1993 Bonds and the Bonds of any one or more Series or a portion of any Series in accordance with and as permitted by the Act and the Supplemental Indenture under which such Refunding Bonds are issued, (ii) paying the costs of issuing such Refunding Bonds and (iii) funding a reserve fund for such Refunding Bonds.

“Registrar” shall mean the Trustee and/or any entity appointed by the Agency as a Registrar pursuant to Section 9.12.

“Regulations” shall mean the regulations adopted or proposed by the Department of Treasury from time to time with respect to obligations issued pursuant to Section 103 of the Code.

“Reimbursement Agreement” shall mean an agreement between the Agency and one or more Banks pursuant to which, among other things, such Bank or Banks issue a Credit Facility with respect to Bonds of one or more Series and the Agency agrees to reimburse such Bank or Banks for any drawings made thereunder, including any security or pledge agreement entered into in connection therewith pursuant to which the Agency grants the Bank or Banks a security interest in any collateral to secure its obligations to the Bank or Banks.

“Reimbursement Obligation” shall mean an obligation of the Agency pursuant to a Reimbursement Agreement to repay any amounts drawn under a Credit Facility and any interest on such drawn amounts pursuant to such Reimbursement Agreement.

“Responsible Officer” shall mean an officer or assistant officer of the Trustee assigned by the Trustee to administer this Indenture.

“Restructured Bonds” shall mean the Outstanding Initial Bonds that mature on January 15, 2037, 2038, 2040, 2041 and 2042 and whose terms were restructured pursuant to the Second Supplemental Indenture of Trust, dated as of May 1, 2011, by and between the Agency and the Trustee.

“Revenue Fund” shall mean the fund created and so designated by Section 4.2.

“Revenues” shall mean: (i) for any period while there are Outstanding 1993 Bonds, the sum of (a) the amounts paid to the Trustee or the Agency by the 1993 Trustee from the “Surplus Revenues Fund” established pursuant to the 1993 Indenture, (b) earnings derived from the investment of moneys in the funds and accounts established hereunder (whether held by the Trustee or the Agency) except the Rebate Fund, and (c) such other sources of funds as may be identified as Revenues in a Supplemental Indenture; and (ii) for any period after there are no longer any Outstanding 1993 Bonds, the sum of (a) the Tolls, (b) Development Impact Fees (but only if and to the extent that they are transferred to the Trustee pursuant to Section 4.2), (c) earnings derived from the investment of moneys in the funds and accounts established hereunder (whether held by the Trustee or the Agency) except the Capital Appreciation Bonds Sinking Account, the Senior Subordinated Interest Sinking Account, the Development Impact Fee Account and the Rebate Fund; (d) liquidated damages or similar payments (net of offsets required or permitted by the applicable agreement) payable under any toll collection or revenue management contract or any operating or maintenance contract relating to a Facility (including the Caltrans Agreement); (e) proceeds of revenue interruption insurance maintained by or for the benefit of the Agency; (f) net proceeds of eminent domain proceedings and casualty insurance maintained by or for the benefit of the Agency to the extent such proceeds are not promptly applied by the Agency either to the replacement or restoration of the Facility taken or damaged or to the redemption of Bonds; and (g) such other sources of funds as may be identified as Revenues in a Supplemental Indenture. Except to the extent specifically otherwise provided above or in a Supplemental Indenture, “Revenues” shall not include (x) the proceeds of any Bonds or other indebtedness issued or incurred by the Agency, (y) Development Impact Fees that are not transferred to the Trustee pursuant to Section 4.2 or (z) rebates of premiums received by the Agency or the Trustee in connection with insurance policies maintained by or for either of them.

“S&P” shall mean Standard & Poor’s Ratings Services, a division of The McGraw-Hill Companies, a corporation duly organized and existing under and by virtue of the laws of the State of New York, its successors and their assigns, and if it shall for any reason no longer perform the functions of a securities rating agency, “S&P” shall be deemed to refer to any other nationally recognized securities rating agency designated by the Agency.

“San Joaquin Hills Transportation Corridor” shall mean the toll road generally referred to by said name and consisting generally of a six-lane, limited access highway from the prior terminus of the Corona del Mar Freeway to Interstate 5 in San Juan Capistrano, together with all related toll collection facilities.

“Secured Owner” shall mean, as to any particular Series of Bonds, each person who is a “Bond Owner,” “Holder,” “Owner” or “registered owner” of the Bonds of such Series, each Parity Swap Agreement Counterparty providing a Parity Swap Agreement with respect to such Bonds, each

Bank providing a Credit Facility with respect to such Bonds and each Bond Insurer providing a bond insurance policy with respect to such Bonds.

“Securities Depositories” shall mean: The Depository Trust Company, 55 Water Street, 50th Floor, New York, New York, 10041-0099, Attn: Call Notification Department, Fax (212) 855-7232; and, in accordance with then current guidelines of the Securities and Exchange Commission, such other addresses as such depository may specify and/or such other securities depositories as the Agency may designate in a certificate of an Authorized Agency Representative delivered to the Trustee.

“Senior Indebtedness” shall have the meaning ascribed to it in Section 8.13.

“Senior Lien Bond” shall mean any Bond which is expressly designated as a Senior Lien Bond by the Supplemental Indenture pursuant to which it is issued.

“Senior Lien Bonds Capitalized Interest Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Debt Service Fund” shall mean the fund so designated established pursuant to Section 4.3.

“Senior Lien Bonds Interest Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Prepayment Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Principal Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Reserve Fund” shall mean the fund so designated established pursuant to Section 4.5.

“Senior Lien Debt Service Reserve Fund Deficiency Amount” shall mean the difference between Maximum Annual Debt Service on the Senior Lien Bonds and the amount on deposit in the Senior Lien Bonds Reserve Fund as of the date of execution and delivery of this First Amended and Restated Master Trust Indenture, as such deficiency may be reduced in accordance with the provisions of Section 4.2(d)(ii).

“Senior Lien Bonds Reserve Fund Requirement” shall mean: (i) during the period in which there are any 1993 Bonds Outstanding, an amount equal to the greater of (a) Maximum Annual Debt Service, calculated without regard to Annual Debt Service on Junior Lien Bonds, less the amount on deposit in the “Senior Lien Bonds Reserve Fund” established pursuant to the 1993 Indenture or (b) Maximum Annual Debt Service, calculated without regard to Annual Debt Service on the 1993 Bonds and without regard to Annual Debt Service on the Junior Lien Bonds; and (ii) during the period in which there are no 1993 Bonds Outstanding, the least of: (x) 10% of the initial principal amount of the Senior Lien Bonds, as calculated by the Agency pursuant to the Regulations, (y) Maximum Annual Debt Service on the Senior Lien Bonds, and (z) 125% of average Annual Debt Service on the Senior Lien Bonds, as determined on the date each Series of Senior Lien Bonds is issued subject to being reduced (but never increased) thereafter as necessary to reflect reductions in

Annual Debt Service on the Senior Lien Bonds resulting only from the redemption or payment at maturity or defeasance of a Senior Lien Bond.

“Series” shall mean one or more Bonds issued at the same time, or sharing some other common term or characteristic, and designated as a separate series or subseries in the Supplemental Indenture pursuant to which it or they are issued.

“Series Credit Facility Fund” shall mean any fund established by a Supplemental Indenture as a fund from which to pay to the applicable Bank or Banks such amounts as may be required to be paid with respect to the Agency’s Reimbursement Obligations to such Bank or Banks.

“Special Project” shall mean any addition to, or any betterment, improvement or enlargement of, the Initial Facilities which is so designated by the Agency in a resolution of the Board a certified copy of which is delivered to the Trustee.

“State” shall mean the State of California.

“Subordinated Indebtedness” shall have the meaning ascribed to it in Section 8.14.

“Supplemental Indenture” shall mean any supplemental indenture then in full force and effect which has been duly approved by resolution of the Board and signed by the Agency and the Trustee and providing for the issuance of a Series or multiple Series of Bonds, amending and/or supplementing this Indenture or amending and/or supplementing another Supplemental Indenture.

“Supplemental Reserve Fund” shall mean the fund created and so designated by Section 4.13.

“Supplemental Reserve Fund Requirement” shall mean: (i) for any period while there are Outstanding 1993 Bonds, an amount equal to \$664,000,000, provided that said amount may be reduced with the consent of the Bond Insurer, the Owners of a majority in Principal Obligation of the Bonds and the Owners of a majority in Principal Obligation of the 1993 Bonds, and (ii) for any period after there are no longer any Outstanding 1993 Bonds, an amount equal to 50% of Maximum Annual Debt Service.

“Surplus Revenues Fund” shall mean the fund created and so designated pursuant to Section 4.8.

“Tax Certificate” shall mean the certificate by that name to be executed by the Agency on a Delivery Date to establish certain facts and expectations and which contains certain covenants relevant to compliance with the Code.

“Swap Termination Payment” shall mean an amount payable by the Agency or a Parity Swap Agreement Counterparty in accordance with a Parity Swap Agreement to compensate the other party to the Parity Swap Agreement for any losses and costs that such other party may incur as a result of the early termination of the obligations, in whole or in part, of the parties under such Parity Swap Agreement.

“Tender Indebtedness” shall mean any Bond or portion thereof a feature of which is an option, on the part of the Bond Owner, or an obligation, under the terms of such Bond, to tender all or a portion of such Bond to the Agency, the Trustee, the Paying Agent or other fiduciary or agent for

payment or purchase and requiring that such Bond or portion thereof be purchased if properly presented. Auction Rate Indebtedness shall not constitute Tender Indebtedness.

“Term Rate Indebtedness” shall mean any Bond or portion thereof a feature of which is an obligation on the part of the owner thereof, under the terms of such Bond, to tender all or a portion of such Bond to the Agency, the Trustee, the Paying Agent or other fiduciary or agent for purchase and requiring that such Bond or portion thereof be purchased if and only if proceeds from the remarketing thereof and/or other funds made available for such purpose at the option of the Agency are sufficient to pay the applicable purchase price.

“Tolls” all rates, rents, fees (including, but not limited to, account maintenance fees, transponder fees and other similar charges), charges, fines, or other income derived by the Agency from vehicular usage of the Facilities, and all rights to receive the same, but excluding therefrom any portion thereof derived from the vehicular usage of a Special Project that is required to be paid to a contractor pursuant to a contract for the acquisition or construction of such Special Project as a result of the early completion of such Special Project or any segment thereof.

“Traffic Consultant” shall mean any traffic and revenue consultant or firm of traffic and revenue consultants of favorable national reputation for skill and experience in performing the duties for which a Traffic Consultant is required to be employed pursuant to the provisions of this Indenture and who is retained by the Agency as a Traffic Consultant for the purposes of this Indenture.

“Trust Estate” shall mean the Pledged Funds.

“Trustee” shall mean the entity named as such in the heading of this Indenture until a successor replaces it in accordance with the provisions of Section 9.9, and thereafter means such successor.

“Unrestricted Funds” shall mean money held by or for the benefit of the Agency in a fund or account other than the funds and accounts established pursuant to this Indenture or any Supplemental Indenture that can be used by the Agency for any lawful purpose.

“Use and Occupancy Fund” shall mean the fund created and so designated by Section 4.7.

“Use and Occupancy Fund Requirement” shall mean (i) for any period while there are Outstanding 1993 Bonds, zero dollars (\$0) and (ii) for any period after there are no Outstanding 1993 Bonds, the greater of (i) \$15,000,000 and (ii) such amount as may from time to time be specified by the Agency.

“Variable Rate Indebtedness” shall mean: (i) any indebtedness incurred pursuant to this Indenture the interest rate applicable to which is not established at the time of incurring of such indebtedness at a rate which cannot increase during the entire term thereof or has not at some subsequent date been established at a rate which cannot increase during the entire term thereof and (ii) indebtedness incurred pursuant to this Indenture which, except for this clause (ii), would be Fixed Rate Indebtedness but with respect to which the Agency has entered into an Approved Swap Agreement pursuant to which Approved Swap Agreement the Agency makes interest payments based on a rate of interest which is not established at a single numerical rate for the entire remaining term of such Approved Swap Agreement, provided that such Fixed Rate Indebtedness shall be

deemed to be Variable Rate Indebtedness only while such agreement remains in effect and only if the counterparty thereto is not in default thereunder.

ARTICLE II

FORM, EXECUTION, DELIVERY AND REGISTRATION OF BONDS

Section 2.1 Issuance of Bonds; Forms. The Agency hereby authorizes the issuance of Bonds hereunder from time to time. The Bonds shall be designated the “San Joaquin Hills Transportation Corridor Agency, Toll Road Refunding Revenue Bonds, Series 1997A,” inserting in the blank an appropriate identifying series letter, number and/or year and including such other characteristics as may be provided by a Supplemental Indenture. The Bonds may have any notations, legends or endorsements required by law or custom and usage, and Bonds issued in whole or in part to refund other Bonds may include the words “Senior,” “Junior,” “Subordinate” and/or “Refunding” in their name. The Bonds shall be numbered and dated as provided in the applicable Supplemental Indenture.

All Bonds shall contain on the face thereof a statement to the following effect:

Neither the faith and the credit nor the taxing power of the State of California or any public agency thereof, other than the San Joaquin Hills Transportation Corridor Agency to the extent of the Pledged Funds, is pledged to the payment of the principal of, or interest on, this Bond.

Section 2.2 Terms of the Bonds. The Bonds shall be issued in the principal amounts, bear interest at a rate or rates (including variable or adjustable rates), not exceeding the maximum rate then permitted by law, shall mature and shall be subject to redemption prior to their respective maturities, all as shall be set forth in a Supplemental Indenture. The Bonds shall be payable in lawful money of the United States, and the payment of principal of, premium, if any, and interest on the Bonds shall be made as specified in the Supplemental Indenture providing for the issuance thereof or as provided in such Bonds themselves.

Section 2.3 Execution and Authentication. The Bonds will be signed for the Agency with the manual or facsimile signatures of its Chair, its Vice Chair or its Chief Executive Officer and either its Secretary or an Assistant Secretary. The Agency may deliver to the Trustee or its agent duly executed Bonds for authentication from time to time by the Trustee or its agent as such Bonds may be required. Bonds executed and so delivered and authenticated will be valid. In case any officer of the Agency whose signature or whose facsimile signature shall appear on any Bonds shall cease to be such officer before the authentication of such Bonds, such signature or the facsimile signature thereof shall nevertheless be valid and sufficient for all purposes the same as if he or she had remained in office until authentication. Also, if a person signing a Bond is the proper officer on the actual date of execution, the Bond will be valid even if that person is not the proper officer on the nominal date of action and even though, at the date of this Indenture, or the related Supplemental Indenture such person was not such officer.

A Bond will not be valid until the Trustee or its agent manually signs the certificate of authentication on the Bond. Such signature will be conclusive evidence that the Bond has been authenticated under this Indenture.

The Trustee may appoint an authenticating agent acceptable to the Agency to authenticate Bonds or may appoint different authenticating agents for different Series of Bonds. An authenticating agent may authenticate Bonds whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent.

Section 2.4 Bond Register. Bonds of each Series may be presented at the Principal Office of the applicable Registrar, unless a different office has been designated for such purpose, for registration, transfer and exchange. The Registrar will keep a register of each Series of Bonds and of their transfer and exchange.

Section 2.5 Mutilated, Lost, Stolen or Destroyed Bonds.

(a) In the event any Bond is mutilated or defaced but identifiable by number and description, the Agency shall execute and the Trustee shall authenticate and deliver a new Bond of like Series, date, maturity and denomination as such Bond, upon surrender thereof to the Trustee; provided that there shall first be furnished to the Agency and the Trustee clear and unequivocal proof satisfactory to the Trustee that the Bond is mutilated or defaced to such an extent as to impair its value to the Bond Owner. The Bond Owner shall accompany the above with a deposit of money required by the Agency for the cost of preparing the substitute Bond and all other expenses connected with the issuance of such substitute. The Agency shall then cause proper record to be made of the cancellation of the original, and thereafter the substitute shall have the validity of the original.

(b) In the event any Bond is lost, stolen or destroyed, the Agency may execute and the Trustee may authenticate and deliver a new Bond of like date, maturity and denomination as that Bond lost, stolen or destroyed; provided that there shall first be furnished to the Agency and the Trustee evidence of such loss, theft or destruction satisfactory to the Agency and the Trustee, together with indemnity satisfactory to them and all other expenses connected with the issuance of such substitute. The Agency shall then cause proper record to be made of the cancellation of the original, and thereafter the substitute shall have the validity of the original.

(c) The Agency and the Trustee shall charge the holder of such Bond all transfer taxes, if any, and their reasonable fees and expenses in this connection. All substitute Bonds issued and authenticated pursuant to this Section shall be issued as a substitute and numbered, if numbering is provided for by the Supplemental Indenture or the Trustee, as determined by the Trustee. In the event any such Bond shall be about to mature or has matured or been called for redemption, instead of issuing a substitute Bond, the Trustee may pay the same at its maturity or redemption without surrender thereof.

Section 2.6 Registration and Transfer and Exchange of Bonds; Persons Treated as Owners. All Bonds shall be issued in fully registered form.

Except as otherwise specified in a Supplemental Indenture, the Agency shall use a book entry system for the registration of transfers and exchanges of the Bonds; and the details of such system shall be as established from time to time by one or more Supplemental Indentures.

If the Bonds are not restricted to being registered in the Bond Register in the name of a nominee pursuant to a book entry system or any other system for the immobilization of the Bonds, they shall be registered in whatever name or names Owners transferring or exchanging Bonds shall

designate, in accordance with the provisions hereof. The cost of printing Bonds and any services rendered or expenses incurred by the Trustee or Registrar in connection with any transfer or exchange, as hereinafter provided, shall be paid by the Agency.

Upon surrender for transfer of any Bond at the Principal Office of the Registrar, the Registrar shall deliver in the name of the Owner or the transferee or transferees, as the case may be, a new fully authenticated and registered Bond or Bonds of Authorized Denominations of the same Series and same maturity for the aggregate principal amount which the Bond Owner is entitled to receive. All Bonds presented for transfer, redemption or payment shall be accompanied by a written instrument or instruments of transfer or authorization for exchange, in form and with guaranty of signature satisfactory to the Agency and the Registrar, duly executed by the Bond Owner or by his duly authorized attorney. The Registrar also may require payment from the Bond Owner of a sum sufficient to cover any tax, or other governmental fee or charge that may be imposed in relation thereto. Such taxes, fees and charges shall be paid before any such new Bond shall be delivered. The Registrar shall not be required to register the transfer of any Bond during the five Business Days preceding the selection of Bonds for redemption or of any Bond selected for redemption.

Bonds delivered upon any transfer as provided herein, or as provided in Section 2.5 hereof, shall be valid limited obligations of the Agency, evidencing the same debt as the Bond surrendered, shall be secured by this Indenture and shall be entitled to all of the security and benefits hereof to the same extent as the Bond surrendered.

The Agency, the Trustee, the Registrar and the Paying Agent shall treat the Bond Owner, as shown on the registration books kept by the Registrar, as the person exclusively entitled to payment of principal, premium, if any, and interest and the exercise of all other rights and powers of the Bond Owner, except that all interest payments will be made to the party who, as of the applicable Record Date, is the Bond Owner.

Section 2.7 Destruction of Bonds. Whenever any Outstanding Bonds shall be delivered to the Trustee for cancellation pursuant to this Indenture, upon payment of the principal amount and interest represented thereby or for replacement pursuant to Section 2.5 or transfer pursuant to Section 2.6, such Bond shall be cancelled and destroyed by the Trustee, and counterparts of a certificate of destruction evidencing such destruction shall be furnished by the Trustee to the Agency.

Section 2.8 Temporary Bonds. Pending preparation of definitive Bonds of any Series, the Agency may execute and the Trustee shall authenticate and deliver, in lieu of definitive Bonds and subject to the same limitations and conditions, interim receipts, certificates or temporary Bonds which shall be exchanged for the Bonds.

If temporary Bonds shall be issued, the Agency shall cause the definitive Bonds to be prepared and to be executed, authenticated and delivered to the Trustee, and the Trustee, upon presentation to it of any temporary Bond, shall cancel the same and deliver in exchange therefor at the place designated by the Bond Owner, without charge to the Bond Owner thereof, definitive Bonds of an equal aggregate principal amount, of the same Series, maturity and bearing interest at the same rate or rates as the temporary Bonds surrendered. Until so exchanged, the temporary Bonds shall in all respects be entitled to the same benefit and security of this Indenture as the definitive Bonds to be issued and authenticated hereunder.

Section 2.9 Issuance of Series of Bonds; Supplemental Indenture; Application of Bond Proceeds. Bonds may be issued in Series from time to time, subject to the conditions of this Section, for the purposes of (i) financing Costs and (ii) refunding any Bond or other indebtedness of the Agency theretofore issued.

Each Supplemental Indenture under which such Bonds are issued to finance Costs shall specify the Facilities the Costs of which are to be paid in whole or in part with the proceeds derived from the sale of such Bonds, provided that any surplus remaining after the completion thereof may be expended for other Costs even though not so specified or may be otherwise applied as set forth in such Supplemental Indenture.

Such Supplemental Indenture may provide for the appointment of a Registrar or Registrars and a Paying Agent or Paying Agents in addition to or in place of the Trustee, may provide for the establishment of a Series Credit Facility Fund, and may pledge moneys to the payment thereof in addition to the Pledged Funds. Such Supplemental Indenture may also provide that the interest rate on Bonds of the Series thereby authorized and the duration of the periods during which such interest accrues may from time to time be adjusted (provided that the Bond interest rate shall never exceed the maximum interest rate permitted by law, if any) and that such Bonds may be purchased upon the demand of the Owners thereof or shall be subject to mandatory purchase upon the occurrence of certain events or certain times, and such provisions may include, without limitation, the creation of objective standards for such adjustments, the appointment of agents to apply such standards to such Bonds, the criteria for such purchases upon demand and the procurement of Credit Facilities with respect to such Bonds.

Each of the Bonds of a Series, upon execution by the Agency, shall be deposited with the Trustee or the Trustee's agent for authentication and delivery, but prior to or simultaneously with the delivery of such Bonds, there shall be filed with the Trustee the following:

(a) an original executed counterpart or a copy, certified by an Authorized Agency Representative, of this Indenture, together with all prior Supplemental Indentures;

(b) an original executed counterpart or a copy, certified by an Authorized Agency Representative, of the Supplemental Indenture providing for the issuance of such Series of Bonds and setting forth the terms of such Bonds and, among other matters, the amount, if any, of the Capitalized Interest with respect thereto;

(c) if credit enhancement or liquidity support is to be provided at the time of issuance of the Series, the executed bond insurance policy, surety bond, or Credit Facility, if any, relating to such Bonds;

(d) in the event one or more Credit Facilities or bond insurance policies or surety bonds are then in effect in connection with any Outstanding Series, a certificate of the Agency executed by an Authorized Agency Representative to the effect that all conditions precedent to the issuance of the proposed Bonds established by each of the applicable Reimbursement Agreements and other similar agreements have been fulfilled;

(e) except as otherwise provided in Section 2.10, a certificate of the Agency executed by an Authorized Agency Representative, in each case as provided for in Section 2.11;

(f) except in the case of the Initial Bonds and except also in the case of Bonds satisfying the requirements of Section 2.10, a certificate of the Agency executed by an Authorized Agency Representative, in each case to the effect that concurrently with the issuance of such Bonds the Reserve Fund will be funded in an amount not less than the Reserve Fund Requirement (determined as if the proposed Bonds were Outstanding);

(g) written instructions from the Agency, executed by an Authorized Agency Representative, to the Trustee setting forth the respective portions of the proceeds from the sale of such Bonds to be deposited in the various funds and accounts established hereunder or under any Supplemental Indenture held by the Trustee;

(h) if any such Bonds constitute Balloon Indebtedness, the written consent of the Bond Insurer to the issuance of such Bonds; and

(i) written instructions from the Agency, executed by an Authorized Agency Representative, to authenticate the Bonds and, upon receipt of the purchase price, to deliver the Bonds to or upon the order of the purchasers named in such instructions.

When the documents mentioned in clauses (a) to (i), inclusive, of this Section shall have been filed with the Trustee and when such Bonds shall have been executed and authenticated, the Trustee or authenticating agent shall (i) deliver such Bonds to or upon the order of the purchasers thereof, but only upon payment by the purchasers of the purchase price of such Bonds, and (ii) deposit proceeds from the sale of such Bonds to the credit of the Reserve Fund to the extent necessary to achieve the balance referred to in (f) above and apply the remainder of such proceeds as directed by the Agency.

Section 2.10 Refunding Bonds. Without satisfying the requirements of Section 2.11, Refunding Bonds may be issued under and secured by this Indenture provided that:

(a) During the period in which any 1997 Bonds the terms of which have not been amended subsequent to the date of this Indenture remain Outstanding, (i) such Bonds may be issued as Senior Lien Bonds without satisfying the provisions of Section 2.11 only if either (y) the Bonds being issued constitute Fixed Rate Indebtedness and are for the purpose of refunding 1993 Bonds or then Outstanding Bonds which constitute Fixed Rate Indebtedness and there is delivered to the Trustee a certificate of an Authorized Agency Representative showing that Annual Debt Service payable on all Senior Lien Bonds that will be Outstanding after the issuance of the Refunding Bonds will not exceed Annual Debt Service on all Senior Lien Bonds Outstanding prior to the issuance of such Refunding Bonds in each Fiscal Year in which any such Senior Lien Bonds would have been Outstanding but for the issuance of such Refunding Bonds; or (z) there shall be delivered to the Trustee a certificate of an Authorized Agency Representative showing that the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant) to be received in the then current Fiscal Year and in each Fiscal Year thereafter is not less than 1.3 times Annual Debt Service on Senior Lien Bonds, taking into account the Bonds proposed to be issued, for each such Fiscal Year and (ii) such Bonds may be issued as Junior Lien Bonds without satisfying the provisions of Section 2.11 only if there shall be delivered to the Trustee a certificate of an Authorized Agency Representative showing that the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant) to be received in the then current Fiscal Year and in each Fiscal Year thereafter is not less than 1.1 times Annual Debt Service on all Bonds, taking into account the Bonds proposed to be issued, for each such Fiscal Year. In estimating the amount of future Tolls for purposes of the foregoing, the Traffic Consultant may take into

account any revisions of the Tolls which have been approved by the Board and which will be effective during such period, and any additional Tolls which the Traffic Consultant estimates will be received by the Agency following the completion of any Pledged Facility then being constructed, or proposed to be constructed by or on behalf of the Agency, provided that an Authorized Agency Representative shall have certified in writing as to the estimated completion date of such Pledged Facility and an Authorized Agency Representative shall have certified in writing as to the sufficiency of funds available with which to complete the same; and

(b) Subsequent to the period described in subdivision (a) above, (i) such Bonds may be issued as Senior Lien Bonds without satisfying the provisions of Section 2.11 only if there is delivered to the Trustee a certificate of an Authorized Agency Representative showing that Annual Debt Service payable on all Senior Bonds that will be Outstanding after the issuance of the Refunding Bonds will not exceed Annual Debt Service payable on all Senior Lien Bonds Outstanding prior to the issuance of such Refunding Bonds in each Fiscal Year (and only in each Fiscal Year) in which any such Senior Lien Bonds would have been Outstanding but for the issuance of such Refunding Bonds, and (ii) such Bonds may be issued as Junior Lien Bonds without satisfying the provisions of Section 2.11 only if there is delivered to the Trustee a certificate of an Authorized Agency Representative showing that Annual Debt Service on all Bonds that will be Outstanding after the issuance of the Refunding Bonds will not exceed Annual Debt Service on all Outstanding Bonds Outstanding prior to the issuance of such Refunding Bonds in each Fiscal Year (and only in each Fiscal Year) in which any such Bonds would have been Outstanding but for the issuance of such Refunding Bonds.

Section 2.11 Tests for Issuance of Certain Bonds. Except as provided in Section 2.10 hereof, subsequent to the issuance of the Initial Bonds, as a condition to the issuance of any Senior Lien Bonds, there shall first be delivered to the Trustee a certificate of an Authorized Agency Representative showing that (i) either (a) the aggregate amount of the Adjusted Net Toll Revenues during any twelve month period during the most recent eighteen month period preceding the date on which such Senior Lien Bonds are proposed to be issued for which such data are available was not less than 1.3 times Maximum Annual Debt Service on Senior Lien Bonds and not less than 1.1 times the Maximum Annual Debt Service on the Bonds, in each case taking into account the Senior Lien Bonds proposed to be issued, or (b) the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant) to be received in the current Fiscal Year and in each Fiscal Year thereafter is not less than two times Annual Debt Service on Senior Lien Bonds during the period in which any 1997 Bonds the terms of which have not been amended subsequent to the date of this Indenture remain Outstanding and thereafter not less than 1.5 times Annual Debt Service on Senior Lien Bonds and not less than 1.2 times the Annual Debt Service on all Bonds for each such Fiscal Year, in each case taking into account the Senior Lien Bonds proposed to be issued; (ii) each Rating Agency then rating the Senior Lien Bonds will not withdraw its rating or reduce its then outstanding rating assigned to the Senior Lien Bonds (without regard to the availability of bond insurance) as a direct consequence of the issuance of the proposed Senior Lien Bonds; and (iii) concurrently with the issuance of such Senior Lien Bonds the Senior Lien Bonds Reserve Fund will be funded in an amount not less than the Senior Lien Bonds Reserve Fund Requirement (determined as if the proposed Senior Lien Bonds were Outstanding), provided that the test set forth in this clause (iii) may be satisfied in whole or in part with an insurance policy, surety bond, or letter of credit as described in Section 4.5.

Except as provided in Section 2.10 hereof, subsequent to the issuance of the Initial Bonds, as a condition to the issuance of any Junior Lien Bonds, there shall first be delivered to the Trustee a

certificate of an Authorized Agency Representative showing that (i) either (a) the aggregate amount of the Adjusted Net Toll Revenues during any twelve month period during the most recent eighteen month period preceding the date on which such Junior Lien Bonds are proposed to be issued for which such data are available was not less than 1.1 times the Maximum Annual Debt Service on all Bonds, in each case taking into account the Junior Lien Bonds proposed to be issued, or (b) the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant) to be received in the current Fiscal Year and in each Fiscal Year thereafter is not less than 1.1 times the Annual Debt Service on all Bonds for each such Fiscal Year, in each case taking into account the Junior Lien Bonds proposed to be issued; (ii) each Rating Agency then rating the Junior Lien Bonds will not withdraw its rating or reduce its then outstanding rating assigned to the Junior Lien Bonds (without regard to the availability of bond insurance) as a direct consequence of the issuance of the proposed Junior Lien Bonds; and (iii) concurrently with the issuance of such Junior Lien Bonds the Junior Lien Bonds Reserve Fund will be funded in an amount not less than the Junior Lien Bonds Reserve Fund Requirement (determined as if the proposed Junior Lien Bonds were Outstanding), provided that the test set forth in this clause (iii) may be satisfied in whole or in part with an insurance policy, surety bond, or letter of credit as described in Section 4.6.

In estimating the amount of future Tolls for purposes of the preceding paragraphs, the Traffic Consultant may take into account any additional Tolls which the Traffic Consultant estimates will be received by the Agency following the completion of any Facility then being constructed, or proposed to be constructed by or on behalf of the Agency, provided that an Authorized Agency Representative shall have certified in writing as to the estimated completion date of such Pledged Facility and an Authorized Agency Representative shall have certified in writing as to the sufficiency of funds available with which to complete the same.

Section 2.12 Certain Contracts and Swaps. Without entering into a Supplemental Indenture with respect thereto, upon receipt of an opinion of Bond Counsel to the effect that such action is permitted under the laws of the State and will not adversely affect the exclusion from gross income of interest on the Bonds for federal income tax purposes, the Agency may and the Trustee shall, if so directed in writing by an Authorized Agency Representative, enter into one or more contracts in order to place any Series, or any portion thereof, on the interest rate, currency, cash flow, or other basis desired by the Agency, including, without limitation, interest rate swap agreements, currency swap agreements, forward payment conversion agreements, futures contracts, contracts providing for payments based on levels of or changes in interest rates, currency exchange rates, stock or other indices, or contracts to exchange cash flows or a series of payments, and contracts including, without limitation, interest rate floors or caps, options, puts or calls to hedge payment, currency rate, spread or similar exposure; provided that if such contract is entered into prior to the issuance of the Bonds to which it relates, the latter portion of the opinion of Bond Counsel referred to hereinabove need not be delivered until such Bonds are issued.

The amounts received by the Agency or the Trustee, if any, pursuant to such a contract shall be applied as set forth below (to the extent required) and otherwise may be applied to the various deposits required hereunder or under any Supplemental Indenture with respect to the Bonds in question.

Amounts payable by the Agency under such a contract may be secured by the Pledged Funds on parity with the Bonds to which such contract relates but only to the extent so provided in such contract, provided that under no circumstances shall a Swap Termination Payment be secured by the Pledged Funds on parity with any Senior Lien Bond. In the event and to the extent that amounts

payable by the Agency under such a contract are secured by the Pledged Funds on parity with the Bonds to which such contract relates, the Agency shall pay to the Trustee for deposit into the Interest Account for the Bonds to which such contract relates the net amount payable, if any, to the Parity Swap Agreement Counterparty as if such amounts were additional amounts of interest due on said Bonds; and the Trustee shall pay to the Parity Swap Agreement Counterparty, to the extent required under the Parity Swap Agreement, amounts deposited in the aforesaid account.

Net amounts received by the Agency or the Trustee from the counterparty pursuant to a swap agreement shall be deposited to the credit of the Interest Account for the Bonds to which such contract relates or, if money has been deposited to the credit of said Interest Account from a drawing pursuant to a Credit Facility, to the credit of the applicable Series Credit Facility Fund.

Unless it has received an opinion from Bond Counsel to the effect that such action will not adversely affect the exclusion from gross income of interest on the Bonds for federal income tax purposes, once it has entered into a Parity Swap Agreement the Agency will take no action the effect of which would be to either terminate the Parity Swap Agreement in advance of its scheduled expiration date or cause the notional amount thereunder to be different from the principal amount of the then Outstanding Bonds to which such Parity Swap Agreement relates.

ARTICLE III

REDEMPTION OF BONDS

Section 3.1 Bonds Redeemable. The Bonds of each Series issued under the provisions of Article II may be made subject to redemption either in whole or in part and at such times, prices and in such order and under such terms as may be provided by the Supplemental Indenture providing for the issuance of such Bonds. The Agency may provide for the redemption of Bonds from any funds available to the Agency and not obligated to be used for other purposes.

Section 3.2 Selection of Bonds To Be Redeemed. If less than all the Bonds shall be called for redemption, the Bonds to be redeemed shall be selected from such Series of Bonds as the Agency shall determine, and, within a Series of Bonds, if less than all of the Bonds of that Series are to be redeemed, Bonds shall be selected as provided in the Supplemental Indenture under which such Bonds were issued.

Section 3.3 Notice of Redemption. In the event any of the Bonds are called for redemption, the Trustee shall give notice, at the times and in the manner specified by Supplemental Indenture, in the name of the Agency, to the Owners of the Bonds, of the redemption of such Bonds, which notice shall (i) specify the Bonds to be redeemed, the redemption date, the redemption price and the place or places where amounts due upon such redemption will be payable and, if less than all of the Bonds are to be redeemed, the numbers of the Bonds, and the portions of Bonds, to be redeemed, (ii) state any condition to such redemption, (iii) state that on the redemption date, and upon the satisfaction of any such condition, the Bonds or portions thereof to be redeemed shall cease to bear interest, and state that a new Bond of the same Series, maturing on the same date and bearing interest at the same rate and in the same principal amount as the unredeemed portion of any Bond redeemed only in part will be registered in the name of and returned to the Owner of any such Bond in exchange therefor. Such notice may set forth any additional information relating to such redemption. Notice may provide for purchase in lieu of redemption or conditional redemption as provided by a Supplemental Indenture. Notwithstanding the foregoing, a Supplemental Indenture

may provide for redemption of Bonds of a Series, under certain circumstances, without notice and for the revocation of a notice and the cancellation of the redemption described therein.

Neither failure to receive any such notice nor any defect in any notice so given shall affect the sufficiency of the proceedings for the redemption of such Bonds.

In addition to any notice of redemption required pursuant to a Supplemental Indenture, further notice shall be given by the Trustee as set out below, but no defect in said further notice nor any failure to give all or any portion of such further notice shall in any manner defeat the effectiveness of a call for redemption if notice thereof is given as above prescribed.

(a) Each further notice of redemption given hereunder shall contain the information required above for an official notice of redemption plus (i) the rate of interest borne by each Bond being redeemed; and (ii) any other descriptive information needed to identify accurately the Bonds being redeemed.

(b) Each further notice of redemption shall be sent by registered or certified mail or overnight delivery service on the same day on which notice is provided to Owners, to the Bond Insurer, if any, insuring such Bonds and to the Information Services and the Securities Depositories.

Section 3.4 Effect of Call for Redemption. On the date so designated for redemption, notice having been given in the manner and under the conditions provided herein and in the Supplemental Indenture relating to such Bonds as are to be redeemed, and moneys for payment of the redemption price being held in trust to pay the redemption price, unless otherwise provided in a Supplemental Indenture, the Bonds or portions thereof so called for redemption shall become and be due and payable on the redemption date, interest thereon shall cease to accrue, such Bonds or portions thereof shall cease to be entitled to any lien, benefit or security under this Indenture and the owners of such Bonds shall have no rights in respect thereof except to receive payment of the redemption price.

Bonds which have been duly called for redemption under the provisions of this Article and for the payment of the redemption price of which moneys shall be held in trust for the Owners of the Bonds to be redeemed, all as provided in this Indenture, shall not be deemed to be Outstanding under the provisions of this Indenture.

Section 3.5 Purchase in Lieu of Redemption. Unless otherwise provided in a Supplemental Indenture, in lieu of redeeming Bonds the Agency shall have the option to tender to the Trustee any amount of Bonds subject to redemption which have been purchased by the Agency. The Agency may purchase such Bonds at public or private sale as and when and at such prices as the Agency may in its discretion determine, provided that such price shall not exceed the principal amount or the Accreted Amount, as the case may be, of the subject Bonds plus interest, if any, accrued thereon to the date of purchase.

Section 3.6 Mandatory Tender for Repurchase. Unless otherwise provided in a Supplemental Indenture, the Bonds shall be subject to mandatory tender for repurchase by or for the benefit of the Agency on the same dates, in the same amounts, at the same prices, upon the same notification, and subject in all respects to the same provisions as are applicable to the calling of Bonds for redemption, provided that no Bond repurchased by or on behalf of the Agency shall be remarketed after a period of 30 days unless the Agency delivers to the Trustee an opinion of Bond

Counsel to the effect that such action will not adversely affect the exclusion from gross income for federal income tax purposes of the interest on Bonds issued on a tax exempt basis.

ARTICLE IV

REVENUES AND FUNDS

Section 4.1 Construction Fund and Certain Accounts. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Construction Fund” (the “Construction Fund”); said fund shall be held by the Agency. The Construction Fund shall include such accounts as may be provided for from time to time by a Supplemental Indenture.

The Agency shall credit to the Construction Fund (i) the amounts from time to time required to be so credited pursuant to a Supplemental Indenture or other agreement to which the Agency is a party and (ii) such other amounts as may be received by the Agency from time to time, to the extent such amounts are determined by the Agency to be appropriate for deposit into the Construction Fund.

The moneys in the Construction Fund shall be held by the Agency in trust for the benefit of the Bonds, the Parity Swap Agreements and the Reimbursement Obligations and applied as hereinafter provided or as provided in a Supplemental Indenture or in the written instructions of the Agency referred to hereinabove and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners and for the further security of such Secured Owners until paid out or transferred as hereinafter provided.

Moneys on deposit in the Construction Fund may be withdrawn therefrom to pay (i) a Cost and (ii) if moneys are not available in any capitalized interest account for the payment of interest on Bonds, at the option of the Agency, as set forth in a certificate executed by an Authorized Agency Representative, to pay any Reimbursement Obligation or any obligation of the Agency under a Parity Swap Agreement then due or to pay interest on Bonds. Moneys remaining on deposit in the Construction Fund following the completion of the Facilities specified in the Supplemental Indenture or Supplemental Indentures pursuant to which such Facilities were financed shall be applied as provided herein or therein, provided that (unless specifically prohibited by such Supplemental Indenture or Supplemental Indentures) any surplus remaining after the completion of such Facilities may be expended for other Costs, even though not so specified, or may be applied as set forth in such Supplemental Indenture.

Section 4.2 Revenue Fund. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Revenue Fund” (the “Revenue Fund”); said fund shall be held by the Agency. A separate account in the Revenue Fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Development Impact Fee Account” (the “Development Impact Fee Account”). The Agency covenants that it will deposit all Revenues (other than Development Impact Fees) when and as received by it into the Revenue Fund and that it will deposit all Development Impact Fees as and when received by it into the Development Impact Fee Account. All moneys in the Revenue Fund shall be held by the Agency in trust for the benefit of the Bonds, the Parity Swap Agreements and the Reimbursement Obligations and applied as provided in this Article and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners and for the further security of such Secured Owners until paid out or transferred as hereinafter provided.

The Agency shall withdraw from the Revenue Fund such amounts as it shall from time to time determine necessary (i) to pay the Current Expenses that are then due and payable, (ii) to pay the Current Expenses that the Agency expects to become due and payable in the next succeeding calendar month, and (iii) to maintain a reserve, the amount of which reserve shall not exceed one-twelfth of the total Current Expenses shown in the Annual Operating Budget for the then current Fiscal Year. Amounts so withdrawn from the Revenue Fund shall be applied to the payment of Current Expenses. In addition to the foregoing, the Agency may withdraw from the Development Impact Fee Account such amounts as it may from time to time deem necessary or desirable, provided that the aggregate amount so withdrawn during any six month period commencing July 1 and ending December 31 shall not exceed \$2,500,000 and the aggregate amount so withdrawn during any 12 month period commencing July 1 and ending June 30 shall not exceed \$5,000,000. In addition, the Agency may also withdraw from the Development Impact Fee Account the amounts described in the penultimate paragraph of this Section. Amounts so withdrawn from the Development Impact Fee Account shall be applied as determined by the Agency.

On or before the last Business Day of each month, after making the withdrawals described in the preceding paragraph, the Agency shall withdraw from the Revenue Fund (but not from the Development Impact Fee Account) and transfer to the Trustee the balance then on deposit therein for transfer, deposit or payment by the Trustee in the following order of priority (and for such purpose earnings on the Senior Lien Bonds Debt Service Fund, the Senior Lien Bonds Reserve Fund, the Junior Lien Bonds Debt Service Fund, the Junior Lien Bonds Reserve Fund and the Use and Occupancy Fund received by the Trustee during such period shall be deemed to have been so withdrawn and transferred; and, in connection therewith, the Trustee may establish, as it deems necessary, a temporary fund or account on its books and records to facilitate the deposits and transfers set forth herein):

(a) to the Trustee for deposit to the credit of the Senior Lien Bonds Interest Account, the Senior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of the foregoing to the extent set forth below), the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in this subdivision (a):

(i) to the credit of the Senior Lien Bonds Interest Account (but only after the Trustee shall first have withdrawn from the Senior Lien Bonds Capitalized Interest Account and credited to the Senior Lien Bonds Interest Account such amounts as may from time to time be specified in a Supplemental Indenture or a written direction to the Trustee from an Authorized Agency Representative), an amount equal to (a) the unpaid Aggregate Accrued Interest on the Senior Lien Bonds for the current calendar month, less (b) any Excess Deposit made with respect to a preceding calendar month to the extent such Excess Deposit has not been previously credited against a transfer to the Senior Lien Bonds Interest Account, plus (c) any Deficiency with respect to a preceding calendar month existing on the first day of such current calendar month, plus (d) any amount of interest which has become due on the Senior Lien Bonds and has not been paid, and (e) any amount of interest which will accrue and become payable in the next succeeding calendar month, and for which there are insufficient funds in the Senior Lien Bonds Interest Account or another special account to be used to make such payment; provided that, if an Authorized Agency Representative gives the Trustee written direction to deposit to the credit of the Senior Lien Bonds Interest Account an amount larger than the amount specified above, said larger amount shall be so deposited; and provided further that any amount remaining in the Senior Lien Bonds Interest

Account following the payment of interest on the Senior Lien Bonds on each January 15 and July 15 that is in excess of the interest, if any, then accrued on the Bonds shall be withdrawn therefrom and applied in the manner set forth below; and provided further that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Senior Lien Bonds Interest Account to pay such Aggregate Accrued Interest from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant to the Supplemental Indenture applicable to such Senior Lien Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund in an amount sufficient to reimburse the applicable Bank for such drawing and (but without duplication) to pay any applicable Bank Fees then payable to such Bank; and provided further that if the Revenues transferred to the Trustee as provided for hereinabove are at any time insufficient to make the deposits required to be made pursuant to the provisions of this subparagraph, upon receipt of the written instruction of an Authorized Agency Representative to do so, the Trustee shall withdraw from the Senior Lien Bonds Principal Account and credit to the Senior Lien Bonds Interest Account the amount of such insufficiency;

(ii) to the credit of the Senior Lien Bonds Principal Account, the Aggregate Accrued Principal of the Senior Lien Bonds for the current calendar month, plus any Accrued Premium and plus any Deficiency existing on the first day of such current calendar month plus any amount of principal of Senior Lien Bonds which has become due and has not been paid and for which there are insufficient funds in the Senior Lien Bonds Principal Account or another special account to be used to make such payment, provided that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Senior Lien Bonds Principal Account to pay such Aggregate Accrued Principal or Accrued Premium from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant to the Supplemental Indenture applicable to such Senior Lien Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund to reimburse the applicable Bank for such drawing;

(iii) to the credit of the Capital Appreciation Bonds Sinking Account, the amount, if any, required pursuant to a Supplemental Indenture; and

(iv) to the credit of the Convertible Capital Appreciation Bonds Sinking Account, the amount, if any, required pursuant to a Supplemental Indenture; and

(b) to the credit of the Senior Lien Bonds Reserve Fund, if and to the extent the balance on deposit therein is less than the Senior Lien Bonds Reserve Fund Requirement as a result of a withdrawal of funds therefrom, an amount equal to 1/6th of the aggregate amount theretofore withdrawn from the Senior Lien Bonds Reserve Fund and transferred to the Senior Lien Bonds Debt Service Fund pursuant to Section 4.5;

(c) to the credit of the Junior Lien Bonds Interest Account and the Junior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of them to the extent set forth below) and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in this subdivision (c):

(i) to the credit of the Junior Lien Bonds Interest Account (but only after the Trustee shall first have withdrawn from the Junior Lien Bonds Capitalized Interest Account and credited to the Junior Lien Bonds Interest Account such amounts as may from time to time be specified in a Supplemental Indenture or a written direction to the Trustee from an Authorized

Agency Representative), an amount equal to (a) the unpaid Aggregate Accrued Interest on the Junior Lien Bonds for the current calendar month, less (b) any Excess Deposit made with respect to a preceding calendar month to the extent such Excess Deposit has not been previously credited against a transfer to the Junior Lien Bonds Interest Account, plus (c) any Deficiency with respect to a preceding calendar month existing on the first day of such current calendar month, plus (d) any amount of interest which has become due on the Junior Lien Bonds and has not been paid, and (e) any amount of interest which will accrue and become payable in the next succeeding calendar month, and for which there are insufficient funds in the Junior Lien Bonds Interest Account or another special account to be used to make such payment; provided that, if an Authorized Agency Representative gives the Trustee written direction to deposit to the credit of the Junior Lien Bonds Interest Account an amount larger than the amount specified above, said larger amount shall be so deposited; and provided further that any amount remaining in the Junior Lien Bonds Interest Account following the payment of interest on the Bonds on each January 15 and July 15 that is in excess of the interest, if any, then accrued on the Bonds shall be withdrawn therefrom and applied in the manner set forth below; and provided further that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Junior Lien Bonds Interest Account to pay such Aggregate Accrued Interest from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant to the Supplemental Indenture applicable to such Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund in an amount sufficient to reimburse the applicable Bank for such drawing and (but without duplication) to pay any applicable Bank Fees then payable to such Bank; and provided further that if the Revenues transferred to the Trustee as provided for hereinabove are at any time insufficient to make the deposits required to be made pursuant to the provisions of this subparagraph, upon receipt of the written instruction of an Authorized Agency Representative to do so, the Trustee shall withdraw from the Junior Lien Bonds Principal Account and credit to the Junior Lien Bonds Interest Account the amount of such insufficiency; and

(ii) to the credit of the Junior Lien Bonds Principal Account, the Aggregate Accrued Principal of the Junior Lien Bonds for the current calendar month, plus any Accrued Premium and plus any Deficiency existing on the first day of such current calendar month plus any amount of principal of Junior Lien Bonds which has become due and has not been paid and for which there are insufficient funds in the Principal Account or another special account to be used to make such payment, provided that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Junior Lien Bonds Principal Account to pay such Aggregate Accrued Principal or Accrued Premium from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant to the Supplemental Indenture applicable to such Junior Lien Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund to reimburse the applicable Bank for such drawing;

(d) to the credit of the Senior Lien Bonds Reserve Fund: (i) if and to the extent the balance on deposit therein is less than the Senior Lien Bonds Reserve Fund Requirement, other than due to a Senior Lien Debt Service Reserve Fund Deficiency Amount (which is being funded in accordance with clause (ii) of this subdivision (d)), the amount necessary to restore said balance to the Senior Lien Bonds Reserve Fund Requirement (less any Senior Lien Debt Service Reserve Fund Deficiency Amount) and (ii) if and to the extent that the balance on deposit therein is less than Maximum Annual Debt Service on the Senior Lien Bonds due to a Senior Lien Debt Service Reserve Fund Deficiency Amount, the lesser of (A) 50% of the Revenues remaining after making all of the transfers and deposits described above and (B) the amount necessary to fully fund in the aggregate the Senior Lien Debt Service Reserve Fund Deficiency Amount;

(e) to the credit of the Junior Lien Bonds Reserve Fund, if and to the extent the balance on deposit therein is less than the Junior Lien Bonds Reserve Fund Requirement, the amount necessary to restore said balance to the Junior Lien Bonds Reserve Fund Requirement;

(f) to the credit of the Use and Occupancy Fund if and to the extent the balance on deposit therein is less than the Use and Occupancy Fund Requirement, the amount necessary to cause the balance on deposit therein to equal the Use and Occupancy Fund Requirement;

(g) commencing January 2024, the lesser of (A) 50% of the Revenues remaining after making all of the transfers and deposits described above and (B) the amount specified by the Agency as being necessary to pay or to provide for the payment of all amounts payable by the Agency to the Foothill/Eastern Transportation Corridor Agency pursuant to the Agreement Terminating First Amended and Restated Mitigation Payment and Loan Agreement, dated as of August 14, 2014, by and between the Foothill/Eastern Transportation Corridor Agency and the Agency to transfer to the Agency for payment to the Foothill/Eastern Transportation Corridor Agency on January 15, 2025 and each January 15 thereafter;

(h) to the credit of the Supplemental Reserve Fund, if and to the extent that the balance on deposit in the Supplemental Reserve Fund is less than the Supplemental Reserve Fund Requirement, 50% of the Revenues remaining after making all of the transfers and deposits described above or, if the report filed by the Agency with the Trustee for the preceding Fiscal Year pursuant to Section 5.2 indicates that the Enhanced Adjusted Net Toll Revenues for such Fiscal Year were less than either (i) 1.3 times Annual Debt Service on the Senior Lien Bonds or (ii) 1.1 times Annual Debt Service on all Bonds, 100% of such remaining Revenues;

(i) to make such transfers, deposits and payments as may be required in connection with obligations issued or incurred by the Agency to reimburse the Bond Insurer in accordance with a Supplemental Indenture for amounts paid by the Bond Insurer under a Municipal Bond Insurance Policy or any related insurance agreement (to the extent such amounts have not been paid to the Bond Insurer on account of its subrogation rights, to pay any Bank Fees payable to a Bank pursuant to a Reimbursement Agreement, and to make such other transfers, deposits and payments as may be required in connection with subordinated obligations issued or incurred by the Agency pursuant to Section 5.16 and, if the amount available is insufficient to provide for all such transfers, deposits and payments, to each in proportion to the respective amount thereof, all as directed in writing by an Authorized Agency Representative; and

(j) to transfer to the Agency for deposit to the credit of the Surplus Revenues Fund, any Revenues remaining after making the transfers and deposits described in subdivisions (a) through (i), inclusive.

If the Revenues so transferred to the Trustee pursuant to the foregoing subdivisions are, on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Senior Lien Bonds Debt Service Fund or any account therein and from the Supplemental Reserve Fund, less than the aggregate amount of the deposits required by subdivisions (a) and (b) above, then prior to any transfer of funds from the Senior Lien Bonds Reserve Fund, the Trustee shall promptly give telephonic notice to the Agency of the amount of the insufficiency (which notice shall be confirmed in writing as soon as reasonably practicable); and, not later than the Business Day following its receipt of such notice, the Agency shall transfer to the Trustee the amount of such insufficiency from the following sources in the following order: first, from the Surplus Revenues

Fund, and then from any fund or account established pursuant to a Supplemental Indenture in which funds are available for such purpose, and finally from the Development Impact Fee Account. If the Revenues so transferred to the Trustee pursuant to the foregoing subdivisions are, on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Junior Lien Bonds Debt Service Fund or any account therein or from the Supplemental Reserve Fund, less than the aggregate amount of the deposits required by subdivision (c) above, then prior to any transfer of funds from the Junior Lien Bonds Reserve Fund, the Trustee shall promptly give telephonic notice to the Agency of the amount of the insufficiency (which notice shall be confirmed in writing as soon as reasonably practicable); and, not later than the Business Day following its receipt of such notice, the Agency shall transfer to the Trustee the amount of such insufficiency from the following sources in the following order: first, from the Surplus Revenues Fund, then from any fund or account established pursuant to a Supplemental Indenture in which funds are available for such purpose and finally from the Development Impact Fee Account. Any amount remaining on deposit in the Development Impact Fee Account at the close of business on each January 15 and July 15 may be withdrawn by the Agency and used for any lawful purpose of the Agency.

If the Revenues are at any time insufficient to make the deposits required by this Section, or at anytime, the Agency may, at its election, deposit with the Trustee funds from any available sources with the direction that such funds be deposited into the funds and accounts or specified funds and accounts held by the Trustee.

Section 4.3 Senior Lien Bonds Debt Service Fund and Certain Accounts. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Senior Lien Bonds Debt Service Fund” (the “Senior Lien Bonds Debt Service Fund”), which fund shall be held by the Trustee. There are hereby created in the Debt Service Fund separate accounts designated the “Senior Lien Bonds Capitalized Interest Account,” the “Senior Lien Bonds Interest Account,” the “Senior Lien Bonds Principal Account,” the “Capital Appreciation Bonds Sinking Account,” the “Senior Lien Bonds Prepayment Account” and the “Convertible Capital Appreciation Bonds Sinking Account.”

The Trustee shall deposit into these accounts such amounts as are specified in Sections 4.2, 4.5, 4.7, 4.8 and 4.13 and as are specified in any Supplemental Indenture and shall also deposit into such accounts and subaccounts such amounts as are received with instructions from the Agency to the Trustee to deposit such amounts into a specific account or subaccount.

The moneys in each of such accounts shall be held by the Trustee in trust for the benefit of the Senior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations applicable to the Senior Lien Bonds to the extent the foregoing are payable from such accounts, shall be applied as hereinafter provided with regard to each such account and, to said extent and pending such application, shall be subject to a lien and charge in favor of the Secured Owners of Senior Lien Bonds until paid out or transferred as hereinafter provided. Notwithstanding the foregoing, the amounts on deposit in the Capital Appreciation Bonds Sinking Account shall be subject to a lien and charge in favor of only the Secured Owners of the 1997 Bonds that are Capital Appreciation Bonds, and the amounts on deposit in the Convertible Capital Appreciation Bonds Sinking Account shall be subject to a lien and charge in favor of only the Secured Owners of the Restructured Bonds. There shall be withdrawn from the Senior Lien Bonds Interest Account (and, if the amount therein is insufficient, from the Senior Lien Bonds Capitalized Interest Account) and the Senior Lien Bonds Principal Account from time to time and set aside or deposited with the Paying Agent sufficient money for paying the interest (other than the Subordinated Senior Lien Interest) on and the principal

(except to the extent payable from the Capital Appreciation Bonds Sinking Account) of and premium on the Senior Lien Bonds and the amounts, if any, owed to each such Parity Swap Agreement Counterparty or in respect of such Reimbursement Obligations as the same shall fall due, except to the extent such interest, principal or other amounts are payable from a fund or account other than the Senior Lien Bonds Debt Service Fund as provided in any Supplemental Indenture.

The moneys in the Capital Appreciation Bonds Sinking Account shall be withdrawn therefrom and applied to the payment of the Accreted Amount of 1997 Bonds that are Capital Appreciation Bonds as the same shall become due or as otherwise provided in a Supplemental Indenture. Earnings derived from the investment of amounts on deposit in the Capital Appreciation Bonds Sinking Account shall be paid to the Agency following the payment of debt service on the Bonds on each January 15.

The moneys in the Senior Lien Bonds Prepayment Account shall be withdrawn therefrom and applied to the redemption of Senior Lien Bonds, or the purchase thereof in lieu of redemption, from time to time as specified in a certificate of an Authorized Agency Representative; and, to the extent provided in a Supplemental Indenture, the moneys in the Senior Lien Bonds Prepayment Account shall also be applied to repurchase of Term Rate Indebtedness in the event of a failed remarketing thereof.

The moneys in the Convertible Capital Appreciation Bonds Sinking Account shall be withdrawn therefrom and applied to the payment of interest on the Restructured Bonds as the same shall become due or as otherwise provided in a Supplemental Indenture. Earnings derived from the investment of amounts on deposit in the Convertible Capital Appreciation Bonds Sinking Account shall be paid to the Agency following the payment of debt service on the Bonds on each January 15.

Section 4.4 Junior Lien Bonds Debt Service Fund and Certain Accounts. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Junior Lien Bonds Debt Service Fund” (the “Junior Lien Bonds Debt Service Fund”), which fund shall be held by the Trustee. There are hereby created in the Debt Service Fund separate accounts designated the “Junior Lien Bonds Capitalized Interest Account,” the “Junior Lien Bonds Interest Account,” the “Junior Lien Bonds Principal Account,” and the “Junior Lien Bonds Prepayment Account.”

The Trustee shall deposit into these accounts such amounts as are specified in Sections 4.2, 4.6, 4.7, 4.8 and 4.13 and as are specified in any Supplemental Indenture and shall also deposit into such accounts and subaccounts such amounts as are received with instructions from the Agency to the Trustee to deposit such amounts into a specific account or subaccount.

The moneys in each of such accounts shall be held by the Trustee in trust for the benefit of the Junior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations applicable to the Junior Lien Bonds to the extent the foregoing are payable from such accounts, shall be applied as hereinafter provided with regard to each such account and, to said extent and pending such application, shall be subject to a lien and charge in favor of the Secured Owners of Junior Lien Bonds until paid out or transferred as hereinafter provided. There shall be withdrawn from the Junior Lien Bonds Interest Account (and, if the amount therein is insufficient, from the Junior Lien Bonds Capitalized Interest Account) and the Junior Lien Bonds Principal Account from time to time and set aside or deposited with the Paying Agent sufficient money for paying the interest on and the principal of and premium on the Junior Lien Bonds and the amounts, if any, owed to each such Parity

Swap Agreement Counterparty or in respect of such Reimbursement Obligations as the same shall fall due, except to the extent such interest, principal or other amounts are payable from a fund or account other than the Junior Lien Bonds Debt Service Fund as provided in any Supplemental Indenture.

The moneys in the Junior Lien Bonds Prepayment Account shall be withdrawn therefrom and applied to the redemption of Junior Lien Bonds, or the purchase thereof in lieu of redemption, from time to time as specified in a certificate of an Authorized Agency Representative; and, to the extent provided in a Supplemental Indenture, the moneys in the Prepayment Account shall also be applied to the repurchase of Term Rate Indebtedness in the event of a failed remarketing thereof.

Section 4.5 Senior Lien Bonds Reserve Fund. A special fund is hereby created and designated the San Joaquin Hills Transportation Corridor Agency Revenue Bonds Senior Lien Bonds Reserve Fund (the “Senior Lien Bonds Reserve Fund”), which fund shall be held by the Trustee. The Trustee shall deposit into the Senior Lien Bonds Reserve Fund such amounts as are specified in Sections 4.2 and 4.8 and such amounts as are received with instructions from an Authorized Agency Representative to so deposit said amounts. Moneys in the Senior Lien Bonds Reserve Fund shall be held by the Trustee in trust for the benefit of all Senior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations relating thereto and, but only to the extent hereinafter provided, for the benefit of the Outstanding 1993 Bonds; and said moneys shall be applied as hereinafter provided and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners of Senior Lien Bonds and, but only to the extent hereinafter provided, the owners of the Outstanding 1993 Bonds until paid out or transferred as hereinafter provided. Notwithstanding the foregoing, the Trustee shall establish such accounts in the Senior Lien Bonds Reserve Fund, for the purpose of investing moneys on deposit therein, as may from time to time be directed in writing by an Authorized Agency Representative.

In the event that the moneys on deposit in any account in the Senior Lien Bonds Debt Service Fund are insufficient, after any transfer of funds thereto from the Supplemental Reserve Fund required or permitted hereunder or any other source from which such transfers may be made, to pay the interest or principal coming due on the Senior Lien Bonds on any Interest Payment Date or the moneys on deposit in the applicable Series Credit Facility Fund are insufficient to pay, as it becomes due, any Reimbursement Obligation resulting from a draw on a Credit Facility to pay principal of or interest on Senior Lien Bonds and any obligation under a Parity Swap Agreement relating thereto, in each such case to the extent such interest or principal is payable from such account or such Reimbursement Obligation is payable from a Series Credit Facility Fund on parity therewith, the Trustee shall withdraw from the Senior Lien Bonds Reserve Fund and shall deposit to the credit of such account and/or each such Series Credit Facility Fund, as the case may be, an amount sufficient to remedy said deficiency (and if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of its deficiency), there to be available to principal of or interest on Senior Lien Bonds.

In the event that on December 31, 2032 the 1993 Trustee delivers to the Trustee a certificate to effect that the moneys then available under the 1993 Indenture for the payment of the principal of the Outstanding 1993 Bonds coming due and payable on January 1, 2033 are insufficient to make such payment and specifying the additional amount required in order to make such payment in full, the Trustee shall immediately withdraw from the Reserve Fund and transfer to the 1993 Trustee in immediately available funds the amount that the 1993 Trustee certified as being necessary to make the aforesaid payment.

Any earnings derived from the investment of money on deposit in the Senior Lien Bonds Reserve Fund shall be deemed to have been deposited by the Agency in the Revenue Fund and transferred to the Trustee pursuant to Section 4.2.

In the event that the Senior Lien Bonds Reserve Fund Requirement will be reduced upon the issuance of Refunding Bonds, then concurrently with the issuance of the Refunding Bonds and as directed in writing by an Authorized Agency Representative, the Trustee shall withdraw the amount of such reduction from the Senior Lien Bonds Reserve Fund and apply it to the redemption of the Bonds being refunded or as otherwise directed in writing by an Authorized Agency Representative. Except as otherwise provided in the immediately preceding sentence, amounts on deposit in the Senior Lien Bonds Reserve Fund at the close of business on January 15, 2016 and each January 15 thereafter in excess of the Senior Lien Bonds Reserve Fund Requirement (other than any earnings derived from the investment thereof that have not yet been deemed to have been transferred to the Revenue Fund) shall be transferred (i) first, to the Use and Occupancy Fund if and to the extent the amount then on deposit in the Use and Occupancy Fund is less than the Use and Occupancy Fund Requirement, (ii) then, to the extent not required to be so transferred, to the Supplemental Reserve Fund if and to the extent the amount then on deposit in the Supplemental Reserve Fund is less than the Supplemental Reserve Fund Requirement and (iii) and finally, to the extent not required to be so transferred, to the Surplus Revenues Fund.

The Senior Lien Bonds Reserve Fund Requirement may be satisfied, in whole or in part, with an insurance policy, surety bond, or letter of credit as hereinafter described.

An insurance policy or surety bond may be used to satisfy said requirement if it is issued to the Trustee, as trustee for the Secured Owners, by a company licensed to issue an insurance policy guaranteeing the timely payment of debt service on municipal bonds, the claims paying ability of which company shall be rated in its highest Rating Category by each Rating Agency which has assigned a rating both to any such Outstanding Senior Lien Bond and to such claims paying ability. The use of such insurance policy or surety bond shall be subject to the receipt by the Trustee of an opinion of counsel as to the due authorization, execution, delivery and enforceability of such instrument in accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

In order for a letter of credit to satisfy the aforesaid requirement it shall be an unconditional irrevocable letter of credit issued to the Trustee, as trustee for the Secured Owners, by a bank which has unsecured, uninsured and unguaranteed long term obligations rated in one of its three highest Rating Categories (but not less than the highest Rating Category to which the Senior Lien Bonds are then assigned) by each Rating Agency which has assigned a rating both to any Outstanding Senior Lien Bond and to such obligation. Any such letter of credit shall be payable in one or more draws upon presentation by the beneficiary of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal of or interest on such Senior Lien Bonds, which draw shall be payable within two days of presentation of the sight draft. In addition, such letter of credit shall be for a term not less than three years, the issuer thereof shall be required to notify the Trustee not later than thirty days prior to the stated expiration date of the letter of credit of such expiration, and the Trustee shall be required to make a full draw thereunder if such letter of credit has not been renewed or replaced at least two weeks prior to the expiration or termination thereof. The use of such a letter of credit shall be subject to the Trustee's receipt of one or more opinions of counsel as to the due authorization, execution, delivery and enforceability thereof in

accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

The Agency covenants that when all of the Outstanding 1993 Bonds have been paid in full, or when provision for such payment has been made as provided for in the 1993 Indenture, it will cause the 1993 Trustee to transfer or assign, as the case may be, to the Trustee all amounts then remaining on deposit in, and all insurance policies, surety bonds and letters of credit held by the 1993 Trustee for the benefit of, the "Senior Lien Bonds Reserve Fund" established pursuant to the 1993 Indenture.

Section 4.6 Junior Lien Bonds Reserve Fund. A special fund is hereby created and designated the San Joaquin Hills Transportation Corridor Agency Revenue Bonds Junior Lien Bonds Reserve Fund (the "Junior Lien Bonds Reserve Fund"), which fund shall be held by the Trustee. The Trustee shall deposit into the Junior Lien Bonds Reserve Fund such amounts as are specified in Sections 4.2 and 4.8 and such amounts as received with instructions from an Authorized Agency Representative to so deposit said amounts. Moneys in the Junior Lien Bonds Reserve Fund shall be held by the Trustee in trust for the benefit of all Restructured Bonds and all Junior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations relating thereto; and said moneys shall be applied as hereinafter provided and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners of the Junior Lien Bonds until paid out or transferred as hereinafter provided. Notwithstanding the foregoing, the Trustee shall establish such accounts in the Junior Lien Bonds Reserve Fund, for the purpose of investing moneys on deposit therein, as may from time to time be directed in writing by an Authorized Agency Representative.

In the event that the moneys on deposit in any account in the Junior Lien Bonds Debt Service Fund are insufficient, after any transfer of funds thereto from the Supplemental Reserve Fund required or permitted hereunder or any other source from which such transfers may be made, to pay the interest or principal coming due on the Junior Lien Bonds on any Interest Payment Date or the moneys on deposit in the applicable Series Credit Facility Fund are insufficient to pay, as it becomes due, any Reimbursement Obligation resulting from a draw on a Credit Facility to pay principal of or interest on Junior Lien Bonds and any obligation under a Parity Swap Agreement relating thereto, in each such case to the extent such interest or principal is payable from such account or such Reimbursement Obligation is payable from a Series Credit Facility Fund on parity therewith, the Trustee shall withdraw from the Junior Lien Bonds Reserve Fund and shall deposit to the credit of such account and/or each such Series Credit Facility Fund, as the case may be, an amount sufficient to remedy said deficiency (and if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of its deficiency), there to be available to principal of or interest on Junior Lien Bonds.

Any earnings derived from the investment of money on deposit in the Junior Lien Bonds Reserve Fund shall be deemed to have been deposited by the Agency in the Revenue Fund and transferred to the Trustee pursuant to Section 4.2.

In the event that the Junior Lien Bonds Reserve Fund Requirement will be reduced upon the issuance of Refunding Bonds, then concurrently with the issuance of the Refunding Bonds and as directed in writing by an Authorized Agency Representative, the Trustee shall withdraw the amount of such reduction from the Junior Lien Bonds Reserve Fund and apply it to the redemption of the Bonds being refunded or as otherwise directed in writing by an Authorized Agency Representative. Except as otherwise provided in the immediately preceding sentence, amounts on deposit in the

Junior Lien Bonds Reserve Fund at the close of business on January 15, 2016 and each January 15 thereafter in excess of the Junior Lien Bonds Reserve Fund Requirement (other than any earnings derived from the investment thereof that have not yet been deemed to have been transferred to the Revenue Fund) shall be transferred (i) first, to the Use and Occupancy Fund if and to the extent the amount then on deposit in the Use and Occupancy Fund is less than the Use and Occupancy Fund Requirement, (ii) then, to the extent not required to be so transferred, to the Supplemental Reserve Fund if and to the extent the amount then on deposit in the Supplemental Reserve Fund is less than the Supplemental Reserve Fund Requirement and (iii) and finally, to the extent not required to be so transferred, to the Surplus Revenues Fund.

The Junior Lien Bonds Reserve Fund Requirement may be satisfied, in whole or in part, with an insurance policy, surety bond, or letter of credit as hereinafter described.

An insurance policy or surety bond may be used to satisfy said requirement if it is issued to the Trustee, as trustee for the Secured Owners, by a company licensed to issue an insurance policy guaranteeing the timely payment of debt service on municipal bonds, the claims paying ability of which company shall be rated in its highest Rating Category by each Rating Agency which has assigned a rating both to any such Outstanding Junior Lien Bond and to such claims paying ability. The use of such insurance policy or surety bond shall be subject to the receipt by the Trustee of an opinion of counsel as to the due authorization, execution, delivery and enforceability of such instrument in accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

In order for a letter of credit to satisfy the aforesaid requirement it shall be an unconditional irrevocable letter of credit issued to the Trustee, as trustee for the Secured Owners, by a bank which has unsecured, uninsured and unguaranteed long term obligations rated in one of its three highest Rating Categories (but not less than the highest Rating Category to which the Junior Lien Bonds are then assigned) by each Rating Agency which has assigned a rating both to any Outstanding Junior Lien Bond and to such obligation. Any such letter of credit shall be payable in one or more draws upon presentation by the beneficiary of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal of or interest on such Junior Lien Bonds, which draw shall be payable within two days of presentation of the sight draft. In addition, such letter of credit shall be for a term not less than three years, the issuer thereof shall be required to notify the Trustee not later than thirty days prior to the stated expiration date of the letter of credit of such expiration, and the Trustee shall be required to make a full draw thereunder if such letter of credit has not been renewed or replaced at least two weeks prior to the expiration or termination thereof. The use of such a letter of credit shall be subject to the Trustee's receipt of one or more opinions of counsel as to the due authorization, execution, delivery and enforceability thereof in accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

Section 4.7 Use and Occupancy Fund. A special fund is hereby created and designated the San Joaquin Hills Transportation Corridor Agency Revenue Bonds Use and Occupancy Fund (the "Use and Occupancy Fund"), which fund shall be held by the Trustee. The Trustee shall deposit into the Use and Occupancy Fund such amounts as are specified in Sections 4.2 and 4.8, such amounts as may be transferred to it by the 1993 Trustee from the "Use and Occupancy Fund" established pursuant to the 1993 Indenture, and such amounts as are received with instructions from the Agency to so deposit said amounts. Moneys on deposit in the Use and Occupancy Fund may be withdrawn therefrom and applied as follows:

(a) Upon receipt of and in accordance with written instructions from an Authorized Agency Representative specifying the payee, the amount to be paid and the payment instructions, the Trustee shall apply amounts on deposit in the Use and Occupancy Fund to pay all or any part of the cost of reconstructing, restoring, repairing or rehabilitating a Facility or any portion thereof which has been destroyed or damaged by any cause other than ordinary and usual usage thereof. Each such written instruction shall be sufficient evidence to the Trustee of the facts stated therein, and the Trustee shall have no duty to confirm the accuracy of such facts.

(b) If the other amounts then available for transfer into the Senior Lien Bonds Debt Service Fund (including amounts on deposit in the Supplemental Reserve Fund, the Surplus Revenues Fund, the Development Impact Fee Account and the Senior Lien Bonds Reserve Fund) are insufficient to cause the amounts on deposit in the Senior Lien Bonds Interest Account, the Senior Lien Bonds Principal Account, the Convertible Capital Appreciation Bonds Sinking Account or the Capital Appreciation Bonds Sinking Account to equal the respective amounts required by Section 4.3, the Trustee shall withdraw from the Use and Occupancy Fund and transfer to such accounts the respective amounts necessary to cause the balances on deposit therein to equal the amounts required by Section 4.3 and, if the amounts available in the Use and Occupancy Fund is insufficient for such purposes, to the credit of each such account in proportion to the respective amount of its deficiency.

(c) If the other amounts then available for transfer into the Junior Lien Bonds Debt Service Fund (including amounts on deposit in the Supplemental Reserve Fund, the Surplus Revenues Fund, the Development Impact Fee Account and the Junior Lien Bonds Reserve Fund) are insufficient to cause the amounts on deposit in the Junior Lien Bonds Interest Account or the Junior Lien Bonds Principal Account to equal the respective amounts required by Section 4.4, the Trustee shall withdraw from the Use and Occupancy Fund and transfer to the Junior Lien Bonds Interest Account and the Junior Lien Bonds Principal Account the respective amounts necessary to cause the balances on deposit therein to equal the amounts required by Section 4.4 and, if the amounts available in the Use and Occupancy Fund is insufficient for such purposes, to the credit of each such account in proportion to its deficiency.

The Agency covenants that when all of the Outstanding 1993 Bonds have been paid in full, or when provision for such payment has been made as provided for in the 1993 Indenture, it will cause the 1993 Trustee to transfer or assign, as the case may be, to the Trustee all amounts then remaining on deposit in, and all insurance policies held by the 1993 Trustee for the benefit of, the "Use and Occupancy Fund" established pursuant to the 1993 Indenture.

Section 4.8 Surplus Revenues Fund. A special fund is hereby created and designated the "San Joaquin Hills Transportation Corridor Agency Revenue Bonds Surplus Revenues Fund" (the "Surplus Revenues Fund"), which fund shall be held by the Agency in trust for the benefit of the Bonds, the Parity Swap Agreements and the Reimbursement Obligations. The Agency shall deposit into this fund from Revenues such amounts as are specified in Section 4.2 as well as such amounts as are specified in any Supplemental Indenture and shall also deposit into such fund such amounts as are received by the Agency from time to time, to the extent such amounts are determined by the Agency to be appropriate for deposit into the Surplus Revenues Fund.

Moneys on deposit in the Surplus Revenues Fund shall be withdrawn therefrom and applied in the order of priority as follows and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners until paid out or transferred as hereinafter provided:

(a) If the other amounts then available for transfer into the Senior Lien Bonds Debt Service Fund (exclusive of amounts held in the Senior Lien Bonds Reserve Fund and the Use and Occupancy Fund) are insufficient to cause the amounts on deposit in the Senior Lien Bonds Debt Service Fund to equal the amount required by Section 4.3, the Agency shall withdraw from the Surplus Revenues Fund (prior to any withdrawal from the Senior Lien Bonds Reserve Fund or the Use and Occupancy Fund) and transfer to the Senior Lien Bonds Debt Service Fund the amount necessary to cause the balance on deposit therein to equal the amount so required;

(b) If the other amounts then available for transfer into the Junior Lien Bonds Debt Service Fund (exclusive of amounts held in the Junior Lien Bonds Reserve Fund and the Use and Occupancy Fund) are insufficient to cause the amounts on deposit in the Junior Lien Bonds Debt Service Fund to equal the amount required by Section 4.4, the Agency shall withdraw from the Surplus Revenues Fund (prior to any withdrawal from the Junior Lien Bonds Reserve Fund or the Use and Occupancy Fund) and transfer to the Junior Lien Bonds Debt Service Fund the amount necessary to cause the balance on deposit therein to equal the amount so required;

(c) If the amount on deposit in the Senior Lien Bonds Reserve Fund is less than the Senior Lien Bonds Reserve Fund Requirement, there shall be withdrawn from the Surplus Revenues Fund and transferred to the Trustee for deposit into the Senior Lien Bonds Reserve Fund the amount necessary to remedy such deficiency;

(d) If the amount on deposit in the Junior Lien Bonds Reserve Fund is less than the Junior Lien Bonds Reserve Fund Requirement, there shall be withdrawn from the Surplus Revenues Fund and transferred to the Trustee for deposit into the Junior Lien Bonds Reserve Fund the amount necessary to remedy such deficiency;

(e) If the amount on deposit in the Use and Occupancy Fund is less than the Use and Occupancy Fund Requirement, there shall be withdrawn from the Surplus Revenues Fund and transferred to the Trustee for deposit into the Use and Occupancy Fund the amount necessary to remedy such deficiency; and

(f) After all of the foregoing transfers have been completed, the Agency may use any amount on deposit in the Surplus Revenues Fund on the last Business Day of each month to prepay Current Expenses and/or withdraw any such amount from the Surplus Revenues Fund. Upon withdrawal from the Surplus Revenues Fund such funds shall cease to be Pledged Funds.

Section 4.9 Rebate Fund. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Rebate Fund” (the “Rebate Fund”) which is to be held by the Trustee. Absent an opinion of Bond Counsel that the exclusion from gross income for federal income tax purposes of interest on the applicable Bonds will not be adversely affected, the Agency shall cause to be deposited in each such account of the Rebate Fund such amounts as are required to be deposited therein pursuant to each Supplemental Indenture and the applicable Tax Certificate. All money at any time deposited in the Rebate Fund shall be held by the Trustee in trust, for payment to the United States Treasury.

Section 4.10 Moneys Held by Paying Agents in Trust; Unclaimed Moneys. All moneys which shall have been withdrawn from the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund and set aside or deposited with a Paying Agent for the purpose of paying any of the Bonds hereby secured, either at the maturity thereof or upon call for redemption, shall be

held in trust for the respective Owners of such Bonds. Subject to the escheat laws of the State, any moneys which shall be so set aside or deposited and which shall remain unclaimed by the holders of such Bonds for a period of one (1) year after the date on which such Bonds shall have become due and payable shall be paid to the Agency, and thereafter the holders of such Bonds shall look only to the Agency for payment; and the Agency shall be obligated to make such payment, but only to the extent of the amounts so received pursuant to this Section without any interest thereon and not from Pledged Funds, and the Paying Agents shall have no responsibility with respect to any of such moneys.

Section 4.11 Additional Funds and Accounts. The Agency may, by Supplemental Indenture, create additional funds and accounts under this Indenture and for such purposes as the Agency deems appropriate, including separate funds available only for specified Bonds or Series of Bonds; however, the Revenues shall, in all events, first be used to make the deposits set forth in paragraphs (a) through (f) of Section 4.2 hereof before any amounts of Revenues are used to fund any other funds or accounts.

Section 4.12 Additional Security. Except as otherwise provided or permitted herein, the Pledged Funds secure (a) all Senior Lien Bonds issued under the terms of this Indenture and all Parity Swap Agreements and Reimbursement Obligations relating thereto on an equal and ratable basis and (b) all Junior Lien Bonds issued under the terms of this Indenture and all Parity Swap Agreements and Reimbursement Obligations relating thereto on an equal and ratable basis. The Agency may, however, in its discretion, provide additional security or credit enhancement for specified Bonds or Series of Bonds or Parity Swap Agreements or Reimbursement Obligations with no obligation to provide such additional security or credit enhancement to other Bonds or Reimbursement Obligations, except that no additional security or credit enhancement shall be provided unless there shall have been first delivered to the Trustee an opinion of Bond Counsel that the exclusion from gross income of interest on the Bonds for federal income tax purposes will not be adversely affected thereby. Moreover, the Agency may provide in a Supplemental Indenture that Bonds issued thereunder are not secured, or are secured only in part or only under certain circumstances, by Pledged Funds.

Section 4.13 Supplemental Reserve Fund. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Supplemental Reserve Fund” (the “Supplemental Reserve Fund”), which fund shall be held by the Trustee. The Trustee shall deposit into the Supplemental Reserve Fund such amounts as are specified in the Section 4.2.

(a) During any period in which there are Outstanding 1993 Bonds, the provisions of this subsection (a) shall apply. Moneys in the Supplemental Reserve Fund shall be held by the Trustee in trust for benefit of the Bonds and the 1993 Bonds. Said moneys shall be applied as hereinafter provided; and, pending such application, such moneys shall be subject to a lien and charge in favor of the Secured Owners and the Owners of the 1993 Bonds until paid or transferred as hereinafter provided.

Moneys on deposit in the Supplemental Reserve Fund shall be withdrawn therefrom and transferred or applied by the Trustee for the following purposes in the following order of priority:

(i) the Trustee shall transfer to the 1993 Trustee an amount required by the 1993 Trustee to pay interest coming due on the 1993 Bonds on any interest payment date for the

1993 Bonds if the amount available for such purpose in the Senior Lien Bonds Interest Account of the Senior Lien Bonds Debt Service Fund established pursuant to the 1993 Indenture is insufficient for such purpose, all as set forth in a request from the 1993 Trustee;

(ii) the Trustee shall transfer to the 1993 Trustee an amount required by the 1993 Trustee to pay principal coming due on the 1993 Bonds on any principal payment date for the 1993 Bonds if the amount available for such purpose in the Senior Lien Bonds Principal Account of the Senior Lien Bonds Debt Service Fund established pursuant to the 1993 Indenture is insufficient for such purpose, all as set forth in a request from the 1993 Trustee;

(iii) in the event that the moneys on deposit in any account in the Debt Service Fund (other than the Junior Lien Interest Account (as defined in the 1997 Indenture)) are insufficient, after any transfer of funds thereto from the Surplus Revenues Fund required or permitted hereunder but prior to any transfer of funds thereto from the Reserve Fund required or permitted hereunder, to pay the interest coming due on the Bonds (other than Junior Lien Interest (as defined in the 1997 Indenture)) on any Interest Payment Date or the moneys on deposit in the applicable Series Credit Facility Fund are insufficient to pay, as it becomes due, any Reimbursement Obligation resulting from a draw on a Credit Facility to pay principal of or interest on Bonds and any obligation under a Parity Swap Agreement relating thereto, in each such case to the extent such interest or principal is payable from such account or such Reimbursement Obligation is payable from a Series Credit Facility Fund on parity therewith, the Trustee shall withdraw from the Supplemental Reserve Fund and shall deposit to the credit of such account and/or each such Series Credit Facility Fund, as the case may be, an amount sufficient to remedy said deficiency (and if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of its deficiency); and

(iv) in the event that the moneys on deposit in the Junior Lien Interest Account (as defined in the 1997 Indenture) of the Debt Service Fund are insufficient, after any transfer of funds thereto from the Surplus Revenues Fund required or permitted hereunder but prior to any transfer of funds thereto from the Reserve Fund required or permitted hereunder, to pay the Junior Lien Interest (as defined in the 1997 Indenture) coming due on the Restructured Bonds on any Interest Payment Date, the Trustee shall withdraw from the Supplemental Reserve Fund and shall deposit to the credit of the Junior Lien Interest Account an amount sufficient to remedy said deficiency.

Notwithstanding the foregoing, funds may be released from the Supplemental Reserve Fund at the request of the Agency and transferred to the Agency to pay for proposed revenue generating additions, enhancements or other improvements to the San Joaquin Hills Transportation Corridor, but only with the consents of the Bond Insurer, the Owners of a majority in Principal Obligation of the 1993 Bonds and the Owners of a majority in Principal Obligation of the Bonds.

Within 60 days of the end of each Fiscal Year, the Agency shall report to the Trustee and the Bond Insurer the balance remaining on deposit in the Supplemental Reserve Fund after accounting for the transfer of funds for any approved project as described above and after accounting for transfers described in Section 4.2 for such Fiscal Year. If such balance is not less than \$500,000 above the "Target Annual Toll Stabilization Amount" for such Fiscal Year shown in the Table 1 (such amount, as shown in Table 1, the "Target Amount"), then as soon as practicable, the Agency shall employ a Traffic Consultant to produce the projection of Tolls and shall complete the work necessary to produce Agency projections of other Revenues and Current Expenses needed to

determine if the sum of the balances then on deposit in the Reserve Fund and the Supplemental Reserve Fund plus Net Revenues estimated to be received by the Agency prior to January 15, 2028 (said sum, the “Projected Available Funds”) exceeds all debt service coming due on the Bonds prior to and including such date (“Debt Service Through January 15, 2028”). Promptly after completion of such projection and work, the Agency will deliver to the Trustee and the Bond Insurer a certificate from an Authorized Agency Representative setting forth the results thereof. If such certificate demonstrates that the Projected Available Funds do exceed Debt Service Through January 15, 2028, the Trustee shall transfer to the Prepayment Account of the Debt Service Fund to be applied to the redemption of Outstanding Series 1997A Current Interest Bonds maturing on January 15, 2028 an amount equal to the largest integral multiple of \$5,000 by which the aforesaid balance remaining on deposit in the Supplemental Reserve Fund exceeds the aforesaid Target Amount (or such lesser amount as may be permitted by the Bond Insurer).

Notwithstanding the foregoing, the amount required to be transferred to the Prepayment Account of the Debt Service Fund and applied to the redemption of Outstanding Series 1997A Current Interest Bonds maturing on January 15, 2028 may be reduced or eliminated altogether if the Trustee receives the written consent thereto of the Owners of a majority in Principal Obligation of the Series 1997A Current Interest Bonds maturing on January 15, 2028.

Table 1

Target Annual Toll Stabilization Amount

June 30, 2011	\$ 27,500,000
June 30, 2012	27,500,000
June 30, 2013	30,500,000
June 30, 2014	33,500,000
June 30, 2015	37,500,000
June 30, 2016	31,500,000
June 30, 2017	32,000,000
June 30, 2018	57,500,000
June 30, 2019	83,000,000
June 30, 2020	114,000,000
June 30, 2021	139,500,000
June 30, 2022	147,500,000
June 30, 2023	176,500,000
June 30, 2024	166,000,000
June 30, 2025	80,500,000
June 30, 2026	82,000,000

After all Series 1997A Current Interest Bonds maturing on January 15, 2028 have been paid, either at maturity or by earlier redemption, money on deposit in the Supplemental Reserve Fund may be used to redeem other Outstanding Bonds and the Outstanding 1993 Bonds subject to the consent of the Bond Insurer.

Amounts on deposit in the Supplemental Reserve Fund shall be invested in the same manner and with the same limitations as provided in Article VI with respect to amounts on deposit in the Reserve Fund.

Amounts on deposit in the Supplemental Reserve Fund in excess of the Supplemental Reserve Fund Requirement following any transfer to the Prepayment Account described above and the payment of principal of and interest on the Bonds and the 1993 Bonds shall be withdrawn therefrom and deposited to the credit of the Surplus Fund.

(b) During any period in which there are no Outstanding 1993 Bonds the provisions of this subsection (b) shall apply. Moneys in the Supplemental Reserve Fund shall be held by the Trustee in trust for benefit of the Secured Owners and applied as described below; and, pending such application, such moneys shall be subject to a lien and charge in favor of the Secured Owners.

If the Revenues transferred to the Trustee pursuant to Section 4.2, are on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Senior Lien Bonds Debt Service Fund or any account therein, less than the aggregate amount of the deposits required by subdivision (a) of Section 4.2, the Trustee shall transfer the aggregate amount of such deficiencies from the Supplemental Reserve Fund to the Senior Lien Bonds Interest Account, the Senior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of the foregoing to the extent set forth above), the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in subdivision (a) of Section 4.2.

If the Revenues transferred to the Trustee pursuant to Section 4.2, are on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Junior Lien Bonds Debt Service Fund or any account therein, less than the aggregate amount of the deposits required by subdivision (c) of Section 4.2, the Trustee shall transfer (after making any transfers described in the preceding paragraphs) the aggregate amount of such deficiencies from the Supplemental Reserve Fund to the Junior Lien Bonds Interest Account and the Junior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of the foregoing to the extent set forth above) and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in subdivision (c) of Section 4.2.

Section 4.14 Additional Moneys Not To Be Commingled. Whenever the Trustee receives moneys from the Agency (other than Revenues) accompanied by instructions from the Agency to deposit such moneys into a particular fund or account the Trustee shall establish a subaccount in said fund or account, shall deposit such moneys in said subaccount, and shall hold such moneys separate and apart from, and not commingle them with, any other moneys held in such fund or account.

ARTICLE V

COVENANTS OF THE AGENCY

Section 5.1 Payment of Principal, Premium and Interest. The Agency covenants and agrees that it will duly and punctually pay or cause to be paid from the Pledged Funds hereinabove described and to the extent thereof the principal of, premium, if any, and interest on every Bond at the place and on the dates and in the manner herein and in the Bonds specified, according to the true intent and meaning thereof, and that it will faithfully do and perform all covenants and agreements

herein and in the Bonds contained; and the Agency agrees that time is of the essence of this Indenture, provided that the Agency's obligation to make payment of the principal of, premium, if any, and interest on the Bonds shall be limited to payment from the Pledged Funds, the funds and accounts pledged therefor in the Granting Clause of this Indenture or in any Supplemental Indenture and any other source which the Agency may specifically provide for such purpose, and no Bond Owner shall have any right to force payment from any other funds of the Agency.

Section 5.2 Tolls. The Agency covenants that, for as long as it is permitted to do so pursuant to the Caltrans Agreement, prior to the commencement of each Fiscal Year it will fix and prescribe toll rates so that Adjusted Net Toll Revenues for such Fiscal Year are forecasted to be at least equal to: (i) 1.3 times Annual Debt Service on the Senior Lien Bonds and (ii) 1.1 times Annual Debt Service on all Bonds; and the Annual Operating Budget required to be adopted by the Agency for each Fiscal Year pursuant to Section 5.3 shall include a demonstration that said requirements will be satisfied for such Fiscal Year and shall also include the cash balances projected to remain in each of the funds established pursuant to this Indenture at the end of such Fiscal Year. However, the failure of toll rates to yield the amount described herein shall not be deemed to constitute an Event of Default so long as the Agency complies with the requirements of the succeeding paragraphs and is not otherwise in default under this Indenture.

Prior to January 31 of each Fiscal Year the Agency will cause its Chief Financial Officer to (i) review the Adjusted Net Toll Revenues received by it in the first half of such Fiscal Year and the Adjusted Net Toll Revenues that the Chief Financial Officer expects the Agency will receive in the second half of such Fiscal Year, (ii) determine whether the sum of those Adjusted Net Toll Revenues is less than 1.3 times Annual Debt Service on the Senior Lien Bonds or less than 1.1 times Annual Debt Service on all Bonds, in each case calculating Annual Debt Service without any adjustment thereto otherwise permitted pursuant to the provisions of subdivision (i) of the definition thereof, and (iii) if the Chief Financial Officer so determines, promptly notify the Board of such determination. As soon as reasonably practicable following the Board's receipt of any such notification, the Agency will retain a Traffic Consultant to provide it with a review of its current toll rate schedule, multiple possible toll rate schedules for at least the upcoming Fiscal Year, their respective impacts on transactions and toll revenues and recommended changes in toll rates to maximize toll revenues while minimizing negative long term impacts from traffic diversion resulting from potential toll increases. The Agency may adopt any of the Traffic Consultant's recommended toll rate schedules that are forecasted to produce Adjusted Net Toll Revenues (as projected by the Agency) for such upcoming Fiscal Year of at least 1.3 times Annual Debt Service on the Senior Lien Bonds and 1.1 times Annual Debt Service on all Bonds. If none of the Traffic Consultant's recommended toll rate schedules produce Adjusted Net Toll Revenues (as projected by the Agency) for such upcoming Fiscal Year of at least 1.3 times Annual Debt Service on the Senior Lien Bonds and 1.1 times Annual Debt Service on all Bonds, the Agency shall adopt the toll rate structure recommended by the Traffic Consultant that produces the maximum amount of Adjusted Net Toll Revenues unless either (i) the Agency both (x) identifies an alternative toll rate structure that the Traffic Consultant agrees will produce not less than 97.5% of the Adjusted Net Toll Revenues that the Traffic Consultant projects would be generated by the Traffic Consultant's recommended toll rate structure and (y) forecasts (and the Traffic Consultant concurs) that the Agency can generate at least the 2.5% difference from operating sources in addition to tolls themselves (including but not limited to account fees or violation fees and penalties) or (ii) both the Bond Insurer and the Owners of a majority in Principal Obligation of the Bonds consent to the adoption of an alternative toll rate schedule.

Within 60 days after the end of each Fiscal Year, commencing with Fiscal Year 2015-2016, the Agency will file with the Trustee a report setting forth the Enhanced Adjusted Net Toll Revenues for such Fiscal Year. If such report for any Fiscal Year indicates that the Enhanced Adjusted Net Toll Revenues for such Fiscal Year were less than either (i) 1.3 times Annual Debt Service on the Senior Lien Bonds or (ii) 1.1 times Annual Debt Service on all Bonds, then as soon as practicable after delivering such report to the Trustee, the Agency shall (i) notify each Bond Insurer and each Rating Agency of that fact and (ii) if the Agency has not already employed a Traffic Consultant to provide toll rate schedules for such Fiscal Year, employ a Traffic Consultant to review and analyze its toll rates and methods of operation and to submit to the Board, as soon as practicable (but not later than such date as will enable the Board to act upon it within 180 days after the end of the Fiscal Year), a written report which shall include the actions that the Traffic Consultant recommends should be taken by the Agency with respect to revising the toll rates, altering its methods of operation or taking other action projected to produce the amount so required in the following twelve month period (or, if less, the maximum amount deemed feasible by the Traffic Consultant) and that the Traffic Consultant estimates will not adversely affect the amount of Adjusted Net Toll Revenues. Promptly upon its receipt of such written report (and, in any case, within 180 days after the end of the Fiscal Year), after giving due consideration thereto, the Agency will revise the toll rates, as permitted by law, alter its methods of operation or take such other action as it deems appropriate. Such revisions, alterations or actions need not comply with the recommendations of the Traffic Consultant so long as Adjusted Net Toll Revenues projected by the Traffic Consultant to be produced by the revisions, alterations or actions then taken by the Agency are at least equal to the amount required hereinabove.

The Trustee shall have no responsibility to review any written report received pursuant to this Section.

The Agency further covenants that such toll rates for traffic using the Facilities will be established and maintained in a reasonable way to cover all traffic (other than Agency and Caltrans vehicles used for maintaining the Facilities; vehicles used by persons employed to operate and maintain the Toll collection equipment to drive to and from such equipment in connection with such operation and maintenance; police, fire, and other public emergency vehicles; buses owned and operated by the Orange County Transportation Authority; and vehicles in a public emergency declared by the Agency's Chief Executive Officer) consistent with the requirements hereof, but with such classifications as the Agency may deem appropriate; and provided further that nothing contained in this Section shall prevent the Agency from temporarily reducing or eliminating Tolls in connection with programs which it intends to use to increase Adjusted Net Toll Revenues.

The Agency also covenants to use its best efforts to extend the term of the Caltrans Agreement if necessary to provide for the payment of any Bonds that remain Outstanding after January 15, 2050.

Section 5.3 Annual Operating Budget. The Agency covenants that on or before the commencement of each Fiscal Year it will adopt the Annual Operating Budget for such Fiscal Year. On or before the 20th day of July in such Fiscal Year copies of the Annual Operating Budget shall be filed with the Trustee and the Bond Insurer. The Trustee shall have no responsibility to review the Annual Operating Budget.

If for any reason the Agency shall not have adopted the Annual Operating Budget before the first day of any Fiscal Year, the budget for the preceding Fiscal Year shall, until the adoption of the

Annual Operating Budget, be deemed to be in force and shall be treated as the Annual Operating Budget hereunder for such Fiscal Year.

The Agency may at any time adopt an amended or supplemental Annual Operating Budget for the remainder of the then current Fiscal Year. Copies of any such amended or supplemental Annual Operating Budget shall be filed with the Trustee.

Section 5.4 Use and Operation of Facilities. The Agency covenants that, to the maximum extent it is permitted by law to do so: (i) it will operate the Facilities owned by it in an efficient and economical manner, (ii) it will promptly notify Caltrans of any damage to or destruction of any of the Facilities owned by Caltrans of which the Board has actual knowledge, (iii) it will enforce the Caltrans Agreement, (iv) it will take no action with respect to any of the Facilities that would materially impair its ability to meet the requirements of the covenant set forth in Section 5.2 hereof, and (v) it will observe and perform all of the terms and conditions contained in the Act.

The Agency further covenants that in the event of damage to or destruction of all or any part of any Facilities it will use its best efforts to cause the Facilities or such part thereof to be repaired, restored or replaced so that the efficiency and value of the Facilities as a revenue producing toll road will not be impaired or in the alternative to redeem the Bonds then Outstanding.

Section 5.5 Payment of Lawful Charges. The Agency covenants that, except as otherwise permitted herein, it will not create or suffer to be created any lien or charge upon the Facilities owned by it or upon the Revenues except the lien and charge of the 1993 Bonds, the Bonds, the Parity Swap Agreements and the Reimbursement Obligations secured hereby upon such Revenues and the lien, if any, in favor of any Bank to secure the obligations of the Agency to such Bank under the applicable Reimbursement Agreement and related documents, and that, from such Revenues or other available funds, it will pay or cause to be discharged, or will make adequate provision to satisfy and discharge, within 60 days after the same shall accrue, all lawful claims and demands for labor, materials, supplies or other objects that, if unpaid, might by law become a lien upon the Facilities owned by it or the Revenues; provided however, that nothing in this Section shall require the Agency to pay or cause to be discharged, or make provision for, any such lien or charge so long as the validity thereof shall be contested in good faith.

Section 5.6 Construction or Maintenance Permitted from Other Funds. Notwithstanding any other provision of this Indenture, the Agency may permit the United States of America, the State or any of their respective agencies, departments or political subdivisions to pay all or any part of the cost of constructing, maintaining, repairing and operating the Facilities.

Section 5.7 Insurance. The Agency covenants that it will maintain or cause to be maintained a practical insurance program, with such reasonable terms, conditions, provisions and costs, as the Agency in its sole discretion determines will afford adequate insurance protection. The Agency shall provide insurance against loss caused by damage to or destruction of all or any part of any of the Facilities owned by it; comprehensive public liability insurance for bodily injury and property damage relating to any part of the Facilities owned by it and such other insurance as the Agency in its sole discretion may determine. All such insurance policies shall be carried with a responsible insurance company or companies authorized and qualified under State law or otherwise to assume the risks thereof or shall be provided under a self insurance program if and to the extent that such program provides coverage in the amounts and manner usually maintained in connection with facilities similar to that portion of the Facilities owned by the Agency and provided that such

program is, in the written opinion of an accredited actuary filed with the Trustee prior to the close of each Fiscal Year, actuarially sound.

All such policies shall be for the benefit of the 1993 Trustee, the Trustee and the Agency as their interests shall appear, shall be made payable to the 1993 Trustee, the Trustee and the Agency as their interests shall appear, and shall remain with the Agency.

Subject to the provisions of the 1993 Indenture and the rights of the 1993 Trustee, the Trustee shall have the sole right to receive the proceeds of physical loss insurance. Immediately upon receipt thereof the Trustee shall transfer to the Agency the proceeds of physical loss insurance for deposit in the Construction Fund. Proceeds so deposited to the credit of the Construction Fund shall be promptly applied to paying Costs incurred in repairing, restoring or replacing the Facilities or portion thereof with respect to which the insurance proceeds were received or shall be used to redeem Bonds (if such redemption is permitted by a Supplemental Indenture), as directed in writing by an Authorized Agency Representative.

Nothing contained herein shall be deemed or construed to prevent the Agency from maintaining policies of insurance in which other parties are named as dual obligee beneficiaries, provided that such other parties shall be limited to contractors constructing Special Projects and persons supplying toll collection and revenue management system equipment or facilities.

The Trustee shall have no responsibility for the sufficiency of insurance or the compliance of the Agency with this Section.

Section 5.8 Inspection of Insurance Policies. All insurance policies referred to in Section 5.7 shall be open at all reasonable times to inspection by the Trustee and the Bond Owners and their agents and representatives. The Agency covenants that it will take such action as may be necessary to demand, collect and sue for any insurance money that may become due and payable under any policy payable to the Agency or the Trustee.

Any appraisal or adjustment of any loss or damage under any policy payable to the Agency or the Trustee and any settlement or payment of indemnity under any such policy that may be agreed upon by the Agency and any insurer shall be evidenced by a certificate, signed by the Chair and the Chief Executive Officer of the Agency and filed with the Trustee.

Section 5.9 Accurate Records; Reports; Audits. The Agency and the Trustee shall each keep proper books of record and accounts containing complete and correct entries of all transactions made by it relating to the receipt, investment, disbursement, allocation and application of the moneys related to the Bonds, including moneys derived from, pledged to, or to be used to make payments on the Bonds. Such records shall specify the fund, account, or subaccount to which each contract or investment (or portion thereof) is to be allocated and shall set forth in the case of each investment security (i) its purchase price, (ii) identifying information, including par amount, coupon rate, and payment dates, (iii) the amount received at maturity or its sale price, as the case may be, including accrued interest, (iv) the amounts and dates of any payments made with respect thereto, and (v) the dates of acquisition and disposition or maturity. The Agency covenants that it will keep the funds, accounts and subaccounts established pursuant hereto separate from all other funds and accounts, if any, of the Agency and that it will keep an accurate record of the total cost of the Facilities, of the Revenues collected from the Facilities, of the number of toll transactions with respect to the Facilities, the Pledged Funds, and of the application of such Revenues and Pledged

Funds. Such records shall be open at all reasonable times to the inspection by the Trustee and the Secured Owners and their agents and representatives.

The Agency further covenants that promptly after the close of each Fiscal Year it will cause an audit to be made of its books and accounts relating to the Facilities for the preceding Fiscal Year by an independent firm of certified public accountants of recognized ability and standing to be chosen by the Agency. The Trustee shall make available to such accountants all its books and records pertaining to the Facilities. Each such audit report shall be prepared in accordance with generally accepted accounting principles and shall set forth in respect of the preceding Fiscal Year, the findings of such certified public accountants as to whether the moneys received by the Agency under the provisions of this Indenture during such Fiscal Year have been applied in accordance with the provisions of this Indenture, whether any obligations for Current Expenses were incurred in the preceding Fiscal Year in excess of the total amount provided for Current Expenses in the Annual Operating Budget for such Fiscal Year, whether the Tolls for the preceding Fiscal Year have exceeded or were less than the amount required for such Fiscal Year under the terms of Section 5.2, and whether any Event of Default has occurred and not been cured as of the end of such Fiscal Year of which such certified public accountants have knowledge. Such report and audit reports shall be open at all reasonable times to the inspection of the Secured Owners and their agents and representatives.

The Agency further covenants that it will cause any additional reports or audits relating to the Facilities to be made as required by law and that, as often as may be requested, it will furnish to the Trustee and the Secured Owners such other information concerning the Facilities or the operation thereof as any of them may reasonably request.

The cost of the reports and audits referred to in this Section shall be treated as a Current Expense.

Section 5.10 Covenant Against Sale or Encumbrance; Exceptions. The Agency covenants that, except as permitted in this Section, it will not sell or otherwise dispose of or, except upon the conditions and in the manner provided in Sections 2.9, 2.10, 2.11, 2.12 and 5.16, encumber the right to receive Revenues from or with respect to the Facilities or any part thereof. The Agency has, however, executed and delivered the 1993 Indenture and has transferred to Caltrans that portion of the Facilities required to be so transferred pursuant to the Caltrans Agreement (substantially all portions thereof which are roads, arterials, ramps, bridges and similar transportation facilities); and the Agency may in the future transfer to Caltrans or other public agencies all or portions of Special Projects, other than the right to receive Revenues from or with respect thereto. In addition, the Agency may, from time to time, sell or encumber for consideration not less than the fair market value thereof any machinery, fixtures, apparatus, tools, instruments or other movable property, equipment or materials acquired by it from the proceeds of the Bonds or from the Revenues provided that such actions do not impair the ability of the Agency to pay the principal of or interest or other amounts owing with respect to Bonds or any Parity Swap Agreements or Reimbursement Obligations. To the extent that they are not required to be deposited pursuant to the 1993 Indenture, the proceeds thereof shall be deposited to the credit of the Construction Fund or the Revenue Fund, as an Authorized Agency Representative may determine. Upon any disposition of property under the provisions of this Section, the Agency shall notify the Trustee of the property so sold and the amount, if any, and disposition of the proceeds thereof.

The Agency may lease, or grant easements, franchises or concessions for the use of, any part of the Facilities, provided that such actions do not impair the ability of the Agency to pay the principal of or interest or other amounts owing with respect to Bonds or any Parity Swap Agreements or Reimbursement Obligations; and To the extent that they are not required to be deposited pursuant to the 1993 Indenture, the net proceeds from any such lease, easement, franchise, or concession shall be deposited as earned to the credit of the Revenue Fund.

Nothing contained herein shall be deemed or construed to prevent the Agency from acquiring and encumbering toll collection and revenue management systems (including transponders) through a lease-purchase agreement, an installment purchase agreement or any other instrument providing for or relating to the financing of such acquisition.

Section 5.11 Performance of Covenants by Agency; Authority; Due Execution. The Agency covenants that it will faithfully perform at all times any and all covenants, undertakings, stipulations and provisions contained in this Indenture, in any and every Bond executed, authenticated and delivered hereunder and in all of its proceedings pertaining hereto. The Agency covenants that it is duly authorized under the Constitution and laws of the State, including particularly the Act, to enter into this Indenture, to issue the Bonds and pledge the Pledged Funds thereto and to the Parity Swap Agreements and the Reimbursement Obligations and that the Agency has not previously pledged such Pledged Funds to secure other obligations.

Section 5.12 Instruments of Further Assurance. The Agency covenants that it will do, execute, acknowledge and deliver, or cause to be done, executed, acknowledged and delivered, such Supplemental Indentures, and such further acts, instruments and transfers as the Trustee may reasonably request for the better assuring and confirming to the Trustee all and singular the rights and obligations of the Agency under and pursuant to this Indenture. The Agency shall, upon the reasonable request of the Trustee, from time to time execute and deliver such further instructions and take such further action as may be reasonable and as may be required to effectuate the purposes of this Indenture or any provisions hereof; provided, however, that no such instruments or actions shall pledge the full faith and credit or the taxing powers of the State or any public agency thereof.

Section 5.13 Receipt and Deposit of Cash Advances. The Agency covenants and agrees that, immediately upon receipt of cash advances representing deposits against future toll payments from users or potential users of Facilities, it will (i) deposit and hold such moneys in a special account, separate from other assets of the Agency, or cause such moneys to be deposited with and held by a bank or trust company (which may be the Trustee), (ii) invest such moneys only in Government Obligations or Permitted Investments of the type described in clause (a) of the definition of said term maturing within thirty (30) days from the date of the investment or in Permitted Investments of the type described in clause (c) of said definition and (iii) to the extent that they are not required to be deposited pursuant to the 1993 Indenture, promptly, and in any event within one Business Day after such deposits become Tolls, transfer or cause the transfer of moneys from such account for credit to the Revenue Fund. The Agency further covenants and agrees that it will not enter into any agreement pursuant to which cash advances received by any other person, business organization or governmental agency may be applied to the payment of Tolls unless such person, business organization or governmental agency, as the case may be, has agreed to take such actions as the Agency may determine are reasonably necessary to assure that the Agency will receive timely payment of such Tolls.

Section 5.14 Receipt and Deposit of Revenues - Revenue Fund. The Agency covenants and agrees that it will immediately upon receipt thereof transfer Revenues for credit to the Revenue Fund except as otherwise provided herein, and during such time as such Revenues are held by the Agency prior to transfer to the Revenue Fund, such Revenues will be impressed with a trust and held for the Secured Owners.

Section 5.15 No Inconsistent Action. The Agency covenants that no contract or contracts will be entered into or any action taken by the Agency which shall be inconsistent with the provisions of this Indenture.

Section 5.16 Other Obligations. The Agency covenants that it will not voluntarily create or cause to be created any debt, lien, pledge, assignment, encumbrance or any other charge having priority to the lien held by the Secured Owners of the Senior Lien Bonds and the Parity Swap Agreements and the Reimbursement Agreements relating thereto upon the Pledged Funds, or any part thereof, or on parity therewith or having a priority to the lien held by the Secured Owners of the Junior Lien Bonds and Parity Swap Agreements and Reimbursement Obligations relating thereto upon the Pledged Funds, or any part thereof, or on parity therewith, except in accordance with this Indenture. In connection with the foregoing, the Agency specifically covenants that, other than the Outstanding 1993 Bonds, no additional bonds or other obligations (other than obligations constituting Current Expenses) will be issued under or secured by the 1993 Indenture and that the Agency will not enter into any contract under the provisions of Section 2.12 of the 1993 Indenture if its obligations under such contract would be payable from or secured by a pledge of "Pledged Funds" as defined in the 1993 Indenture. The Agency may issue obligations on a subordinated basis provided that any such subordinated obligations issued by the Agency and payable from the Pledged Funds shall contain an express statement that such obligations are junior and subordinate in all respects to the Bonds, the Parity Swap Agreements and the Reimbursement Obligations as to lien on and source and security for payment from the Pledged Funds.

Section 5.17 Maintenance of Powers. The Agency covenants that it will at all times use its best efforts to maintain the powers, functions, duties and obligations now reposed on it pursuant to the Act and all other laws and will not at any time voluntarily do, suffer or permit any act or thing the effect of which would be to hinder, delay or imperil either the payment of the indebtedness evidenced by any of the Bonds or the performance or observance of any of the covenants herein contained.

Section 5.18 Limitation on Use of Surplus Revenues - Competing Facilities. The Agency covenants that it will not spend moneys withdrawn from the Surplus Revenues Fund to pay all or any portion of the cost of any transportation facility which would compete with the Facilities unless it shall have filed with the Trustee a Certificate of a Traffic Consultant to the effect that the existence of such competing transportation facility would not have a material adverse effect on the ability of the Facilities to generate the Adjusted Net Toll Revenues necessary to enable the Agency to comply with the provisions of Section 5.2.

Section 5.19 Development Impact Fees. The Agency covenants that, at least until the balance on deposit in the Reserve Fund has equaled or exceeded the Reserve Fund Requirement and for at least five consecutive Fiscal Years thereafter the Adjusted Net Toll Revenues have been at least equal to the amount specified in Section 5.2, (a) it will enforce the provisions of the Joint Exercise of Powers Agreement relating to the imposition and collection of Development Impact Fees; (b) it will not authorize or permit revisions or amendments to the Joint Powers Agreement or the ordinances of the Members adopted pursuant to Section 66484.3 of the California Government

Code, which revisions or amendments would have a material adverse impact on the financial condition of the Agency; and (c) it will not authorize or permit the elimination or a reduction in the rate of the Development Impact Fees in effect on the date of this Indenture except to the extent required by law; provided, that the Agency shall have the right to make nominal adjustments to the amount of the fee payable by a developer in connection with a grant of appeal or a settlement agreement between the Agency and such developer.

Section 5.20 Modifications of the 1993 Indenture. The Agency covenants that it will not modify or amend the 1993 Indenture in any respect unless it either files with the Trustee certificate executed by an Authorized Agency Representative to the effect that such modification or amendment is not materially adverse to the interests of the Bond Owners or complies with the provisions of Article X of this Indenture (treating such modification or amendment as if it were a modification of or an amendment to this Indenture).

Section 5.21 Modifications of the 1993 Use and Occupancy Fund. The Agency covenants that, to the maximum extent it may do so consistent with its obligations under the 1993 Indenture, it will satisfy the “Use and Occupancy Fund Requirement” (within the meaning of the 1993 Indenture) in a manner that does not adversely affect the interests of the Owners of the Bonds.

Section 5.22 Covenants of Agency Binding on Agency and Successors. All covenants, stipulations, obligations and agreements of the Agency contained in this Indenture shall be deemed to be covenants, stipulations, obligations and agreements of the Agency to the full extent authorized or permitted by law. If the powers or duties of the Agency shall hereafter be transferred by amendment of the Act or a new act or any provision of the Constitution or any other law of the State or in any other manner there shall be a successor to the Agency, and if such transfer shall relate to any matter or thing permitted or required to be done under this Indenture by the Agency then the entity that shall succeed to such powers or duties of the Agency shall act and be obligated in the place and stead of the Agency as in this Indenture provided, and all such covenants, stipulations, obligations and agreements shall be binding upon the successor or successors thereof from time to time and upon any officer, board, body or commission to whom or to which any power or duty affecting such covenants, stipulations, obligations and agreement shall be transferred by or in accordance with law.

Except as otherwise provided in this Indenture, all rights, powers and privileges conferred and duties and liabilities imposed upon the Agency by the provision of this Indenture shall be exercised or performed by the Agency or by such officers, board, body or commission as may be required by law to exercise such powers or to perform such duties.

Section 5.23 Indenture of Trust To Constitute a Contract. This Indenture is executed by the Agency for the benefit of the Secured Owners and constitutes a contract with the Secured Owners.

ARTICLE VI

INVESTMENTS

Moneys held in the funds and accounts created under this Indenture shall be invested and reinvested in Permitted Investments as directed by the Agency, subject to the restrictions set forth in this Article and in any Supplemental Indenture and subject to the investment restrictions imposed upon the Agency by the laws of the State. The Agency shall direct the Trustee with respect to the

investment of moneys held by the Trustee by written certificate of an Authorized Agency Representative. If the Agency fails to direct the investment of moneys as required by this Section, the Trustee shall invest such moneys held by it in a Permitted Investment of the type described in subparagraph (c) of the definition of Permitted Investments theretofore specified in a written direction from an Authorized Agency Representative or, in the absence of such specification, the Trustee shall hold such moneys uninvested. The Trustee shall be under no obligation to determine or inquire into the legality of any investment made at the direction of the Agency.

Except as otherwise provided in this paragraph, moneys on deposit in the Senior Lien Bonds Debt Service Fund and in the Junior Lien Bonds Debt Service Fund shall be invested only in (i) Government Obligations the maturities of which shall not extend beyond the time when funds will be needed therefrom to make payment on the Bonds, the Parity Swap Agreements and the Reimbursement Obligations, (ii) Permitted Investments described in subsection (c) of the definition of said term and (iii) any other Permitted Investment with respect to which the Rating Agency Condition is satisfied. The restriction set forth in the preceding sentence shall not be applicable to moneys in such funds (other than Eligible Funds (as defined in a Supplemental Indenture) set aside for the redemption of Bonds and moneys derived from a drawing under a Credit Facility, with respect to both of which such restriction shall always be applicable) at such times as one or more Credit Facilities and/or policies of bond insurance are in effect which assure the timely payment of the principal of and interest on all Outstanding Bonds if the Bank or Banks providing such Credit Facilities and/or the Bond Insurer or Bond Insurers providing such insurance policies, as the case may be, so agree in a written instrument filed with the Trustee. Investments in the Senior Lien Bonds Debt Service Fund and in the Junior Lien Bonds Debt Service Fund shall be sold or otherwise converted to cash by the Trustee as needed to make payment of principal, premium, if any, and interest on the Bonds, the Parity Swap Agreements and the Reimbursement Obligations, and the Trustee shall have no liability for the selection and liquidation of such investments or for any losses which may be incurred as a result thereof.

The maturities of investments in the Construction Fund shall not extend beyond the time when funds will be needed therefrom to pay Costs.

Without the written consent of the Bond Insurer, no moneys on deposit in the Reserve Fund shall be invested in Permitted Investments maturing more than five years after the purchase of the investment. Notwithstanding the foregoing, there shall be no limit on the maturity of an investment in the Reserve Fund if the Agency has entered into an agreement pursuant to which the Agency can, at its sole option, sell to liquidate such investment at par on each applicable Interest Payment Date, and if the entity to whom the Agency can so sell such investment has long-term unsecured, uninsured and unguaranteed obligations rated in one of its two highest long-term Rating Categories by each Rating Agency which has assigned a rating both to any such Outstanding Bond and to such obligation.

Except as otherwise provided herein or in a Supplemental Indenture, (i) investments of moneys in any fund or account shall be deemed at all times to be a part of such fund and shall be valued at the cost thereof (such valuation of investments in the Senior Lien Bonds Reserve Fund, the Junior Lien Bonds Reserve Fund and the Use and Occupancy Fund to occur on each January 15 commencing January 15, 2016), (ii) the interest accruing on and any profit realized from investment of moneys in any fund or account shall be credited to such fund or account, and (iii) any loss resulting from such investment shall be charged to the fund or account in which such investment is held. Notwithstanding the foregoing, if and to the extent so directed by an Authorized Agency

Representative, the interest accruing on and any profit realized from the investment of moneys in any fund or account, other than the Senior Lien Bonds Debt Service Fund and the Junior Lien Bonds Debt Service Fund, shall be credited to the Rebate Fund.

The Trustee shall furnish to the Agency monthly cash transaction statements which describe all investment transactions made by the Trustee pursuant to this Indenture. To the extent permitted by law, the Agency waives any right to receive brokerage confirmations of security transactions as they occur to the extent that such a right is conferred upon the Agency by regulations of the Comptroller of the currency or any other applicable regulatory agency. The Trustee, its parent, or any of its affiliates may act as sponsor, advisor or manager in connection with any investments made by the Trustee under this Indenture.

ARTICLE VII

DEFEASANCE

Bonds or portions thereof (such portions to be in integral multiples of the applicable authorized denomination) which have been paid in full or which are deemed to have been paid in full shall no longer be secured by or entitled to the benefits of this Indenture except for the purposes of payment from moneys or Defeasance Securities held by the Trustee or a Paying Agent for such purpose. When all Bonds and all Reimbursement Obligations relating thereto and all obligations under Parity Swap Agreements have been paid in full or are deemed to have been paid in full, and all other sums payable hereunder by the Agency, including all necessary and proper fees, compensation and expenses of the Trustee, the Registrar and the Paying Agent, have been paid or are duly provided for, then the right, title and interest of the Trustee in and to the Pledged Funds shall thereupon cease, terminate and become void, and thereupon the Trustee shall cancel, discharge and release this Indenture, shall execute, acknowledge and deliver to the Agency such instruments of satisfaction and discharge or release as shall be requisite to evidence such release and such satisfaction and discharge and shall assign and deliver to the Agency any property and Revenues at the time subject to this Indenture which may then be in the Trustee's possession, except funds or securities in which such funds are invested and held by the Trustee or the Paying Agents for payment of the principal of, premium, if any, and interest on the Bonds and all Reimbursement Obligations relating thereto and all obligations under Parity Swap Agreements.

A Bond shall be deemed to be paid within the meaning of this Article and for all purposes of this Indenture when (a) payment of the principal, interest and premium, if any, either (i) shall have been made or caused to be made in accordance with the term of the Bond and this Indenture or (ii) shall have been provided for by irrevocably depositing with the Trustee in trust and irrevocably setting aside exclusively for such payment, (1) moneys sufficient to make such payment and/or (2) non-callable, non-prepayable Defeasance Securities maturing as to principal and interest in such amounts and at such times as will insure the availability of sufficient moneys (as calculated by an independent certified public accountant or firm of independent certified public accountants) to make such payment, and (b) all necessary and proper fees, compensation and expenses of the Trustee, the Registrar and the Paying Agent pertaining to the Bonds with respect to which such deposit is made shall have been paid or provision made for the payment thereof. At such times as Bonds shall be deemed to be paid hereunder, such Bonds shall no longer be secured by or entitled to the benefits of this Indenture, except for the purposes of payment from such moneys or Defeasance Securities.

Notwithstanding the foregoing paragraph, no deposit pursuant thereto shall be deemed a payment of such Bonds until there has been delivered to the Trustee a written opinion of nationally recognized counsel experienced in bankruptcy matters that the use of the moneys or Defeasance Securities so deposited to make payments on the Bonds will not constitute a voidable preference under the United States Bankruptcy Code and until either (a) proper notice of redemption of such Bonds shall have been given in accordance with Section 3.3, or in the event such Bonds are not to be redeemed within the next succeeding 60 days, until the Agency shall have given the Trustee irrevocable instructions to notify, as soon as practicable, the holders of the Bonds in accordance with Section 3.3, that the deposit required by (a)(ii) above has been made with the Trustee and that such Bonds are deemed to have been paid in accordance with this Article and stating the maturity or redemption date upon which moneys are to be available for the payment of the principal of and the applicable redemption premium, if any, on such Bonds; or (b) the maturity of such Bonds. Moreover, no Bond the interest rate then applicable to which can change prior to the redemption thereof and no Bond with respect to which a Credit Facility is then in effect shall be deemed to be paid within the meaning of this Article unless the Trustee shall have received written confirmation from each Rating Agency that its rating will not be reduced or withdrawn as a result of the actions taken by the Agency pursuant to the provisions of this Article.

ARTICLE VIII

DEFAULTS AND REMEDIES

Section 8.1 Events of Default. Each of the following events shall constitute and is referred to in this Indenture as an “Event of Default”:

(a) a failure to pay the principal of or premium, if any, on any of the Bonds when the same shall become due and payable at maturity or upon redemption, provided that the failure to make such a payment with respect to a Junior Lien Bond shall not constitute an Event of Default with respect to the Senior Lien Bonds;

(b) a failure to pay any installment of interest on any of the Bonds when such interest shall become due and payable;

(c) a failure by the Agency to observe and perform any covenant, condition, agreement or provision (other than as specified in paragraphs (a) and (b) of this Section) contained in any of the Bonds or in this Indenture on the part of the Agency to be observed or performed (provided that if such covenant, condition, agreement or provision is applicable only to Senior Lien Bonds or only to Junior Lien Bonds then such failure shall constitute an Event of Default only with respect to Senior Lien Bonds or Junior Lien Bonds, as the case may be), which failure shall continue for a period of 60 days after written notice, specifying such failure and requesting that it be remedied, shall have been given to the Agency by the Trustee (which notice may be given at the discretion of the Trustee and shall be given at the written request of Owners of 25% or more of the Principal Obligation of the Senior Lien Bonds then Outstanding (provided that if such Event of Default relates only to Junior Lien Bonds then the written request of Owners of 25% or more of the Principal Obligation of the Junior Lien Bonds in question shall be sufficient for this purpose), unless the Trustee, or the Trustee and Owners of Bonds in a Principal Obligation not less than the Principal Obligation of Bonds the Owners of which requested such notice, shall agree in writing to an extension of such period prior to its expiration; provided, however, that the Trustee or the Trustee and the Owners of such Principal Obligation of Bonds shall be deemed to have agreed to an

extension of such period if corrective action is initiated by the Agency within such period and is being diligently pursued;

(d) the Agency's application for or consent to the appointment of a receiver, trustee, liquidator or custodian of the Agency or of all or a substantial part of its property or the Agency's commencement of a voluntary case or other proceeding seeking liquidation, reorganization or other such relief with respect to the Agency or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or the Agency's consent to any such relief or to the taking of possession of its property by another party in any such involuntary case or other proceeding commenced against it;

(e) a diversion or an attempted diversion by the Agency of any Pledged Funds for any use prior to the deposit thereof into the funds and accounts held by the Trustee under this Indenture, or the existence of a lien on or a charge against any Pledged Funds which lien or charge is prior to, or (except to the extent permitted by this Indenture) on parity with that granted to secure the Bonds, the Parity Swap Agreements and related Reimbursement Obligations, or a failure or cessation of the lien against any Pledged Funds to be a valid lien, except in each of the foregoing instances any such event affecting only a *de minimis* portion of Pledged Funds; or

(f) the occurrence of any other Event of Default as is provided in a Supplemental Indenture, provided that if such Supplemental Indenture establishes said Event of Default as one with respect to only Senior Lien Bonds or only Junior Lien Bonds then said occurrence shall constitute an Event of Default only with respect to Senior Lien Bonds or Junior Lien Bonds, as the case may be.

If, on any date on which payment of principal of, premium, if any, or interest on the Bonds is due, sufficient moneys are not available to make such payment, the Trustee shall give notice of such insufficiency to the Agency by facsimile transmission and in writing immediately thereafter.

For purposes of clarification, the payment of principal of, premium, if any, or interest on any of the Bonds by the Bond Insurer when the same shall become due and payable shall constitute an Event of Default.

Section 8.2 Remedies. Upon the occurrence and continuance of any Event of Default of the type described in clauses (a), (b) or (e) of Section 8.1 with respect to Senior Lien Bonds and the written direction of the Owners of not less than a majority of the Principal Obligation of the Senior Lien Bonds then Outstanding, or upon receipt by the Trustee of any notification as a result of which it is compelled to accelerate the indebtedness represented by any Bond, the Trustee shall, upon notice in writing to the Agency, declare the principal of all the Bonds then Outstanding, and the interest accrued thereon, as well as the Accreted Amount of Capital Appreciation Bonds and Convertible Capital Appreciation Bonds, to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable, anything in this Indenture or in the Bonds contained to the contrary notwithstanding. Upon the occurrence and continuance of any Event of Default of the type described in clause (d) of Section 8.1, all principal of all Bonds then Outstanding and the interest thereon shall, without notice, become immediately due and payable.

Any such declaration as a result of the occurrence of and Event of Default of the type described in clauses (a), (b) or, (e) of Section 8.1 with respect to Senior Lien Bonds is subject to the condition that if, at any time after such declaration and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, the Agency shall deposit with the

Trustee a sum sufficient to pay all the principal of and installments of interest on the Bonds the payment of which is overdue or the amount of the diverted Pledged Funds, as the case may be, with interest on such overdue principal at the rate borne by the respective Bonds (to the extent permitted by law), and the reasonable charges and expenses of the Trustee, and any and all other Events of Default known to the Trustee (other than in the payment of principal of and interest on the Bonds due and payable solely by reason of such declaration) shall have been made good or cured to the satisfaction of the Trustee or provision deemed by the Trustee to be adequate shall have been made therefor, then, and in every such case, the Trustee shall on behalf of the Owners of all Bonds rescind and annul such declaration and its consequences and waive such Event of Default; but no such rescission and annulment shall extend to or affect any subsequent Event of Default or shall impair or exhaust any right or power consequent thereon.

Upon the occurrence and continuance of any Event of Default, the Trustee in its discretion may (but not in any manner contrary to the written direction of the Owners of not less than a majority of the Principal Obligation of the Bonds with respect to which such Event of Default has occurred), and upon the written direction of the Owners of at least a majority of the Principal Obligation of the Senior Lien Bonds then Outstanding (provided that, if said Event of Default pertains only to the Junior Lien Bonds, then the written direction of the Owners of at least a majority of the Principal Obligation of the Junior Lien Bonds shall be sufficient) and receipt of indemnity to its satisfaction, shall, in its own name and as the trustee of an express trust (but subject to the limitations set forth in this Section):

(a) by mandamus, or other suit, action or proceeding at law or in equity, enforce all rights of the Owners of the Bonds with respect to which the Event of Default has occurred, and require the Agency to carry out any agreements with or for the benefit of said Owners and to perform its or their duties under the Act or any other law to which it is subject and this Indenture, provided that any such remedy may be taken only to the extent permitted under the applicable provisions of this Indenture;

(b) bring suit upon the Bonds with respect to which the Event of Default has occurred;

(c) commence an action or suit in equity to require the Agency to account as if it were the trustee of an express trust for the aforesaid Owners; or

(d) by action or suit in equity enjoin any acts or things which may be unlawful or in violation of the rights of the aforesaid Owners.

Notwithstanding the foregoing, neither the Trustee nor any Owner shall be entitled to establish or to compel the Agency to establish Tolls in excess of Tolls required to be established by the Agency pursuant to Section 5.2.

The Trustee shall be under no obligation to take any action with respect to any Event of Default unless the Trustee has actual knowledge of the occurrence of such Event of Default.

Upon the occurrence and continuation of any Event of Default of the type described in clause (a) or (b) of Section 8.1, in addition to the other remedies provided for in this Section, the Agency shall engage an independent firm of certified public accountants of recognized ability and standing to examine and report on the application of Revenues during each Fiscal Year in which such

default remains uncured. Such report shall be required to be presented to the Agency, the Trustee and the Bond Insurer within 120 days following the conclusion of any such Fiscal Year and must include the opinion of such firm as to whether the Revenues received in such Fiscal Year were applied in accordance with the Indenture.

Section 8.3 Restoration to Former Position. In the event that any proceeding taken by the Trustee to enforce any right under this Indenture shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee, then the Agency, the Trustee, and the Secured Owners of the Bonds with respect to which the Event of Default has occurred, shall be restored to their former positions and rights hereunder, respectively, and all rights, remedies and powers of the Trustee shall continue as though no such proceeding had been taken.

Section 8.4 Bond Owners' Right To Direct Proceedings. Anything in this Indenture to the contrary notwithstanding, except to the extent limited by a Supplemental Indenture relating to Senior Lien Bonds, Owners of a majority in Principal Obligation of the Senior Lien Bonds then Outstanding (or, if the Event of Default pertains only to Junior Lien Bonds, Owners of a majority in Principal Obligation of the Junior Lien Bonds) with respect to which the Event of Default has occurred shall have the right, at any time, by an instrument in writing executed and delivered to the Trustee, to direct the time, method and place of conducting all remedial proceedings available to the Trustee under this Indenture to be taken in connection with the enforcement of the terms of this Indenture or exercising any trust or power conferred on the Trustee by this Indenture; provided that such direction shall not be otherwise than in accordance with the provisions of the law and this Indenture and that there shall have been provided to the Trustee security and indemnity satisfactory to the Trustee against the costs, expenses and liabilities to be incurred as a result thereof by the Trustee.

Section 8.5 Limitation on Bond Owners' Right To Institute Proceedings. No Bond Owner shall have any right to institute any suit, action or proceeding in equity or at law for the execution of any trust or power hereunder, or any other remedy hereunder or on such Bonds, unless such Bond Owner or Bond Owners previously shall have given to the Trustee written notice of an Event of Default as hereinabove provided and unless also Owners of 25% or more of the Principal Obligation of the Bonds with respect to which the Event of Default has occurred then Outstanding as provided in the third paragraph of Section 8.2 shall have made written request of the Trustee so to do, after the right to institute such suit, action or proceeding under Section 8.2 shall have accrued, and shall have afforded the Trustee a reasonable opportunity to proceed to institute the same in either its or their name, and unless there also shall have been offered to the Trustee security and indemnity satisfactory to it against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall not have complied with such request within a reasonable time; and such notification, request and offer of indemnity are hereby declared in every such case, at the option of the Trustee, to be conditions precedent to the institution of such suit, action or proceeding; it being understood and intended that no one or more of the Bond Owners shall have any right in any manner whatever by his or their action to affect, disturb or prejudice the security of this Indenture, or to enforce any right hereunder or under the Bonds, except in the manner herein provided, and that all suits, actions and proceedings at law or in equity shall be instituted, had and maintained in the manner herein provided and for the equal benefit of all Owners of the Bonds with respect to which the Event of Default has occurred.

Section 8.6 No Impairment of Right To Enforce Payment. Notwithstanding any other provision in this Indenture, the right of any Bond Owner to receive payment of the principal of,

premium, if any, and interest on such Bond, on or after the respective due dates expressed therein and to the extent of the Pledged Funds (but subject to the application of the Pledged Funds in the order of priority set forth herein), or to institute suit for the enforcement of any such payment on or after such respective date, shall not be impaired or affected without the consent of such Bond Owner.

Section 8.7 Proceedings by Trustee Without Possession of Bonds. All rights of action under this Indenture or under any of the Bonds secured hereby which are enforceable by the Trustee may be enforced by it without the possession of any of the Bonds, or the production thereof at the trial or other proceedings relative thereto, and any such suit, action or proceeding instituted by the Trustee shall be brought in its name for the equal and ratable benefit of the Owners of the Bonds with respect to which the Event of Default has occurred, subject to the provisions of this Indenture.

Section 8.8 No Remedy Exclusive. No remedy herein conferred upon or reserved to the Trustee or to Secured Owners is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative, and shall be in addition to every other remedy given hereunder, or now or hereafter existing at law or in equity or by statute; provided, however, that any conditions set forth herein to the taking of any remedy to enforce the provisions of this Indenture or the Bonds shall also be conditions to seeking any remedies under any of the foregoing pursuant to this Section.

Section 8.9 No Waiver of Remedies. No delay or omission of the Trustee or of any Secured Owner to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default, or an acquiescence therein: and every power and remedy given by this Article to the Trustee and to the Secured Owners, respectively, may be exercised from time to time and as often as may be deemed expedient.

Section 8.10 Application of Moneys. Subject to the provisions of Section 8.13, any Pledged Funds held or received by the Trustee, by any receiver or by any Bond Owner pursuant to any right given or action taken under the provisions of this Article, after payment of the costs and expenses of the proceedings resulting in the collection of such moneys and of the fees, expenses and liabilities incurred by the Trustee in and about the performance of its powers and duties under this Indenture, shall be deposited and applied as follows (provided that moneys in the Senior Lien Bonds Debt Service Fund and the Senior Lien Bonds Reserve Fund shall not be applied to make payments with respect to the Junior Lien Bonds or Reimbursement Obligations or Parity Swap Agreements relating thereto, and provided further that moneys in the Junior Lien Bonds Debt Service Fund and the Junior Lien Bonds Reserve Fund shall not be applied to make payments with respect to Senior Lien Bonds or Reimbursement Obligations or Parity Swap Agreements relating thereto):

(a) If the principal of all the Bonds then Outstanding and the interest accrued thereon has been declared to be due and payable immediately pursuant to the first sentence of Section 8.2 (or, but for any legal prohibition on such declaration of acceleration, such principal and interest would have been declared to be due and payable immediately pursuant to the last sentence of Section 8.2 or the provisions of any applicable Reimbursement Agreement) and such declaration has not been rescinded and annulled, there shall be deposited:

(i) proportionately into (y) the Senior Lien Bonds Interest Account moneys sufficient to pay to the persons entitled thereto all installments of interest then due on the Senior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Senior Lien Bonds as well as interest due with respect to all

Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the weighted average rate per annum borne by the Senior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment, and (z) the Senior Lien Bonds Principal Account moneys sufficient to pay to the persons entitled thereto of the unpaid principal of any of the Senior Lien Bonds which shall have become due (or which but for any legal prohibition on such declaration of acceleration would have become due) (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay principal of Senior Lien Bonds) and, for such purposes, interest on Senior Lien Capital Appreciation Bonds and, during the applicable Accretion Period, on Senior Lien Convertible Capital Appreciation Bonds shall continue to be compounded and the Accreted Amount of any such Bond shall be deemed to be principal; and, if the amount available shall not be sufficient to pay in full the principal of all Senior Lien Bonds (and any such Reimbursement Obligation) due on any particular date, then to the payment ratably, according to the amount of principal due on such date, in each case to the persons entitled thereto, without any discrimination or privilege;

(ii) proportionately into (y) the Junior Lien Bonds Interest Account moneys sufficient to pay to the persons entitled thereto all installments of interest then due on the Junior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Junior Lien Bonds as well as interest due with respect to all Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the weighted average rate per annum borne by the Junior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment; and (z) the Junior Lien Bonds Principal Account moneys sufficient to pay to the persons entitled thereto of the unpaid principal of any of the Junior Lien Bonds which shall have become due (or which but for any legal prohibition on such declaration of acceleration would have become due) (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay principal of Junior Lien Bonds) with interest on such Junior Lien Bonds (and any such Reimbursement Obligation) at their respective rates from the respective dates upon which they became due and, if the amount available shall not be sufficient to pay in full the Junior Lien Bonds (and any such Reimbursement Obligation) due on any particular date, together with such interest, then to the payment ratably, according to the amount of principal and interest due on such date, in each case to the persons entitled thereto, without any discrimination or privilege; and

(iii) to the payment of any other Reimbursement Obligation and of any other amounts then owing pursuant to any Reimbursement Agreement pertaining to Bonds; and, after said deposit into the Debt Service Fund, there shall be paid the subordinated obligations issued or incurred by the Agency pursuant to Section 5.16, including the amounts necessary to reimburse the Bond Insurer in accordance with a Supplemental Indenture for amounts paid by the Bond Insurer under a Municipal Bond Insurance Policy or any related insurance agreement (to the extent such amounts have not been paid to the Bond Insurer on account of its subrogation rights).

(b) If the principal of all the Bonds then Outstanding and the interest accrued thereon has not been declared to be due and payable immediately pursuant to the first sentence of Section 8.2 (or deemed to be due and payable as contemplated in paragraph (a) above) or if such a declaration has been rescinded and annulled, then unless the Event of Default in question pertains

only to Junior Lien Bonds, there shall first be deposited into the Senior Lien Bonds Debt Service Fund moneys sufficient to pay the amounts described in clauses (i), (ii) and (iii) below, and all such moneys shall be applied (i) first, to the payment to the persons entitled thereto of all installments of interest then due on the Senior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Senior Lien Bonds as well as interest due with respect to all Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the rate per annum borne by the Senior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment; and (ii) second, to the payment to the persons entitled thereto of the unpaid principal of any of the Senior Lien Bonds which shall have become due (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay principal of Senior Lien Bonds) and, for such purposes, interest on Senior Lien Capital Appreciation Bonds and, during the applicable Accretion Period, on Senior Lien Convertible Capital Appreciation Bonds shall continue to be compounded and the Accreted Amount of any such Bond shall be deemed to be principal; and, if the amount available shall not be sufficient to pay in full the principal of all Senior Lien Bonds (and any such Reimbursement Obligation) due on any particular date, then to the payment ratably, according to the amount of principal due on such date, in each case to the persons entitled thereto, without any discrimination or privilege. Moneys remaining after satisfying the foregoing requirements, to the extent such requirements are applicable, shall be deposited into the Junior Lien Bonds Debt Service Fund and applied (i) first, to the payment to the persons entitled thereto of all installments of interest then due on the Junior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Junior Lien Bonds as well as interest due with respect to all Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the rate per annum borne by the Junior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment; (ii) second, to the payment to the persons entitled thereto of the unpaid principal of any of the Junior Lien Bonds which shall have become due (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay principal of Junior Lien Bonds) and, for such purposes, interest on Junior Lien Capital Appreciation Bonds and, during the applicable Accretion Period, on Junior Lien Convertible Capital Appreciation Bonds shall continue to be compounded and the Accreted Amount of any such Bond shall be deemed to be principal; and, if the amount available shall not be sufficient to pay in full the principal of all Junior Lien Bonds (and any such Reimbursement Obligation) due on any particular date, then to the payment ratably, according to the amount of principal due on such date, in each case to the persons entitled thereto, without any discrimination or privilege; and (iii) third, to the payment of any other Reimbursement Obligation and of any other amounts then owing pursuant to any Reimbursement Agreement pertaining to Junior Lien Bonds. Whenever moneys are to be applied pursuant to the provisions of this Section, such moneys shall be applied at such times, and from time to time, as the Trustee shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Trustee shall apply such funds, it shall fix the date (which shall be an Interest Payment Date unless it shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal and interest to be paid on such date shall cease to accrue. The Trustee shall give notice of the deposit with it of any such moneys and of the fixing of any such date by Mail to all Secured Owners of Bonds and related Parity Swap Agreements and Reimbursement Obligations with

respect to which the Event of Default occurred and shall not be required to make payment to any Bond Owner until such Bonds shall be presented to the Trustee for appropriate endorsement or for cancellation if fully paid..

Section 8.11 Severability of Remedies. It is the purpose and intention of this Article to provide rights and remedies to the Trustee and the Secured Owners which may be lawfully granted under the provisions of the Act and other applicable law, but should any right or remedy herein granted be held to be unlawful, the Trustee and the Secured Owners shall be entitled, as above set forth, to every other right and remedy provided in this Indenture and by applicable law.

Section 8.12 Additional and Other Events of Default and Remedies. So long as any particular Series of Bonds is Outstanding, the Events of Default and remedies as set forth in this Article may be supplemented with additional Events of Default and remedies as set forth in the Supplemental Indenture under which such Series of Bonds is issued. Additional Events of Default, not necessarily limited to the time any Series of Bonds are Outstanding, and other Events of Default intended to supersede, in whole or in part, the Events of Default set forth herein and remedies attendant thereon may likewise be added or provided for from time to time by Supplemental Indenture.

Section 8.13 Subordination (Junior Lien Bonds Subordinate to Senior Lien Bonds). Anything in this Indenture to the contrary notwithstanding, the indebtedness evidenced by the Junior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement related thereto) (such indebtedness being hereinafter referred to as “Junior Indebtedness”) shall be subordinated and junior in right of payment, to the extent and in the manner hereinafter set forth, to all principal of, premium, if any, and interest on the Senior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement related thereto) and any refinancings, refundings, deferrals, renewals, modifications or extensions thereof (such indebtedness being hereinafter referred to as “Senior Indebtedness”).

The Agency will not, directly or indirectly, make or agree to make, and neither the Secured Owner of any Junior Indebtedness nor any assignee or successor thereof will demand, accept or receive, (a) any payment (in cash, property or securities by set-off or otherwise), direct or indirect, of or on account of any principal, premium, if any, or interest in respect of any Junior Indebtedness, or (b) any payment for the purpose of any redemption, purchase or other acquisition, direct or indirect, of any Junior Indebtedness, and no such payment shall be due, except as specifically set forth in this Indenture and any Supplemental Indenture governing such Junior Indebtedness.

In the event of (i) any insolvency, bankruptcy, receivership, liquidation, reorganization, readjustment, composition or other similar proceeding relating to the Agency or its property, (ii) any proceeding for the liquidation, dissolution or other winding-up of the Agency, voluntary or involuntary, and whether or not involving insolvency or bankruptcy proceedings, (iii) any assignment for the benefit of creditors, or (iv) any distribution, division, marshaling or application of any of the properties or assets of the Agency or the proceeds thereof to creditors, voluntary or involuntary, and whether or not involving legal proceedings, then and in any such event, except as otherwise provided in the preceding paragraph:

(a) all Senior Indebtedness shall first be paid in full (including all principal, premium, if any, and interest, including interest accruing after the commencement of any such proceeding) before any payment or distribution of any character, whether in cash, securities or other property shall be made in respect of any Junior Indebtedness;

(b) all principal or premium, if any, and interest on the Junior Indebtedness shall forthwith become due and payable, and any payment or distribution of any character, whether in cash, securities or other property, which would otherwise (but for the terms hereof) be payable or deliverable in respect of any Junior Indebtedness, shall be paid or delivered directly to the Secured Owners of the Senior Indebtedness, for application to the payment of the Senior Indebtedness, until all Senior Indebtedness shall have been paid in full, and the Secured Owners of the Junior Indebtedness at the time Outstanding irrevocably authorize, empower and direct all receivers, trustees, liquidators, conservators, fiscal agents and others having authority in the premises to effect all such payments and deliveries; and

(c) to the maximum extent permitted by law, each Secured Owner of the Junior Indebtedness at the time Outstanding irrevocably authorizes and empowers each Secured Owner of the Senior Indebtedness (without imposing any obligation on any Secured Owner of the Senior Indebtedness or such Secured Owner's representative) to demand, sue for, collect and receive such Secured Owner's ratable share of all such payments and distributions and to receipt therefor, and to file and prove all claims therefor and take all such other action (including the right to vote the Junior Indebtedness) in the name of such Secured Owner or otherwise, as such Secured Owner of the Senior Indebtedness or such Secured Owner's representative may determine to be necessary or appropriate for the enforcement of this paragraph.

For all purposes of this Indenture, Senior Indebtedness shall not be deemed to have been paid in full unless the Secured Owners thereof shall have received cash equal to the amount of principal, premium, if any, and interest in respect of all Senior Indebtedness at the time Outstanding.

If any payment or distribution of any character, whether in cash, securities or other property, shall be received by any Secured Owner of any of the Junior Indebtedness, or such Secured Owner's representative, in contravention of any of the terms of this Indenture, such payment or distribution or security shall be held in trust for the benefit of, and shall be paid over or delivered and transferred to, the Secured Owners of the Senior Indebtedness or such Secured Owners' representative or representatives for application to the payment of all Senior Indebtedness remaining unpaid, to the extent necessary to pay all such Senior Indebtedness in full. Notwithstanding the foregoing, a Secured Owner of Junior Indebtedness may assume that payments received hereunder are in compliance with the terms of this Indenture unless such Secured Owner has actual knowledge that such payments are in contravention of the terms of this Indenture.

In case cash, securities or other property otherwise payable or deliverable to the Secured Owners of the Junior Indebtedness shall have been applied pursuant to this Section to the payment of Senior Indebtedness in full, then and in each such case, the Secured Owners of the Junior Indebtedness shall be subrogated to any rights of any Secured Owners of Senior Indebtedness to receive any further payments or distributions in respect of or applicable to the Senior Indebtedness.

The terms of this Section shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any Senior Indebtedness is rescinded, annulled or must otherwise be returned by any Secured Owner of Senior Indebtedness or such Secured Owner's representative, upon the insolvency, bankruptcy or reorganization of the Agency or otherwise, all as though such payment has not been made.

Section 8.14 Subordination (Subordinated Obligations Subordinated to Senior and Junior Lien Bonds). Anything in this Indenture to the contrary notwithstanding, the indebtedness

issued pursuant to Section 5.16 (including, without limitation, payments under the Parity Swap Agreement which are subordinated) (such indebtedness being hereinafter referred to as “Subordinated Indebtedness”) shall be subordinated and junior in right of payment, to the extent and in the manner hereinafter set forth, to all principal of, premium, if any, and interest on the Senior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement (except as otherwise provided therein) related thereto) and to all principal of, premium, if any, and interest on the Junior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement related thereto) and any refinancings, refundings, deferrals, renewals, modifications or extensions thereof (such indebtedness being hereinafter referred to as “Superior Indebtedness”).

The Agency will not, directly or indirectly, make or agree to make, and neither the holder of any Subordinated Indebtedness nor any assignee or successor thereof will demand, accept or receive, (a) any payment (in cash, property or securities by set-off or otherwise), direct or indirect, of or on account of any principal, premium, if any, or interest in respect of any Subordinated Indebtedness, or (b) any payment for the purpose of any redemption, purchase or other acquisition, direct or indirect, of any Subordinated Indebtedness, and no such payment shall be due, except as specifically set forth in this Indenture and any Supplemental Indenture governing such Subordinated Indebtedness.

In the event of (i) any insolvency, bankruptcy, receivership, liquidation, reorganization, readjustment, composition or other similar proceeding relating to the Agency or its property, (ii) any proceeding for the liquidation, dissolution or other winding-up of the Agency, voluntary or involuntary, and whether or not involving insolvency or bankruptcy proceedings, (iii) any assignment for the benefit of creditors, or (iv) any distribution, division, marshaling or application of any of the properties or assets of the Agency or the proceeds thereof to creditors, voluntary or involuntary, and whether or not involving legal proceedings, then and in any such event, except as otherwise provided in the preceding paragraph:

(a) all Superior Indebtedness shall first be paid in full (including all principal, premium, if any, and interest, including interest accruing after the commencement of any such proceeding) before any payment or distribution of any character, whether in cash, securities or other property shall be made in respect of any Subordinated Indebtedness;

(b) all principal or premium, if any, and interest on the Subordinated Indebtedness shall forthwith become due and payable, and any payment or distribution of any character, whether in cash, securities or other property, which would otherwise (but for the terms hereof) be payable or deliverable in respect of any Subordinated Indebtedness, shall be paid or delivered directly to the holders of the Superior Indebtedness, for application to the payment of the Superior Indebtedness, until all Superior Indebtedness shall have been paid in full, and the holders of the Subordinated Indebtedness at the time Outstanding irrevocably authorize, empower and direct all receivers, trustees, liquidators, conservators, fiscal agents and others having authority in the premises to effect all such payments and deliveries; and

(c) to the maximum extent permitted by law, each holder of the Subordinated Indebtedness at the time Outstanding irrevocably authorizes and empowers each holder of the Superior Indebtedness (without imposing any obligation on any holder of the Superior Indebtedness or such holder’s representative) to demand, sue for, collect and receive such holder’s ratable share of all such payments and distributions and to receipt therefor, and to file and prove all claims therefor and take all such other action (including the right to vote the Subordinated Indebtedness) in the name

of such holder or otherwise, as such holder of the Superior Indebtedness or such holder's representative may determine to be necessary or appropriate for the enforcement of this paragraph.

For all purposes of this Indenture, Superior Indebtedness shall not be deemed to have been paid in full unless the holders thereof shall have received cash equal to the amount of principal, premium, if any, and interest in respect of all Superior Indebtedness at the time Outstanding.

If any payment or distribution of any character, whether in cash, securities or other property, shall be received by any holder of any of the Subordinated Indebtedness, or such holder's representative, in contravention of any of the terms of this Indenture, such payment or distribution or security shall be held in trust for the benefit of, and shall be paid over or delivered and transferred to, the holders of the Superior Indebtedness or such holders' representative or representatives for application to the payment of all Superior Indebtedness remaining unpaid, to the extent necessary to pay all such Superior Indebtedness in full. Notwithstanding the foregoing, a holder of Subordinated Indebtedness may assume that payments received hereunder are in compliance with the terms of this Indenture unless such holder has actual knowledge that such payments are in contravention of the terms of this Indenture.

In case cash, securities or other property otherwise payable or deliverable to the holders of the Subordinated Indebtedness shall have been applied pursuant to this Section to the payment of Superior Indebtedness in full, then and in each such case, the holders of the Subordinated Indebtedness shall be subrogated to any rights of any holders of Superior Indebtedness to receive any further payments or distributions in respect of or applicable to the Superior Indebtedness.

The terms of this Section shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any Superior Indebtedness is rescinded, annulled or must otherwise be returned by any holder of Superior Indebtedness or such holder's representative, upon the insolvency, bankruptcy or reorganization of the Agency or otherwise, all as though such payment has not been made.

ARTICLE IX

TRUSTEE, PAYING AGENT AND CO PAYING AGENTS; REGISTRAR

Section 9.1 Acceptance of Trusts. The Trustee hereby accepts and agrees to execute the trusts specifically imposed upon it by this Indenture, but only upon the additional terms set forth in this Article, to all of which the Agency agrees and the respective Secured Owners agree by their acceptance of delivery of any of the Bonds.

Section 9.2 Duties of Trustee. If an Event of Default has occurred and is continuing, the Trustee shall exercise its rights and powers and use the same degree of care and skill in their exercise as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs. Upon the occurrence and continuance of any Event of Default described in clauses (a) or (b) of Section 8.1 the Trustee shall, and upon the occurrence and continuance of any other Event of Default, the Trustee may (and upon the written direction of the Agency or the Owners of not less than 25% of the Principal Obligation of either the Senior Lien Bonds or the Junior Lien Bonds, shall) appoint a co-trustee to represent the interests of the owners of the Junior Lien Bonds.

Except during the continuance of an Event of Default,

(i) the Trustee need perform only those duties that are specifically set forth in this Indenture and no others, and

(ii) in the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture. However, the Trustee shall examine the certificates and opinions to determine whether they conform to the requirements of this Indenture.

The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

(i) this paragraph does not limit the effect of the preceding paragraph of this Section;

(ii) the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer unless it is proved that the Trustee was negligent in ascertaining the pertinent facts;

(iii) the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it from Secured Owners or the Agency in the manner provided in this Indenture; and

(iv) no provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

Every provision of this Indenture that in any way relates to the Trustee is subject to all the paragraphs of this Section. The Trustee may, unless such right is restricted by Supplemental Indenture, refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against any loss, liability or expense. The Trustee shall not be liable for interest on any cash held by it except as the Trustee may agree with the Agency.

Section 9.3 Rights of Trustee. Subject to the foregoing Section the Trustee may rely on any document believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document. Before the Trustee acts or refrains from acting, it may require a certificate of an Authorized Agency Representative or a written opinion of counsel (who may be counsel of or to the Agency). The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on the certificate or the opinion of counsel. The Trustee may act through agents or co-trustees and shall not be responsible for the misconduct or negligence of any agent or co-trustee which has been appointed with due care and approved by the Agency.

The Trustee shall not be liable to the parties hereto or deemed in breach or default hereunder if and to the extent its performance hereunder is prevented by reason of force majeure. The term “force majeure” means an occurrence that is beyond the control of the Trustee and could not have

been avoided by exercising due care. Force majeure shall include but not be limited to acts of God, terrorism, war, riots, strikes, fire, floods, earthquakes, epidemics or other similar occurrences.

The permissive right of the Trustee to do things enumerated in this Indenture shall not be construed as a duty, and it shall not be answerable for other than its negligence or willful misconduct.

The Trustee shall not be responsible for or accountable to anyone for the subsequent use or application of any moneys which shall be released or withdrawn in accordance with the provisions hereof.

The Trustee shall not be liable in connection with the performance of its duties hereunder except for its own negligence or willful misconduct.

The Trustee may consult with counsel, who may be counsel to the Agency, with regard to legal questions; and the opinion of such counsel shall be full and complete authorization and protection in respect of any action taken or suffered by it hereunder in good faith and in accordance therewith.

The Trustee's rights to immunities and protection from liability hereunder and its rights to payment of its fees and expenses shall survive its resignation or removal and final payment or defeasance of the Bonds. All indemnifications and releases from liability granted herein to the Trustee shall extend to the directors, officers, employees and agents of the Trustee.

The Trustee shall not be deemed to have knowledge of any Event of Default of the type described in Section 8.1(c), (d), (e) or (f) unless and until it shall have actual knowledge thereof by receipt of written notice thereof at its Principal Office.

Whenever in the administration of the trusts imposed upon it by this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a certificate of the Agency, and such certificate shall be full warrant to the Trustee for any action taken or suffered in good faith under the provisions of the Indenture in reliance upon such certificate, but in its discretion the Trustee may, in lieu thereof, accept other evidence of such matter or may require such additional evidence as it may deem reasonable.

Section 9.4 Individual Rights of Trustee. The Trustee in its individual or any other capacity may become the owner or pledgee of Bonds and may otherwise deal with the Agency with the same rights it would have if it were not Trustee. Any paying agent or other agent may do the same with like rights.

Section 9.5 Trustee's Disclaimer. The Trustee makes no representation as to the validity or adequacy of this Indenture or the Bonds, it shall not be accountable for the Agency's use of the proceeds from the Bonds paid to the Agency and it shall not be responsible for any statement in the Bonds other than its certificate of authentication. The Trustee shall have no responsibility or liability with respect to any information, statements or recitals in any official statement, offering memorandum or other disclosure material prepared or distributed in connection with the issuance of Bonds.

Section 9.6 Notice of Defaults. If an event occurs which with the giving of notice or lapse of time or both would be an Event of Default, and if the event is continuing and if it is actually known to the Trustee, the Trustee shall mail to each Secured Owner with respect to which such Event of Default pertains notice of the event within 90 days after it occurs. Except in the case of a default in payment or purchase on any Bonds, the Trustee may withhold the notice if and so long as a committee of its Responsible Officers in good faith determines that withholding the notice is in the interests of the affected Secured Owners.

Section 9.7 Compensation of Trustee. For acting under this Indenture, the Trustee shall be entitled to payment of fees for its services and reimbursement of advances, counsel fees and other expenses reasonably and necessarily made or incurred by the Trustee in connection with its services under this Indenture, in accordance with a letter proposal approved by the Agency from time to time. If the Trustee renders any service not provided for in this Indenture, or the Trustee is made a party to or intervenes in any litigation pertaining to this Indenture, or institutes interpleader proceedings relative hereto or thereto, or if the Trustee has to render services hereunder in connection with an Event of Default, the Trustee shall be compensated reasonably by the Agency for such extraordinary services and reimbursed for any and all claims, liabilities, losses, damages, fines, penalties, and expenses, including out-of-pocket and incidental expenses and legal fees occasioned thereby.

Section 9.8 Eligibility of Trustee. This Indenture shall always have a Trustee that is a trust company, a national banking association or a bank having the powers of a trust company and is organized and doing business under the laws of the United States or any state or the District of Columbia, is subject to supervision or examination by United States, state or District of Columbia authority and has a combined capital and surplus of at least \$100,000,000 as set forth in its most recent published annual report of condition.

Section 9.9 Replacement of Trustee. The Trustee may resign by notifying the Agency in writing at least 60 days prior to the proposed effective date of the resignation. The Owners of a majority in Principal Obligation of the Bonds may remove the Trustee upon 30 days' prior written notice to the Trustee and the Agency and may appoint a successor Trustee with the Agency's consent. The Agency may remove the Trustee at any time and with or without cause by notice in writing delivered to the Trustee 60 days prior to the proposed removal date; provided, however, that the Agency shall have no right to remove the Trustee during any time when an Event of Default has occurred and is continuing. Notwithstanding the foregoing, the Trustee shall not be substituted without a written confirmation from each Rating Agency to the effect that such substitution will not cause the withdrawal or reduction of such rating.

No resignation or removal of the Trustee under this Section shall be effective until a new Trustee has taken office.

If the Trustee resigns or is removed or for any reason is unable or unwilling to perform its duties under this Indenture, the Agency shall promptly appoint a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Agency. Immediately thereafter, the retiring Trustee shall transfer, in strict compliance with the terms thereof, all property held by it as Trustee to the successor Trustee (including, but not limited to, any Credit Facility then in effect), and the resignation or removal of the retiring Trustee shall then (but only then) become effective and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture.

If a successor Trustee does not take office within 60 days after the retiring Trustee delivers notice of resignation or the Agency delivers notice of removal, the retiring Trustee, the Agency or the holders of a majority in Principal Obligation of the Bonds may petition any court of competent jurisdiction for the appointment of a successor Trustee.

Section 9.10 Successor Trustee or Agent by Merger. If the Trustee, any Paying Agent or Registrar consolidates with, merges or converts into, or transfers all or substantially all its assets (or, in the case of a bank or trust company, its corporate trust assets) to, another national banking association, bank, or corporation, the resulting, surviving or transferee national banking association, bank, or corporation without any further act shall be the successor Trustee, Paying Agent or Registrar.

Section 9.11 Paying Agent. The Agency may at any time or from time to time appoint a Paying Agent or Paying Agents for the Bonds or for any Series of Bonds, and each Paying Agent, if other than the Trustee, shall designate to the Agency and the Trustee its Principal Office and signify its acceptance of the duties and obligations imposed upon it hereunder or under a Supplemental Indenture by a written instrument of acceptance delivered to the Agency under which each such Paying Agent will agree, particularly:

(a) to hold all sums held by it for the payment of the principal of, premium or interest on Bonds in trust for the benefit of the Bond Owners until such sums shall be paid to such Bond Owners or otherwise disposed of as herein provided;

(b) to keep such books and records as shall be consistent with prudent industry practice, to make such books and records available for inspection by the Agency and the Trustee at all reasonable times; and

(c) upon the request of the Trustee, to forthwith deliver to the Trustee all sums so held in trust by such Paying Agent.

Section 9.12 Registrar. The Agency shall appoint the Registrar for the Bonds or a Registrar for any Series of Bonds and may from time to time remove a Registrar and name a replacement. Each Registrar, if other than the Trustee, shall designate to the Trustee, the Paying Agent, and the Agency its Principal Office and signify its acceptance of the duties imposed upon it hereunder or under a Supplemental Indenture by a written instrument of acceptance delivered to the Agency and the Trustee under which such Registrar will agree, particularly, to keep such books and records as shall be consistent with prudent industry practice and to make such books and records available for inspection by the Agency, the Trustee, and the Paying Agent at all reasonable times.

Section 9.13 Other Agents. The Agency or the Trustee may from time to time appoint other agents to perform duties and obligations under this Indenture or under a Supplemental Indenture, which agents may include, but not be limited to, tender agents, remarketing agents, auction agents and authenticating agents all as provided by Supplemental Indenture or resolution of the Board.

Section 9.14 Several Capacities. Anything in this Indenture to the contrary notwithstanding, the same entity may serve hereunder as the Trustee, Paying Agent, Registrar and any other agent as appointed to perform duties or obligations under this Indenture, under a

Supplemental Indenture or an escrow agreement, or in any combination of such capacities, to the extent permitted by law.

Section 9.15 Accounting Records and Reports of the Trustee. The Trustee shall at all times keep, or cause to be kept, proper books of record and account in which complete and accurate entries shall be made of all transactions relating to the proceeds of the Bonds, the Revenues and all funds and accounts held by the Trustee pursuant to this Indenture. Such books of record and account shall be available for inspection by the Agency and any Secured Owner, or his agent or representative duly authorized in writing, at reasonable hours and under reasonable circumstances.

The Trustee shall provide to the Agency each month a monthly report of Revenues received, amounts deposited into each fund and account held by the Trustee under this Indenture, the investments made by the Trustee pursuant to this Indenture, the amount disbursed from such funds and accounts and the balance in each of such funds and accounts.

The Trustee shall annually file and furnish to the Agency and to each Secured Owner who shall have filed his name and address with the Trustee for such purpose (at such Secured Owner's cost) a complete financial statement (which need not be audited) covering receipts, disbursements, allocation and application of Revenues and any other moneys in any of the funds and accounts established pursuant to this Indenture for the preceding Fiscal Year.

ARTICLE X

MODIFICATION OF THIS INDENTURE

Section 10.1 Limitations. This Indenture shall not be modified or amended in any respect subsequent to the first delivery of fully executed and authenticated Bonds except as provided in and in accordance with and subject to the provisions of this Article.

Section 10.2 Supplemental Indentures Not Requiring Consent of Bond Owners. The Agency may, from time to time and at any time, without the consent of or notice to the Bond Owners execute and deliver Supplemental Indentures supplementing and/or amending this Indenture or any Supplemental Indenture as follows:

(a) to provide for the issuance of a Series or multiple Series of Bonds under the provisions of Section 2.9 and to set forth the terms of such Bonds and the special provisions which shall apply to such Bonds;

(b) to cure any formal defect, omission, inconsistency or ambiguity in this Indenture or any Supplemental Indenture;

(c) to add to the covenants and agreements of the Agency in this Indenture or any Supplemental Indenture other covenants and agreements, or to surrender any right or power reserved or conferred upon the Agency, and which shall not materially adversely affect the interests of the Bond Owners;

(d) to confirm, as further assurance, any interest of the Trustee in and to the Pledged Funds or in and to the funds and accounts held by the Trustee or in and to any other moneys,

securities or funds of the Agency provided pursuant to this Indenture or to otherwise add additional security for the Bond Owners;

(e) to evidence any change made in the terms of any Series of Bonds if such changes are authorized by the Supplemental Indenture at the time the Series of Bonds is issued and such change is made in accordance with the terms of such Supplemental Indenture;

(f) to comply with the requirements of the Trust Indenture Act of 1939, as from time to time amended;

(g) to modify, alter, amend or supplement this Indenture or any Supplemental Indenture in connection with entering into a contract pursuant to Section 2.12 or a Reimbursement Agreement or in any other respect which, in the judgment of the Agency, as concurred in by the Trustee, is not materially adverse to the Bond Owners;

(h) to provide for uncertificated Bonds or for the issuance of coupons and bearer Bonds or Bonds registered only as to principal;

(i) to qualify the Bonds or a Series of Bonds for a rating or ratings by any Rating Agency;

(j) to comply with the requirements of the Code as are necessary, in the opinion of Bond Counsel, to prevent the inclusion of the interest on the Bonds or a Series of Bonds in gross income for purposes of federal income taxation; and

(k) once there are no 1993 Bonds remaining Outstanding, to delete all references to those Bonds, the 1993 Trustee and the 1993 Indenture.

No such Supplemental Indenture shall modify any of the rights or obligations of the Trustee without its prior written consent; and, as long as there is any Outstanding 1993 Bond, no such Supplemental Indenture shall amend the definition of the term "Senior Lien Bonds Reserve Fund Requirement" or any provision of this Indenture affecting in any way the amount of money required to be deposited in, or permitted to be withdrawn from, the Reserve Fund without the written consent of the owners of at least 60% of the Outstanding 1993 Bonds.

Before the Agency shall, pursuant to this Section, execute any Supplemental Indenture, the Agency shall cause notice of the proposed execution of the Supplemental Indenture to be given by mail to the Bond Insurer. A copy of the proposed Supplemental Indenture shall accompany such notice. Not less than one week after the date of the first mailing of such notice, the Agency may execute and deliver such Supplemental Indenture, but only after there shall have been delivered to the Agency an opinion of Bond Counsel stating that such Supplemental Indenture is authorized or permitted by this Indenture, the Act and other applicable law, complies with their respective terms, will, upon the execution and delivery thereof, be valid and binding upon the Agency in accordance with its terms and will not adversely affect the exclusion from gross income for federal income tax purposes of interest on Bonds which are then unpaid and for which there has been delivered an opinion of Bond Counsel to the effect that interest on such Bonds is excluded from gross income for federal income tax purposes.

Section 10.3 Supplemental Indentures Requiring Consent of Bond Owners.

(a) Except for (i) any Supplemental Indenture that provides for the issuance of additional Bonds pursuant to and in compliance with the provisions of Article II hereof, (ii) any Supplemental Indenture entered into pursuant to Section 10.2 and (iii) any Supplemental Indenture entered into pursuant to Section 10.3(b) below, subject to the terms and provisions contained in this Section and not otherwise, the Owners of Bonds that comprise both not less than a majority of the aggregate Principal Obligation of the Senior Lien Bonds then Outstanding and not less than a majority of the aggregate Principal Obligation of all Bonds then Outstanding shall have the right from time to time to consent to and approve the execution by the Agency of any Supplemental Indenture deemed necessary or desirable by the Agency for the purposes of modifying, altering, amending, supplementing or rescinding, in any particular, any of the terms or provisions contained in this Indenture or in a Supplemental Indenture; provided, that any such Supplemental Indenture shall have been first approved in writing by the Bond Insurer, and provided further that, unless approved in writing by the Owners of all the Bonds then Outstanding or unless such change affects less than all Series of Bonds Outstanding and the following subsection (b) is applicable, nothing herein contained shall permit, or be construed as permitting, (i) a change in the times, amounts or currency of payment of the principal of or interest on any Outstanding Bonds or (ii) a reduction in the principal amount or redemption price of any Outstanding Bonds or the rate of interest thereon; and provided that nothing herein contained, including the provisions of Section 10.3(b) below, shall, unless approved in writing by the Owners of all the Bonds then Outstanding, permit or be construed as permitting (iii) the creation of a lien (except as expressly permitted by this Indenture as originally executed) upon or pledge of the Pledged Funds created by this Indenture, ranking prior to or on parity with the claim created by this Indenture, or (iv) except as provided herein and except with respect to additional security which may be provided for a particular Series of Bonds, a preference or priority of any Bond or Bonds over any other Bond or Bonds, or (v) a reduction in the aggregate Principal Obligation of Bonds the consent of the Bond Owners of which is required for any such Supplemental Indenture. As long as there is any Outstanding 1993 Bond, no such Supplemental Indenture shall amend the definition of the term "Reserve Fund Requirement" or any provision of this Indenture affecting in any way the amount of money required to be deposited in, or permitted to be withdrawn from, the Reserve Fund without the written consent of the owners of at least 60% of the Outstanding 1993 Bonds. Nothing herein contained, however, shall be construed as making necessary the approval by Bond Owners of the execution of any Supplemental Indenture as authorized in Section 10.2, including the granting, for the benefit of particular Series of Bonds, security in addition to the pledge of the Pledged Funds; nor shall anything contained herein prevent an Owner from consenting to changes to any of the terms of such Owner's Bonds.

(b) The Agency may, from time to time and at any time execute a Supplemental Indenture which amends the provisions of an earlier Supplemental Indenture under which a Series or multiple Series of Bonds were issued. If such Supplemental Indenture is executed for one of the purposes set forth in Section 10.2, no notice to or consent of the Bond Owners shall be required. If such Supplemental Indenture contains provisions which affect the rights and interests of less than all Series of Bonds Outstanding and Section 10.2 is not applicable, then this subsection (b) rather than subsection (a) above shall control and, subject to the terms and provisions contained in this Section 10.3 and not otherwise, the Owners of not less than a majority of the aggregate Principal Obligation of the Bonds of all Series which are affected by such changes shall have the right from time to time to consent to and approve the execution by the Agency of any Supplemental Indenture deemed necessary or desirable by the Agency for the purposes of modifying, altering, amending, supplementing or rescinding, in any particular, any of the terms or provisions contained in such

Supplemental Indenture and affecting only the Bonds of such Series; provided, any such Supplemental Indenture shall have been first approved in writing by the Bond Insurer, and provided further that, unless approved in writing by the Owners of all the Bonds of all the affected Series then Outstanding, nothing herein contained shall permit, or be construed as permitting, (i) a change in the times, amounts or currency of payment of the principal of or interest on any Outstanding Bonds of such Series or (ii) a reduction in the principal amount or redemption price of any Outstanding Bonds of such Series or the rate of interest thereon. As long as there is any Outstanding 1993 Bond, no such Supplemental Indenture shall amend the definition of the term "Reserve Fund Requirement" or any provision of this Indenture affecting in any way the amount of money required to be deposited in, or permitted to be withdrawn from, the Reserve Fund without the written consent of the owners of at least 60% of the Outstanding 1993 Bonds. Nothing herein contained, however, shall be construed as making necessary the approval by Bond Owners of the adoption of any Supplemental Indenture as authorized in Section 10.2, including the granting, for the benefit of particular Series of Bonds, security in addition to the pledge of the Pledged Funds; nor shall anything contained herein prevent an Owner from consenting to changes to any of the terms of such Owner's Bonds.

(c) If at any time the Agency shall desire to enter into any Supplemental Indenture for any of the purposes of this Section, the Agency shall cause notice of the proposed execution of the Supplemental Indenture to be given by Mail to the Bond Insurer and all other Secured Owners or, under Section 10.3(b), all Secured Owners of the affected Series and, if applicable, the owners of the Outstanding 1993 Bonds. Such notice shall briefly set forth the nature of the proposed Supplemental Indenture and shall state that a copy thereof is on file at the office of the Agency for inspection by all Secured Owners.

(d) Not less than one week after the date of the first mailing of such notice, the Agency may execute and deliver such Supplemental Indenture in substantially the form described in such notice, but only if there shall have first been delivered to the Agency (i) the required consents, in writing, of the Bond Insurer and Bond Owners and, if applicable, the owners of the Outstanding 1993 Bonds, and (ii) an opinion of Bond Counsel stating that such Supplemental Indenture is authorized or permitted by this Indenture and other applicable law, complies with their respective terms and, upon the execution and delivery thereof, will be valid and binding upon the Agency in accordance with its terms and will not adversely affect the exemption from federal income taxation of interest on the Bonds.

(e) If the Bond Insurer and Bond Owners of not less than the percentage of Bonds required by this Section and, if applicable, the owners of the Outstanding 1993 Bonds, shall have consented to and approved the execution and delivery thereof as herein provided, no Bond Owners shall have any right to object to the adoption of such Supplemental Indenture, or to object to any of the terms and provisions contained therein or the operation thereof, or in any manner to question the propriety of the execution and delivery thereof, or to enjoin or restrain the Agency from executing the same or from taking any action pursuant to the provisions thereof.

Section 10.4 Effect of Supplemental Indenture. Upon execution and delivery of any Supplemental Indenture pursuant to the provisions of this Article, this Indenture or the Supplemental Indenture shall be, and shall be deemed to be, modified and amended in accordance therewith, and the respective rights, duties and obligations under this Indenture and the Supplemental Indenture of the Agency, the Trustee, the Paying Agent and all Bond Owners shall thereafter be determined, exercised and enforced under this Indenture and the Supplemental Indenture, if applicable, subject in all respects to such modifications and amendments.

Section 10.5 Supplemental Indentures To Be Part of This Indenture. Any Supplemental Indenture adopted in accordance with the provisions of this Article shall thereafter form a part of this Indenture or the Supplemental Indenture which they supplement or amend, and all of the terms and conditions contained in any such Supplemental Indenture as to any provision authorized to be contained therein shall be and shall be deemed to be part of the terms and conditions of this Indenture or the Supplemental Indenture which they supplement or amend for any and all purposes.

ARTICLE XI

MISCELLANEOUS PROVISIONS

Section 11.1 Parties in Interest. Except as herein otherwise specifically provided (as, for example, in the case of the owners of the Outstanding 1993 Bonds, in Section 4.5 and Article X), nothing in this Indenture expressed or implied is intended or shall be construed to confer upon any person, firm or corporation other than the Agency, the Paying Agent, the Trustee and the Secured Owners any right, remedy or claim under or by reason of this Indenture, this Indenture being intended to be for the sole and exclusive benefit of the Agency, the Paying Agent, the Trustee and the Secured Owners.

Section 11.2 Severability. In case any one or more of the provisions of this Indenture, or of any Bonds issued hereunder shall, for any reason, be held to be illegal or invalid, such illegality or invalidity shall not affect any other provisions of this Indenture or of Bonds, and this Indenture and any Bonds issued hereunder shall be construed and enforced as if such illegal or invalid provisions had not been contained herein or therein.

Section 11.3 No Personal Liability of Agency Officials; Limited Liability of Agency to Bond Owners. No covenant or agreement contained in the Bonds or in this Indenture shall be deemed to be the covenant or agreement of any present or future official, officer, agent or employee of the Agency in his individual capacity, and neither the members of the Agency nor any person executing the Bonds shall be liable personally on the Bonds or be subject to any personal liability or accountability by reason of the issuance thereof.

Except for the payment from the Pledged Funds when due of the payments and the observance and performance of the other agreements, conditions, covenants and terms required to be performed by it contained in this Indenture, the Agency shall not have any obligation or liability to the Bond Owners with respect to this Indenture or the preparation, execution, delivery, transfer, exchange or cancellation of the Bonds or the receipt, deposit or disbursement of the payments by the Trustee, or with respect to the performance by the Trustee of any obligation required to be performed by it contained in this Indenture.

Section 11.4 Execution of Instruments; Proof of Ownership. Any request, direction, consent or other instrument in writing required or permitted by this Indenture to be signed or executed by Bond Owners or on their behalf by an attorney in fact may be in any number of concurrent instruments of similar tenor and may be signed or executed by such Bond Owners in person or by an agent or attorney in fact appointed by an instrument in writing or as provided in the Bonds. Proof of the execution of any such instrument and of the ownership of Bonds shall be sufficient for any purpose of this Indenture and shall be conclusive in favor of the Trustee with regard to any action taken by it under such instrument if made in the following manner:

(a) The fact and date of the execution by any person of any such instrument may be proved by the certificate of any officer in any jurisdiction who, by the laws thereof, has power to take acknowledgments within such jurisdiction, to the effect that the person signing such instrument acknowledged before him the execution thereof, or by an affidavit of a witness to such execution.

(b) The ownership of Bonds shall be proved by the registration books kept under the provisions hereof.

Nothing contained in this Section shall be construed as limiting the Trustee to such proof. The Trustee may accept any other evidence of matters herein stated which it may deem sufficient. Any request, consent of, or assignment by any Bond Owner shall bind every future Bond Owner of the same Bonds or any Bonds issued in lieu thereof in respect of anything done by the Trustee or the Agency in pursuance of such request or consent.

Section 11.5 Governing Law. The Act and other laws of the State shall govern the construction and enforcement of this Indenture and of all Bonds issued hereunder; provided, however, that the administration of the trusts imposed upon the Trustee by this Indenture and the rights and duties of the Trustee hereunder shall be governed by, and construed in accordance with, the laws of the jurisdiction in which the Trustee has its Principal Office.

Section 11.6 Notices. Except as otherwise provided in this Indenture, all notices, certificates, requests, requisitions or other communications by the Agency, the Trustee, the Paying Agent, or the Registrar, pursuant to this Indenture shall be in writing and shall be sufficiently given and shall be deemed given when mailed by registered mail, postage prepaid, addressed as follows: if the Agency, to the San Joaquin Hills Transportation Corridor Agency, 125 Pacifica, Irvine, California 92618, Attention: Chief Executive Officer; if to the Trustee, to The Bank Of New York Mellon Trust Company, N.A., 400 South Hope Street, Suite 400, Los Angeles, California 90071, Attention: Corporate Trust Division; if to the Registrar or a Paying Agent, to such address as is designated in writing by it to the Trustee and the Agency. During any period in which an Outstanding Bond is insured by the Bond Insurer, any notices required to be given by any of the parties mentioned above to any other such party shall also be given to the Bond Insurer at the following address: 113 King Street, Armonk, New York 10504 Attention: Insured Portfolio Management. Any of the foregoing may, by notice given hereunder to each of the others, designate any further or different addresses to which subsequent notices, certificates, requests or other communications shall be sent hereunder. Notwithstanding the foregoing, any such notices, certificates, requests, requisitions or other communications may be in electronic form and shall be sufficiently given and shall be deemed given when sent by facsimile transmission or when mailed electronically to such telephone numbers or such email addresses as the parties may from time to time provide to one another.

Section 11.7 Holidays. If the date for making any payment or the last date for performance of any act or the exercising of any right, as provided in this Indenture, shall not be a Business Day, such payment may, unless otherwise provided in this Indenture or, with respect to any Series of Bonds or portion of Series of Bonds, provided in the Supplemental Indenture under which such Bonds are issued, be made or act performed or right exercised on the next succeeding Business Day with the same force and effect as if done on the nominal date provided in this Indenture, and no interest shall accrue for the period after such nominal date.

Section 11.8 Validity of Bonds Not Affected by Acts of Agency. The validity of the authorization and issuance of the Bonds by the Agency shall not be dependent upon or affected in any way by:

(a) Proceedings taken by the Agency for the acquisition, construction or completion of the Facilities or any part thereof;

(b) Any contracts made in connection with the acquisition, construction or completion of the Facilities; or

(c) The failure to complete the Facilities or any portion thereof for which the Bonds are authorized to be issued.

Section 11.9 Payment on Municipal Bond Insurance Policy. The Insurance Trustee (as hereinafter defined) shall hold the Municipal Bond Insurance Policy which shall be applied for the benefit of the Owners of the Initial Insured Bonds and shall take such actions at such times pursuant to such Municipal Bond Insurance Policy to assure timely payment of principal and interest (but not premium) on the Initial Insured Bonds in accordance with the terms of the Municipal Bond Insurance Policy.

Section 11.10 Payment Procedure Pursuant to Municipal Bond Insurance Policy. As long as the Municipal Bond Insurance Policy shall be in full force and effect, the Agency and the Trustee agree to comply with the following provisions with respect to the Initial Insured Bonds:

(a) In the event that on the second Business Day, and again on the Business Day, prior to the payment date on the Initial Insured Bonds, the Trustee has not received sufficient moneys to pay all principal of and interest on the Initial Insured Bonds due on the second following or following, as the case may be, Business Day, the Trustee shall immediately notify the Bond Insurer or its designee on the same Business Day by telephone or telegraph, confirmed in writing by registered or certified mail, of the amount of the deficiency.

(b) If the deficiency is made up in whole or in part prior to or on the payment date, the Trustee shall so notify the Bond Insurer or its designee.

(c) In addition, if the Trustee has notice that any Owner of an Initial Insured Bond has been required to disgorge payments of principal or interest on such Bond to a trustee in bankruptcy or creditors or others pursuant to a final judgment by a court of competent jurisdiction that such payment constitutes an avoidable preference to such Bondowner within the meaning of any applicable bankruptcy laws, then the Trustee shall notify the Bond Insurer or its designee of such fact by telephone or telegraphic notice, confirmed in writing by registered or certified mail.

(d) The Trustee is hereby irrevocably designated, appointed, directed and authorized to act as attorney in fact for Owners of the Initial Insured Bonds as follows:

(i) If and to the extent there is a deficiency in amounts required to pay interest on the Initial Insured Bonds, the Trustee shall (a) execute and deliver to State Street Bank and Trust Company, N.A., or its successors under the Policy (the "Insurance Paying Agent"), in form satisfactory to the Insurance Paying Agent, an instrument appointing the Bond Insurer as agent for such Owners in any legal proceeding related to the payment of such interest and an assignment to the

Bond Insurer of the claims for interest to which such deficiency relates and which are paid by the Bond Insurer, (b) receive as designee of the respective Owners of the Initial Insured Bonds (and not as Trustee) in accordance with the tenor of the Policy payment from the Insurance Paying Agent with respect to the claims for interest so assigned, and (c) disburse the same to such respective Owners; and

(ii) If and to the extent of a deficiency in amounts required to pay principal of the Initial Insured Bonds, the Trustee shall (a) execute and deliver to the Insurance Paying Agent in form satisfactory to the Insurance Paying Agent an instrument appointing the Bond Insurer as agent for such Owner in any legal proceeding relating to the payment of such principal and an assignment to the Bond Insurer of any of the Initial Insured Bonds surrendered to the Insurance Paying agent of so much of the principal amount thereof as has not previously been paid or for which moneys are not held by the Trustee and available for such payment (but such assignment shall be delivered only if payment from the Insurance Paying Agent is received), (b) receive as designee of the respective Owners (and not as Trustee) in accordance with the tenor of the Policy payment therefor from the Insurance Paying Agent, and (c) disburse the same of such Owners.

(e) Payments with respect to claims for interest on and principal of Initial Insured Bonds disbursed by the Trustee from proceeds of the Policy shall not be considered to discharge the obligation of the Agency with respect to such obligations, and the Bond Insurer shall become the owner of such unpaid Initial Insured Bonds and claims for the interest in accordance with the tenor of the assignment made to it under the provisions of this subsection or otherwise.

(f) Irrespective of whether any such assignment is executed and delivered, the Agency and the Trustee hereby agree for the benefit of the Bond Insurer that:

(i) They recognize that to the extent the Bond Insurer makes payments, directly or indirectly (as by paying through the Trustee), on account of principal of or interest on the Initial Insured Bonds, the Bond Insurer will be subrogated to the rights of the Owners of such Initial Insured Bonds to receive the amount of such principal and interest from the Agency, with interest thereon as provided and solely from the sources stated in this Indenture and the Bonds; and

(ii) They will accordingly pay to the Bond Insurer the amount of such principal and interest (including principal and interest recovered under subparagraph (ii) of the first paragraph of the Policy, which principal and interest shall be deemed past due and not to have been paid), with interest thereon as provided in this Indenture and the Bonds, but only from the sources and in the manner provided herein for the payment of principal of and interest on the Initial Insured Bonds to Owners, and will otherwise treat the Bond Insurer as the owner of such rights to the amount of such principal and interest.

(g) In connection with the issuance of additional Bonds, the Agency shall deliver to the Bond Insurer a copy of the disclosure document, if any, circulated with respect to such additional Bonds.

(h) Copies of any amendments made to the documents executed in connection with the issuance of the Bonds which are consented to by the Bond Insurer shall be sent to S&P.

(i) The Bond Insurer shall receive notice of the resignation or removal of the Trustee and the appointment of a successor thereto.

(j) The Bond Insurer shall receive copies of all notices required to be delivered to Bondowners or to any other person under this Indenture and, on an annual basis, copies of the Agency's audited financial statements and Annual Budget.

Section 11.11 Municipal Bond Insurance. Any provision of this Indenture expressly recognizing or granting rights in or to the Bond Insurer may not be amended in any manner which affects the rights of the Bond Insurer hereunder without the prior written consent of the Bond Insurer.

Unless otherwise provided in this Section, the Bond Insurer's consent shall be required in addition to Bondowner consent, when required, for the following purposes: (i) removal of the Trustee and selection and appointment of any successor trustee; and (ii) initiation or approval of any action not described in (i) above which requires Bondowner consent.

Anything in this Indenture to the contrary notwithstanding, the Bond Insurer shall be deemed to be the Owner of 100% of the Initial Insured Bonds for purposes of exercising the rights and remedies granted to the Bondowners or to the Trustee for the benefit of the Bondowners under Article VIII; and anything in this Indenture to the contrary notwithstanding, the Bond Insurer shall be deemed to be the Owner of the Initial Insured Bonds for purposes of exercising the rights granted to the Bondowners with respect to the removal of the Trustee pursuant to Section 9.9.

Notwithstanding anything herein to the contrary, in the event that the principal and/or interest due on Initial Insured Bonds shall be paid by the Bond Insurer pursuant to the Municipal Bond Insurance Policy, such Bonds shall remain Outstanding for all purposes, not be defeased or otherwise satisfied and not be considered paid by the Agency, and the assignment and pledge of the Pledged Funds and all of the moneys in the Funds and Accounts held hereunder by the Trustee and all covenants, agreements and other obligations of the Agency to the registered Owners of such Initial Insured Bonds shall continue to exist and shall run to the benefit of the Bond Insurer, and the Bond Insurer shall be subrogated to the rights of such registered Owners until such time as all amounts payable to the Bond Insurer have been paid in full.

Notwithstanding any other provision of this Indenture, in determining whether the rights of the Bondowners will be adversely affected by any action taken pursuant to the terms and provisions of this Indenture, the Trustee shall consider the effect on the Bondowners as if there were no Municipal Bond Insurance Policy.

Notwithstanding any other provision of this Indenture, no removal, resignation or termination of the Trustee shall take effect until a successor, acceptable to the Bond Insurer, shall be appointed.

To the extent that this Indenture confers upon or gives or grants to the Bond Insurer any right, remedy or claim under or by reason of this Indenture, the Bond Insurer is hereby expressly recognized as being a third party beneficiary hereunder and may enforce any such right, remedy or claim conferred, given or granted hereunder in the same manner as if the Bond Insurer were a party to this Indenture.

Section 11.12 Rights of the Bond Insurer Limited. Notwithstanding any other provision of this Indenture, no consent or approval shall be required to be obtained from the Bond Insurer, no notice shall be required to be delivered to the Bond Insurer, and no action shall be required to be taken at the request of the Bond Insurer if (i) no Initial Insured Bond is then Outstanding (or deemed

outstanding) and no amount is due and payable to the Bond Insurer under this Indenture or (ii) if the Bond Insurer is in default under the Municipal Bond Insurance Policy.

Section 11.13 Incorporation of Future Covenants. In the event the Agency shall, directly or indirectly, enter into or otherwise consent to any credit agreement, bond purchase agreement, liquidity agreement, bond insurance policy or related insurance agreement or other agreement or instrument (or any amendment, supplement or modification thereto) (an “Other Credit Facility”) under which or in connection with which, directly or indirectly, any person or persons undertakes to make loans or extend credit or liquidity to the Agency that constitute Senior Indebtedness, which such agreement (or amendment thereto) provides such person with different covenants and/or different rights and remedies than are provided to the Bond Insurer under this Indenture, substantially contemporaneously therewith the Agency shall provide the Bond Insurer and the Trustee with a copy of each such agreement (or amendment thereto) which provides such different covenants and/or different rights and remedies. If requested in writing by the Bond Insurer (with a copy of such request to the Trustee), the Agency and the Trustee shall promptly enter into an amendment to this Indenture to include such different covenants and/or different rights or remedies (provided that the Bond Insurer shall have and maintain the benefit of such different covenants and/or different rights and remedies as if specifically set forth in this Indenture even if the Agency and the Trustee fail to provide such amendment after having been requested to do so by the Bond Insurer). The incorporation of such different covenants and/or different rights and remedies shall continue regardless of whether there is a termination of the applicable Other Credit Facility.

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed all as of the date first above written.

SAN JOAQUIN HILLS TRANSPORTATION
CORRIDOR AGENCY

By: _____
Its: Chair

ATTEST:

Assistant Secretary

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A., as Trustee

By: _____
Its: Authorized Officer

EXHIBIT 2

COMPARISON OF

1997 MASTER INDENTURE

AND

FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST

FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST

Dated as of ~~September~~ **November** 1, 1997**2014**

By and Between

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY

and

~~BNY WESTERN~~ **THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.**
as Trustee

Relating to the

**SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY
TOLL ROAD REFUNDING REVENUE ~~BOND~~ BONDS**

TABLE OF CONTENTS

Page

TABLE OF CONTENTS

Page

ARTICLE I

DEFINITIONS; INTERPRETATION 2

ARTICLE II

FORM, EXECUTION, DELIVERY AND REGISTRATION OF BONDS	<u>21</u> <u>24</u>
Section <u>2.1.2.1</u> Issuance of Bonds; Forms.....	<u>21</u> <u>24</u>
Section <u>2.2.2.2</u> Terms of the Bonds.....	<u>21</u> <u>24</u>
Section <u>2.3.2.3</u> Execution and Authentication.....	<u>22</u> <u>24</u>
Section <u>2.4.2.4</u> Bond Register	<u>22</u> <u>25</u>
Section <u>2.5.2.5</u> Mutilated, Lost, Stolen or Destroyed Bonds.....	<u>22</u> <u>25</u>
Section <u>2.6.2.6</u> Registration and Transfer and Exchange of Bonds; Persons Treated as Owners	<u>23</u> <u>25</u>
Section <u>2.7.2.7</u> Destruction of Bonds	<u>24</u> <u>26</u>
Section <u>2.8.2.8</u> Temporary Bonds	<u>24</u> <u>26</u>
Section <u>2.9.2.9</u> Issuance of Series of Bonds; Supplemental Indenture; Application of Bond Proceeds	<u>24</u> <u>27</u>
Section <u>2.10.2.10</u> Refunding Bonds	<u>28</u>
Section 2.11 Tests for Issuance of Certain Bonds	<u>26</u> <u>29</u>
Section <u>2.11.2.12</u> Certain Contracts and Swaps	<u>27</u> <u>30</u>
Section 2.12. — Conversions of Variable Rate Indebtedness to Fixed Rate Indebtedness	<u>28</u>

ARTICLE III

REDEMPTION OF BONDS	<u>28</u> <u>31</u>
Section <u>3.1.3.1</u> Bonds Redeemable	<u>28</u> <u>31</u>
Section <u>3.2.3.2</u> Selection of Bonds To Be Redeemed	<u>28</u> <u>31</u>
Section <u>3.3.3.3</u> Notice of Redemption	<u>28</u> <u>31</u>
Section <u>3.4.3.4</u> Effect of Call for Redemption	<u>30</u> <u>32</u>
Section <u>3.5.3.5</u> Purchase in Lieu of Redemption.....	<u>30</u> <u>32</u>
Section <u>3.6.3.6</u> Mandatory Tender for Repurchase	<u>30</u> <u>32</u>
Section 3.7. — Detachable Call Options.....	<u>30</u>

ARTICLE IV

REVENUES AND FUNDS	<u>31</u> <u>33</u>
Section <u>4.1.4.1</u> Construction Fund and Certain Accounts	<u>31</u> <u>33</u>
Section <u>4.2.4.2</u> Revenue Fund	<u>31</u>
Section 4.3. — Debt Service Fund and Certain Accounts	<u>33</u>
Section 4.4. — Reserve Fund	<u>34</u>
Section 4.4.3 Senior Lien Bonds Debt Service Fund and Certain Accounts	<u>38</u>
Section 4.4 Junior Lien Bonds Debt Service Fund and Certain Accounts	<u>39</u>
Section 4.5 Senior Lien Bonds Reserve Fund	<u>40</u>
Section 4.6 Junior Lien Bonds Reserve Fund	<u>42</u>
Section <u>4.5.4.7</u> Use and Occupancy Fund	<u>36</u> <u>43</u>
Section <u>4.6.4.8</u> Surplus Revenues Fund	<u>37</u> <u>44</u>
Section <u>4.7.4.9</u> Rebate Fund	<u>38</u> <u>45</u>

TABLE OF CONTENTS
(Continued)

	Page
Section 4.8. <u>4.10</u> Moneys Held by Paying Agents in Trust; Unclaimed Moneys	<u>3845</u>
Section 4.9. <u>4.11</u> Additional Funds and Accounts	<u>3846</u>
Section 4.10. <u>4.12</u> Additional Security	<u>3846</u>
Section 4.11. Bankruptcy Proceeds <u>4.13</u> <u>Supplemental Reserve</u> Fund	<u>3946</u>
Section 4.12. Toll Stabilization Fund <u>394.14</u> <u>Additional Moneys Not To Be Commingled</u>	<u>49</u>
 ARTICLE V	
COVENANTS OF THE AGENCY	<u>4149</u>
Section 5.1. <u>5.1</u> Payment of Principal, Premium and Interest	<u>4149</u>
Section 5.2. <u>5.2</u> Tolls	<u>4250</u>
Section 5.3. <u>5.3</u> Annual Operating Budget	<u>4351</u>
Section 5.4. <u>5.4</u> Use and Operation of Pledged Facilities	<u>4352</u>
Section 5.5. <u>5.5</u> Payment of Lawful Charges	<u>4352</u>
Section 5.6. <u>5.6</u> Construction or Maintenance Permitted from Other Funds	<u>4352</u>
Section 5.7. <u>5.7</u> Insurance	<u>4452</u>
Section 5.8. <u>5.8</u> Inspection of Insurance Policies	<u>4453</u>
Section 5.9. <u>5.9</u> Accurate Records; Reports; Audits	<u>4453</u>
Section 5.10. <u>5.10</u> Covenant Against Sale or Encumbrance; Exceptions	<u>4554</u>
Section 5.11. <u>5.11</u> Performance of Covenants by Agency; Authority; Due Execution	<u>4655</u>
Section 5.12. <u>5.12</u> Instruments of Further Assurance	<u>4655</u>
Section 5.13. <u>5.13</u> Receipt and Deposit of Cash Advances	<u>4655</u>
Section 5.14. <u>5.14</u> Receipt and Deposit of Revenues - Revenue Fund	<u>4755</u>
Section 5.15. <u>5.15</u> No Inconsistent Action	<u>4756</u>
Section 5.16. <u>5.16</u> Other Obligations	<u>4756</u>
Section 5.17. <u>5.17</u> Maintenance of Powers	<u>4756</u>
Section 5.18. <u>5.18</u> Limitation on Use of Surplus Revenues – Competing Facilities	<u>4756</u>
Section 5.19. Actions with Respect to Federal Line of Credit	<u>48</u>
Section 5.20. <u>5.19</u> Development Impact Fees	<u>4856</u>
Section 5.21. <u>5.20</u> Modifications of the 1993 Indenture	<u>4857</u>
Section 5.22. <u>5.21</u> Modifications of the 1993 Use and Occupancy Fund	<u>4957</u>
Section 5.23. <u>5.22</u> Covenants of Agency Binding on Agency and Successors	<u>4957</u>
Section 5.24. <u>5.23</u> Indenture of Trust To Constitute a Contract	<u>4957</u>
 ARTICLE VI	
INVESTMENTS	<u>4957</u>
 ARTICLE VII DEFEASANCE	
<u>5059</u>	
 ARTICLE VIII	
DEFAULTS AND REMEDIES	<u>5260</u>
Section 8.1. <u>8.1</u> Events of Default	<u>5260</u>
Section 8.2. <u>8.2</u> Remedies	<u>5361</u>
Section 8.3. <u>8.3</u> Restoration to Former Position	<u>5462</u>
Section 8.4. <u>8.4</u> Bond Owners’ Right To Direct Proceedings	<u>5463</u>
Section 8.5. <u>8.5</u> Limitation on Bond Owners’ Right To Institute Proceedings	<u>5463</u>
Section 8.6. <u>8.6</u> No Impairment of Right To Enforce Payment	<u>5563</u>

TABLE OF CONTENTS
(Continued)

	Page
Section 8.7 <u>8.7</u> Proceedings by Trustee Without Possession of Bonds	<u>5563</u>
Section 8.8 <u>8.8</u> No Remedy Exclusive	<u>5564</u>
Section 8.9 <u>8.9</u> No Waiver of Remedies	<u>5564</u>
Section 8.10 <u>8.10</u> Application of Moneys	<u>5564</u>
Section 8.11 <u>8.11</u> Severability of Remedies	<u>5766</u>
Section 8.12 <u>8.12</u> Additional and Other Events of Default and Remedies	<u>5767</u>
Section 8.13 <u>8.13</u> Subordination 57 (<u>Junior Lien Bonds Subordinate to Senior Lien Bonds</u>)	<u>67</u>
<u>Section 8.14 Subordination (Subordinated Obligations Subordinated to Senior and Junior Lien Bonds)</u>	<u>68</u>
ARTICLE IX	
TRUSTEE, PAYING AGENT AND CO PAYING AGENTS; REGISTRAR	<u>5970</u>
Section 9.1 <u>9.1</u> Acceptance of Trusts	<u>5970</u>
Section 9.2 <u>9.2</u> Duties of Trustee	<u>5970</u>
Section 9.3 <u>9.3</u> Rights of Trustee	<u>6071</u>
Section 9.4 <u>9.4</u> Individual Rights of Trustee	<u>6072</u>
Section 9.5 <u>9.5</u> Trustee’s Disclaimer	<u>6072</u>
Section 9.6 <u>9.6</u> Notice of Defaults	<u>6072</u>
Section 9.7 <u>9.7</u> Compensation of Trustee	<u>6173</u>
Section 9.8 <u>9.8</u> Eligibility of Trustee	<u>6173</u>
Section 9.9 <u>9.9</u> Replacement of Trustee	<u>6173</u>
Section 9.10 <u>9.10</u> Successor Trustee or Agent by Merger	<u>6274</u>
Section 9.11 <u>9.11</u> Paying Agent	<u>6274</u>
Section 9.12 <u>9.12</u> Registrar	<u>6274</u>
Section 9.13 <u>9.13</u> Other Agents	<u>6274</u>
Section 9.14 <u>9.14</u> Several Capacities	<u>6274</u>
Section 9.15 <u>9.15</u> Accounting Records and Reports of the Trustee	<u>6274</u>
ARTICLE X	
MODIFICATION OF THIS INDENTURE	<u>6375</u>
Section 10.1 <u>10.1</u> Limitations	<u>6375</u>
Section 10.2 <u>10.2</u> Supplemental Indentures Not Requiring Consent of Bond Owners	<u>6375</u>
Section 10.3 <u>10.3</u> Supplemental Indentures Requiring Consent of Bond Owners	<u>6476</u>
Section 10.4 <u>10.4</u> Effect of Supplemental Indenture	<u>6678</u>
Section 10.5 <u>10.5</u> Supplemental Indentures To Be Part of This Indenture	<u>6678</u>
ARTICLE XI	
MISCELLANEOUS PROVISIONS	<u>6679</u>
Section 11.1 <u>11.1</u> Parties in Interest	<u>6679</u>
Section 11.2 <u>11.2</u> Severability	<u>6779</u>
Section 11.3 <u>11.3</u> No Personal Liability of Agency Officials; Limited Liability of Agency to Bond Owners	<u>6779</u>
Section 11.4 <u>11.4</u> Execution of Instruments; Proof of Ownership	<u>6779</u>

TABLE OF CONTENTS
(Continued)

	Page
Section 11.5 11.5 Governing Law	67 80
Section 11.6 11.6 Notices	68 80
Section 11.7 11.7 Holidays	68 80
Section 11.8 11.8 Validity of Bonds Not Affected by Acts of Agency	68 80
Section 11.9 11.9 Payment on Municipal Bond Insurance Policy	68 81
Section 11.10 11.10 Payment Procedure Pursuant to Municipal Bond Insurance Policy	69 81
Section 11.11 11.11 Municipal Bond Insurance	70 82
Section 11.12 11.12 Rights of MBIA the Bond Insurer Limited	71 83
<u>Section 11.13 Incorporation of Future Covenants</u>	<u>83</u>
 Signatures.....	 S-1
 EXHIBIT A ————— DEBT SERVICE REQUIREMENTS ON THE 1993 BONDS AND THE 1997 BONDS	 A-1

FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST

This FIRST AMENDED AND RESTATED MASTER INDENTURE OF TRUST (this “Indenture”), dated as of ~~September~~November 1, 1997,2014, is between the ~~San Joaquin Hills Transportation Corridor Agency~~ (the “Agency”), a joint powers agency created by an agreement for the joint exercise of certain powers by and among the County of Orange and the Cities of Costa Mesa, Dana Point, Irvine, Laguna Hills, Laguna Niguel, Mission Viejo, Newport Beach, San Clemente, San Juan Capistrano, and Santa Ana,SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR AGENCY, a joint powers agency existing under and pursuant to the laws of the State of California; and ~~BNY Western Trust Company~~ (the “Agency”), and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a banking corporation organized and existing under the laws of the State of California United States, as trustee (the “Trustee”).

WITNESSETH:

WHEREAS, in order to finance the costs of constructing the San Joaquin Hills Transportation Corridor, the Agency has heretofore issued its San Joaquin Hills Transportation Corridor Agency, Toll Road Revenue Bonds, Series 1993 (the “1993 Bonds”) pursuant to an Indenture of Trust, dated as of March 1, 1993 (as heretofore supplemented or amended, the “1993 Indenture”), by and between the Agency and ~~BNY Western~~The Bank of New York Mellon Trust Company, N.A., as successor to ~~First Interstate Bank of California~~trustee (the “1993 Trustee”); and ~~WHEREAS, in order to finance the costs of constructing the~~ its San Joaquin Hills Transportation Corridor, the Agency has also heretofore issued its Project Revenue Certificates in an aggregate principal amount of \$30.9 million, of which an aggregate principal amount of \$23.2 million remains outstanding (the “1993 Project Revenue Certificates” and, together with the 1993 Bonds, the “1993 Obligations”); and Agency, Toll Road Refunding Revenue Bonds, Series 1997A (collectively, and as the terms of some of them have been heretofore amended, the “1997 Bonds”) pursuant to a Master Indenture of Trust, dated as of September 1, 1997, by and between the Agency and The Bank of New York Mellon Trust Company, N.A., as successor trustee (the “Trustee”), (as heretofore supplemented or amended, the “1997 Indenture”);

WHEREAS, the Agency has determined it advisable to provide for the redemption of the 1993 Obligations, other than the 1993 Bonds that are due on January 1, 2033 (the “1993 Refunded Bonds”); and in order to improve its financial position by establishing a long-term sustainable debt structure that will, among other things, reduce the rate of growth of its annual debt service and its maximum annual debt service, strengthen its debt service coverage ratios and improve its ability to withstand any future economic downturns the Agency wishes to redeem the currently outstanding 1993 Bonds and some of the currently outstanding 1997 Bonds and, if and to the extent that owners thereof consent thereto, to amend the terms of certain of the other outstanding 1997 Bonds;

WHEREAS, in order to provide funds with which to provide for the redemption of the 1993 Refunded Bonds and to finance the costs of future additions to and enlargements and improvements of the San Joaquin Hills Transportation Corridor and other projects and activities of the Agency, the Agency has determined it necessary and advisable to issue bonds and other evidences of indebtedness from time to time, which bonds and other evidences of indebtedness are to be payable from and

~~secured by a lien on and pledge of the Pledged Funds (defined below), under the conditions, and subject to the restrictions, set forth in this Indenture; and~~ **redeem 1997 Bonds as described above, the Agency wishes to issue additional bonds pursuant to the 1997 Indenture;**

~~WHEREAS, the Agency wishes to provide in this Indenture for~~ **in order to facilitate** the issuance and payment of such bonds and other obligations and the pledge of the Pledged Funds thereto, and the Trustee is willing to accept the trusts provided in this **of such additional bonds pursuant to the 1997 Indenture and the amendment of the terms of certain of the outstanding 1997 Bonds, the Agency wishes to amend the 1997** Indenture;

WHEREAS, the 1997 Indenture provides that it may be amended in the manner described herein if the Owners of at least a majority of the aggregate Principal Obligation of the 1997 Bonds then Outstanding and the Bond Insurer (as each capitalized term is defined in the 1997 Indenture) consent thereto; and

WHEREAS, the Owners of at least a majority of the aggregate Principal Obligation of the 1997 Bonds currently Outstanding and the Bond Insurer have filed with the Agency their written consent to and approval of the amendments contained herein; and

WHEREAS, Stradling Yocca Carlson & Rauth, a Professional Corporation, Bond Counsel, has filed with the Agency its legal opinion in satisfaction of the requirements of Section 10.3 of the 1997 Master Indenture;

~~NOW, THEREFORE, the Agency and the Trustee agree as follows, each for the benefit of the other and of owners of the bonds and other obligations issued pursuant to this Indenture:~~ **that the 1997 Indenture is amended and restated in its entirety to read as set forth below, provided that the amendments to the 1997 Indenture made herein shall expire and be of no force or effect if the first series of Senior Lien Bonds issued subsequent to the date hereof and any 1997 Bonds that are not defeased or purchased with the proceeds thereof are not initially assigned investment grade ratings by at least two Rating Agencies and if such Senior Lien Bonds are not issued prior to June 30, 2015.**

GRANTING CLAUSE

To secure the payment of the Bonds, Parity Swap Agreements and Reimbursement Obligations (each as defined below) and the other obligations incurred by the Agency pursuant hereto and the performance and observance by the Agency of all the covenants, agreements and conditions expressed or implied herein and contained in the Bonds, the Reimbursement Obligations, Parity Swap Agreements and such other obligations, the Agency pledges and assigns to the Trustee and grants to the Trustee, subject to the rights therein of the owners of the 1993 Bonds ~~that are not Refunded 1993 Bonds~~, a security interest in all right, title and interest of the Agency in and to the Pledged Funds for the equal and proportionate benefit and security of all Bonds, Parity Swap Agreements and Reimbursement Obligations, all of which, regardless of the time or times of their delivery or maturity, shall be of equal rank without preference, priority or distinction as to lien or otherwise of any Bond over any other Bond, Parity Swap Agreement or Reimbursement Obligation, or of any Reimbursement Obligation over any other Reimbursement Obligation, Parity Swap Agreement or Bond, or of any Parity Swap Agreement over any other Parity Swap Agreement, Reimbursement Obligation or Bond, except as otherwise permitted by or provided for in this Indenture, and except that any funds held by the Trustee for the payment of specific Bonds (or the Reimbursement Obligations or obligations of the

Agency under Parity Swap Agreements related thereto) which are deemed to have been paid and any funds deposited with the Trustee hereunder specifically to be held in escrow or otherwise to provide additional security or an additional source of payment for specified Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) or a specified series of Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) shall be held and used only to pay or provide security for the Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) or series of Bonds (or the Reimbursement Obligations or obligations of the Agency under Parity Swap Agreements related thereto) for which such deposit was made and shall not be held as security on parity for all Bonds, Reimbursement Obligations and Parity Swap Agreements.

ARTICLE I

DEFINITIONS; INTERPRETATION

Except as otherwise indicated, references to Articles and Sections are to the Articles and Sections of this Indenture. The terms defined in this Article shall, for all purposes of this Indenture, have the respective meanings specified herein unless the context clearly requires otherwise.

“1993 Bonds” shall have the meaning ascribed to it set forth in the Recitals of the ~~Fourth Amendment to 1997 Master~~this Indenture of Trust.

“1993 Indenture” shall have the meaning ascribed to it set forth in the Recitals of the ~~Fourth Amendment to 1997 Master~~this Indenture of Trust.

“1993 Trustee” shall have the meaning ascribed to it set forth in the Recitals of the ~~Fourth Amendment to 1997 Master~~this Indenture of Trust.

“1997 Bonds” shall have the meaning ascribed to it set forth in the Recitals of the ~~Fourth Amendment to 1997 Master~~this Indenture of Trust.

“1997 Bond Annual Debt Service” shall mean, for any Fiscal Year, ~~Annual Debt Service for such Fiscal Year (including Junior Lien Interest) minus the amount of principal and interest becoming due with respect to Outstanding 1993 Bonds in such Fiscal Year.~~ Indenture” shall have the meaning set forth in the Recitals of this Indenture.

“Accreted Amount” shall mean, with respect to any Capital Appreciation Bond or Convertible Capital Appreciation Bond, the amount representing principal and interest on such Capital Appreciation Bond or Convertible Capital Appreciation Bond at and prior to the maturity thereof, in the case of a Capital Appreciation Bond, or the expiration of the Accretion Period thereof, in the case of a Convertible Capital Appreciation Bond, being, as of any date of computation an amount equal to the principal amount of such Bond at its initial offering plus the interest accrued thereon from the Delivery Date thereof to the January 15 or July 15 next preceding the date of computation (or, if the date of computation is January 15 or July 15, to said date), such interest to accrue at the rate per annum established as provided in a Supplemental Indenture, compounded periodically, plus, with respect to matters relating to the payment upon redemption of such Capital Appreciation Bond or Convertible Capital Appreciation Bond, if such date of computation shall not be January 15 or July 15, the ratable portion of the difference between the Accreted Amount as of the immediately preceding January 15 or July 15 (or the Delivery Date thereof if the date of computation is prior to the first January 15 or July 15

succeeding the Delivery Date) and the Accreted Amount as of the immediately succeeding January 15 or July 15, calculated based on the assumption that the Accreted Amount accrues during any period in equal daily amounts on the basis of a year of twelve 30 day months.

“Accretion Period” shall mean with respect to any particular Convertible Capital Appreciation Bond, the period from the Delivery Date thereof through the date specified in the document providing for the sale of such Convertible Capital Appreciation Bond (which date must be prior to the maturity date thereof), after which interest accruing on such Convertible Capital Appreciation Bond shall be payable semiannually, with the first such payment date being the applicable Interest Payment Date immediately succeeding the expiration of the Accretion Period.

“Accrued Interest” shall mean, for any calendar month, ~~(i) the amount of unpaid interest (other than Junior Lien Interest) which has accrued or will accrue during that month on a Series of Bonds (other than Convertible Capital Appreciation Bonds prior to the expiration of the applicable Accretion Period and Capital Appreciation Bonds), less (ii) any amount of interest and any Reimbursement Obligation with respect to interest which is payable (other than upon acceleration) exclusively from a fund or account other than the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund or a Series Credit Facility Fund on parity with either such fund, plus the net amount, if any, payable to a Parity Swap Agreement Counterparty with respect to such period pursuant to Section 2.12, and less also any amount of interest for which a separate fund or account (including the Convertible Capital Appreciation Bonds Sinking Account) has been established and into which fund or account has been deposited moneys or Government Obligations which, with the earnings thereon, will be sufficient to pay such interest and which fund or account is irrevocably pledged to the payment of such interest.~~ plus (iii) the net amount, if any, payable to a Parity Swap Agreement Counterparty with respect to such period pursuant to Section 2.12. With respect to Bonds (other than Convertible Capital Appreciation Bonds prior to the expiration of the applicable Accretion Period and Capital Appreciation Bonds) the interest rate on which will or may fluctuate during the period from the date of calculation to the end of such calendar month, interest after the calculation date, for purposes of calculating Accrued Interest for such period, will be assumed to accrue at a rate equal to the maximum rate that such Bonds are permitted to bear.

~~“Accrued Junior Lien Interest” shall mean, for any calendar month, the amount of Junior Lien Interest which has accrued or will accrue during that month on the Restructured Bonds, less any amount of interest for which a separate fund or account has been established and into which fund or account has been deposited moneys or Government Obligations which, with the earnings thereon, will be sufficient to pay such interest and which fund is irrevocably pledged to payment of Junior Lien Interest.~~

“Accrued Premium” shall mean, with respect to any Bonds which are to be redeemed or otherwise prepaid, the full amount of the premium or prepayment penalty imposed as a condition of such redemption or prepayment, less any amount of premium or prepayment penalty and any Reimbursement Obligation with respect to premium or prepayment penalty which is payable (other than upon acceleration) exclusively from a fund or account other than the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund or a Series Credit Facility Fund on parity with either such fund. The full amount of the premium or penalty will accrue in the calendar month in which notice of the redemption or prepayment is given by the Agency to the Trustee.

“Accrued Principal” shall mean, with respect to any calendar month, the amount of unpaid principal which has accrued or will accrue on a Series of Bonds during that month, less any amount of

principal and any Reimbursement Obligation with respect to principal or interest which is payable (other than upon acceleration) exclusively from a fund or account other than the **Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund or a Series Credit Facility Fund** on parity with either such fund, and less also any amount of principal for which a separate fund or account **(including the Capital Appreciation Bonds Sinking Account)** has been established and into which has been deposited moneys or Government Obligations which, ~~with the earnings thereon,~~ will be sufficient to pay such principal and which fund or account is irrevocably pledged to the payment of such principal. For purposes of this definition, it shall be assumed that (a) for any principal or mandatory sinking account payment **(including payments required to be made to the Capital Appreciation Bonds Sinking Account)**, principal commences to accrue on the later of (i) the date of issue of the Series or (ii) one year prior to the payment date (unless principal is payable more frequently than annually, in which case, principal will, for the first payment, be assumed to accrue from the later of the date of issuance of the Series or one year prior to the first payment date and thereafter principal will accrue from the date of each principal payment); (b) principal shall be assumed to accrue in equal monthly installments during each calendar month or portion of any calendar month occurring from the time of commencement of such accrual to the payment date; and (c) the Accreted Amount of Capital Appreciation Bonds and Convertible Capital Appreciation Bonds shall be treated as principal.

“Act” shall mean, collectively, Section 50029 and Section 66484.3 of the California Government Code, the Joint Exercise of Powers Act, Section 6500 et seq. of the California Government Code, the El Dorado Toll Tunnel Authority Act, Chapter 5 (Section 31100 et seq.) of Division 17 of the California Streets and Highways Code, and any other law, whether general or specific, applicable to the Agency as any of such laws may be amended from time to time.

“Adjusted Net Toll Revenues” shall mean, **for any period,** the ~~sum~~ **remainder** of (i) the Tolls **for such period,** (ii) the earnings derived from the investment of moneys on deposit in the “Senior Lien Bonds Debt Service Fund,” the “Senior Lien Bonds Reserve Fund” and the “Use and Occupancy Fund” established pursuant to the 1993 Indenture, (iii) the earnings derived **in such period** from the investment of moneys on deposit in the **Senior Lien Bonds Debt Service Fund, the Senior Lien Bonds Reserve Fund, the Junior Lien Bonds Debt Service Fund, the Junior Lien Bonds Reserve Fund and the Use and Occupancy Fund,** and **minus** (iv) ~~the amount available to the Agency under the Federal Line of Credit (but not more than \$12,000,000 per year), less~~ **ii) the Current Expenses for such period paid from Revenues.**

“Agency” shall mean the San Joaquin Hills Transportation Corridor Agency created pursuant to the Joint Exercise of Powers Agreement, and any successor to its functions.

~~“Agency Attorney” shall mean legal counsel to the Agency.~~

“Aggregate Accrued Interest” shall mean, for any calendar month, the sum of the Accrued Interest for all Series of Outstanding Bonds **Senior Lien Bonds or all Series of Outstanding Junior Lien Bonds, as the case may be.**

“Aggregate Accrued Principal” shall mean, for any calendar month, the sum of the Accrued Principal for all Series of Outstanding Bonds **Senior Lien Bonds or all Series of Outstanding Junior Lien Bonds, as the case may be.**

“Annual Debt Service” shall mean (i) the amount of principal and interest becoming due with respect to Outstanding 1993 Bonds in a Fiscal Year, calculated by the Agency or by a Financial

Consultant as provided in this definition, plus (ii) the amount of principal and interest becoming due with respect to the Bonds in ~~each~~ Fiscal Year, as calculated by the Agency or by a Financial Consultant ~~as~~based on the assumptions provided in this definition, plus (iii) the amount required to be deposited in the Capital Appreciation Bonds Sinking Account on January 15 of such Fiscal Year pursuant to a Supplemental Indenture, plus (iv) the amount required to be deposited in the Convertible Capital Appreciation Bonds Sinking Account on July 15 and January 15 of such Fiscal Year pursuant to a Supplemental Indenture, plus (v) Reimbursement Obligations payable or estimated by the Agency to be payable in such Fiscal Year (but only to the extent they are not duplicative of such principal and interest), plus ~~(iv)~~(vi) the amounts, if any, payable or estimated by the Agency to be payable by the Agency in such Fiscal Year with respect to Parity Swap Agreements, minus ~~(v)~~(vii) the amounts, if any, payable or estimated by the Agency to be payable to the Agency in such Fiscal Year with respect to Approved Swap Agreements, provided that the difference between the amounts described in clauses ~~(iv)~~(vi) and ~~(v)~~(vii) shall be included only to the extent that such difference would not be recognized as a result of the application of the assumptions set forth below. The following assumptions shall be used to determine the Annual Debt Service becoming due in any Fiscal Year:

(a) ~~there shall be excluded from Annual Debt Service for all purposes hereof any amounts which are payable (other than upon acceleration) exclusively from a fund or account other than the Debt Service Fund or a Series Credit Facility Fund on parity with such fund;~~(b) ~~_____~~ payments of principal or interest which are due on or before the fifteenth day of a Fiscal Year shall be assumed to be due on the last day of the immediately preceding Fiscal Year;

~~(e)~~ in determining the principal amount due with respect to Bonds in each Fiscal Year, (unless a different subsection of this definition applies for purposes of determining principal maturities or amortization) payment shall be assumed to be made in accordance with any amortization schedule established for such debt, including any scheduled redemption of Bonds on the basis of Accreted Amount, and for such purpose the redemption payment shall be deemed a principal payment;

~~(d)~~ the Accreted Amount payable at maturity of any Capital Appreciation Bond for which deposits are required to be made to the Capital Appreciation Bonds Sinking Account pursuant to a Supplemental Indenture shall be deemed to be only the portion of such Accreted Amount that will remain to be paid after the last scheduled deposit with respect to such Capital Appreciation Bond is made;

~~(d)~~ the interest payable on any Interest Payment Date for which deposits are required to be made to the Convertible Capital Appreciation Bonds Sinking Account pursuant to a Supplemental Indenture shall be deemed to be only the portion of such interest that will remain to be paid after the last scheduled deposit with respect to such interest is made;

~~(e)~~ if any of the Outstanding Bonds constitute Balloon Indebtedness, or if Bonds then proposed to be issued would constitute Balloon Indebtedness, then such amounts thereof as constitute Balloon Indebtedness shall be treated as if such Bonds were to be amortized in substantially equal annual installments of debt service over a term equal to the number of years then remaining to the maturity of such Bonds;

~~(e)~~ if any Outstanding Bond constitutes Tender Indebtedness or if any Bond then proposed to be issued would constitute Tender Indebtedness, then for purposes of determining the amounts of principal and interest due in any Fiscal Year on such Bond, the options or obligations of the owners of

such Bonds to tender the same for purchase or payment prior to their stated maturity or maturities shall be treated as a principal maturity (but any such amount treated as a maturity shall not be eligible for treatment as Balloon Indebtedness) occurring on the first date on which owners of such Bonds may or are required to tender such Bonds, except that any such option or obligation to tender Bonds shall be ignored and not treated as a principal maturity if both (a) such Bonds are rated in one of the ~~two~~**four** highest long term Rating Categories by each Rating Agency ~~which has assigned a then rating to any such Outstanding Bond at the request of the Agency~~**such Tender Indebtedness** or such Bonds are rated in the highest short term, note or commercial paper Rating Category by each Rating Agency ~~which has assigned a then rating to any such Outstanding Bond at the request of the Agency~~**such Tender Indebtedness**, and (b) any obligation the Agency may have, other than its obligation on such Bonds, to reimburse any person for having extended a credit facility or a liquidity facility or a bond insurance policy, or similar arrangement, shall be either a Reimbursement Obligation with respect to an obligation incurred under and meeting the tests and conditions set forth in Article ~~2~~**II** (in which case the obligations of the Agency to make principal payments thereunder shall be treated as principal maturities) or a subordinate obligation issued pursuant to Section 5.16;

(f) ~~if any Outstanding Bond constitutes Variable Rate Indebtedness other than Auction Rate Indebtedness, or if any Bond proposed to be issued will constitute Variable Rate Indebtedness other than Auction Rate Indebtedness, the interest rate on such Bond shall be assumed to be the Assumed Non Auction Variable Rate, provided that if the maximum interest rate payable by the Agency with respect to any or all of such Bonds has been limited pursuant to an Approved Swap Agreement, then the interest rate to be used for the aforesaid computation with respect to the Variable Rate Indebtedness covered by such Approved Swap Agreement shall not exceed the sum of (A) the maximum interest rate as so limited, and (B) the annual charges payable by the Agency pursuant to said Parity Swap Agreement, expressed as a percentage of the principal amount of the Variable Rate Indebtedness which is covered thereby, and provided further that if any or all of such Variable Rate Indebtedness then constitute Pledged Bonds, the interest rate to be used for the aforesaid computation with respect to the principal amount of such Pledged Bond shall be the rate then applicable to the Agency's Reimbursement Obligation under its Reimbursement Agreement with the Bank in question;~~

(g) ~~if any Outstanding Bond constitutes Auction Rate Indebtedness, or if any Bond proposed to be issued will constitute Auction Rate Indebtedness, the interest rate on such Bond shall be assumed to be the Assumed Auction Rate; and~~**Senior Lien Bond constitutes Variable Rate Indebtedness, or if any Senior Lien Bond proposed to be issued will constitute Variable Rate Indebtedness, the interest rate on such Senior Lien Bond shall be assumed to be the Assumed Variable Rate, provided that if the maximum interest rate payable by the Agency with respect to any or all of such Senior Lien Bonds has been limited pursuant to an Approved Swap Agreement, then the interest rate to be used for the aforesaid computation with respect to the Variable Rate Indebtedness covered by such Approved Swap Agreement shall not exceed the sum of (A) the maximum interest rate as so limited, and (B) the annual charges payable by the Agency pursuant to said Parity Swap Agreement, expressed as a percentage of the principal amount of the Variable Rate Indebtedness which is covered thereby, and provided further that if any or all of such Variable Rate Indebtedness then constitute Pledged Bonds, the interest rate to be used for the aforesaid computation with respect to the principal amount of such Pledged Bond shall be the rate then applicable to the Agency's Reimbursement Obligation under its Reimbursement Agreement with the Bank in question, and provided still further that if any Outstanding Senior Lien Bond constitutes Term Rate Indebtedness that is rated less than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Senior**

Lien Bond from the date of the next mandatory tender date applicable thereto to its maturity date shall be the Maximum Legal Rate and if any Senior Lien Bond proposed to be issued will constitute Term Rate Indebtedness which will be rated lower than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, then the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Senior Lien Bond from its dated date to its first mandatory tender date shall be the actual rate to be borne by such Senior Lien Bond and the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Senior Lien Bond from its first mandatory tender date to its maturity date shall be the Maximum Legal Rate;

(h) if any Outstanding Junior Lien Bond constitutes Variable Rate Indebtedness, or if any Junior Lien Bond proposed to be issued will constitute Variable Rate Indebtedness, the interest rate on such Junior Lien Bond shall be assumed to be the Assumed Variable Rate, provided that if the maximum interest rate payable by the Agency with respect to any or all of such Junior Lien Bonds has been limited pursuant to an Approved Swap Agreement, then the interest rate to be used for the aforesaid computation with respect to the Variable Rate Indebtedness covered by such Approved Swap Agreement shall not exceed the sum of (A) the maximum interest rate as so limited, and (B) the annual charges payable by the Agency pursuant to said Parity Swap Agreement, expressed as a percentage of the principal amount of the Variable Rate Indebtedness which is covered thereby, and provided further that if any or all of such Variable Rate Indebtedness then constitute Pledged Bonds, the interest rate to be used for the aforesaid computation with respect to the principal amount of such Pledged Bond shall be the rate then applicable to the Agency's Reimbursement Obligation under its Reimbursement Agreement with the Bank in question, and provided still further that if any Outstanding Junior Lien Bond constitutes Term Rate Indebtedness that is rated in lower than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Junior Lien Bond from the date of the next mandatory tender date applicable thereto to its maturity date shall be the Maximum Legal Rate and if any Junior Lien Bond proposed to be issued will constitute Term Rate Indebtedness which will be rated in lower than investment grade by all Rating Agencies then rating such Term Rate Indebtedness, then the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Junior Lien Bond from its dated date to its first mandatory tender date shall be the actual rate to be borne by such Junior Lien Bond and the interest rate to be used for the aforesaid calculation with respect to the principal amount of such Junior Lien Bond from its first mandatory tender date to its maturity date shall be the Maximum Legal Rate;

(i) if moneys or Government Obligations have been irrevocably deposited with and are held by the Trustee or another fiduciary to be used solely to pay principal of and/or interest on any specified Bond or Bonds (including, but limited to, amounts designated to be spent in specified Fiscal Years for partial or full payment of principal of and/or interest on any specified Bond or Bonds) or the fees and expenses of a Bank or a remarketing agent, then the principal and/or interest to be paid from such moneys, from Government Obligations or from the earnings thereon shall be disregarded and not included in calculating Annual Debt Service, provided that, for purposes of Section 5.2 of this Indenture, such amounts shall be excluded from Annual Debt Service only if at the time of calculation the Agency has at least \$10,000,000 of Unrestricted Funds; and

(j) there shall be added to Annual Debt Service any principal of or interest on any Bond that was due and payable in a previous Fiscal Year but that has not been paid.

“Annual Operating Budget” shall mean the Agency’s budget for a Fiscal Year of Current Expenses adopted pursuant to the provisions hereof.

“Approved Swap Agreement” shall mean either (i) an interest rate swap agreement, interest rate cap or other agreement of a type described in Section 2.12 with respect to which the Agency’s obligations to make payments is a subordinate obligation issued pursuant to Section 5.16 or (ii) a Parity Swap Agreement which, in either case, has been approved as not causing a reduction or withdrawal of the rating then assigned to Bonds, by each Rating Agency ~~which has assigned a rating to any Outstanding Bonds at the request of the Agency.~~

~~“Assumed Auction Rate” shall mean (a) during the period in which the interest rate applicable to Auction Rate Indebtedness cannot be reset, the interest rate so applicable and (b) for any other period, the lesser of (i) the Assumed Non Auction Variable Rate and (ii) the Maximum Auction Rate.~~
“Assumed Non Auction Variable Rate” shall mean (a) in the case of Bonds the interest on which was, in the opinion of Bond Counsel delivered at the time of the issuance thereof, excluded from gross income for federal income tax purposes, the rate which is the **sum of fifty (50) basis points plus the average of The Bond Buyer Revenue Bond Index for the 52 weeks ending with the week preceding the date of calculation as such rate is calculated by the Agency,** provided that if The Bond Buyer Revenue Bond Index shall cease to be published, the index to be used in its place shall be that index which the Agency (in consultation with the remarketing agent(s) for any Variable Rate Indebtedness then Outstanding) determines most closely replicates it, as set forth in a certificate of an Authorized Agency Representative filed with the Trustee and (b) in the case of Bonds not described in clause (a), the product of the index referred to in clause (a) times the ratio that the Agency determines to best reflect the relative yields of taxable and tax-exempt debt of maturities and credit quality comparable to the bonds used in calculating such index.

~~“Auction Rate Indebtedness” shall mean Variable Rate Indebtedness (i) the interest rate applicable to which (after an initial period following the issuance thereof or the conversion thereof to such an interest rate mode) is reset from time to time through an auction or bidding system and (ii) which the Agency has no obligation to repurchase in connection with the resetting of the interest rate applicable thereto except to the extent proceeds are available for such purpose either from the remarketing of such Variable Rate Indebtedness or from the Prepayment Account.~~

“Authorized Agency Representative” shall mean the ~~Chairman~~**Chair**, the Chief Executive Officer, ~~the Chief Operating Officer,~~ the Chief Financial Officer, the Director of Finance, the ~~Investment Officer~~**Manager of Treasury Operations** or the Controller of the Agency or such other officer or employee of the Agency or other person who has been designated an agent of the Agency with respect to particular matters by a resolution of the Board, except that for purposes of directing the investment of moneys held hereunder, unless otherwise provided by a resolution of the Board, the Controller shall not be an Authorized Agency Representative but a person or entity providing investment management services under a written contract with the Agency shall be an Authorized Agency Representative if and to the extent so designated in writing by the Chief Executive Officer, ~~the Chief Operating Officer,~~ the Chief Financial Officer, or the Finance Director of the Agency.

“Balloon Indebtedness” shall mean a Series of Bonds 25% or more of the principal of which matures in the same Fiscal Year and is not required by the documents pursuant to which such Series was issued to be amortized by payment or redemption prior to that Fiscal Year, provided that such Series of Bonds will not constitute Balloon Indebtedness if the Annual Debt Service in the Fiscal Year

referred to above is less than 125% of the Annual Debt Service for the immediately preceding Fiscal Year.

“Bank” shall mean, as to any particular Series of Bonds, each person (other than a Bond Insurer) providing a letter of credit, a line of credit, a guaranty or another credit or liquidity enhancement facility as designated in the Supplemental Indenture providing for the issuance of such Bonds.

“Bank Fee” shall mean any commission, fee or expense payable to a Bank pursuant to a Reimbursement Agreement (but not amounts payable as reimbursement for amounts drawn under a Credit Facility or interest on such amounts).

~~“Bankruptcy Proceeds Fund” shall mean the fund created and so designated by Section 4.11.~~

“Board” shall mean the governing body of the Agency.

“Bond” or “Bonds” shall mean indebtedness and securities of any kind or class, **whether such Bonds are Senior Lien Bonds or Junior Lien Bonds,** including bonds, notes, bond anticipation notes, commercial paper, and other obligations issued under the provisions of Article ~~2~~**II** of this Indenture, **and including but not limited to the 1997 Bonds and the Restructured Bonds,** provided that notwithstanding any other provision hereof, Junior Lien Interest payable on Restructured Bonds shall be junior and subordinate to the Bonds, the Parity Swap Agreements and the Reimbursement Obligations as to lien on and source and security for payment from the Pledged Funds to the extent set forth herein **Initial Bonds, Restructured Bonds and Refunding Bonds.**

“Bond Counsel” shall mean a firm of attorneys who are nationally recognized as experts in the area of municipal finance and who are familiar with the transactions contemplated under this Indenture and who are acceptable to the Agency and the Bond Insurer.

“Bond Insurer” shall mean, as to the Initial Insured Bonds, ~~MBIA~~**National Public Finance Guarantee Corporation,** and as to any particular maturity or any particular Series of Bonds, other than the Initial Insured Bonds, the person undertaking to insure such Bonds as designated in a Supplemental Indenture providing for the issuance of such Bonds.

“Bond Owner,” “holder,” “Owner” or “registered owner” shall mean the person in whose name any Bond or Bonds are registered on the books maintained by the Registrar; **provided that, when used in reference to a 1993 Bond, “Owner” shall have the meaning ascribed to it in the 1993 Indenture.**

“Bond Register” shall mean the register maintained pursuant to Section 2.4.

“Book Entry Only System” shall mean a system similar to the system described herein pursuant to which Bonds are registered in book-entry form.

“Business Day” shall mean any day other than a Saturday, a Sunday, or a day on which banking institutions are authorized or required by law to be closed in either the State of New York or the State of California; provided that such term may have a different meaning for any specified Series of Bonds if so provided by a Supplemental Indenture.

“Caltrans” shall mean the California Department of Transportation, a department of the Business, Transportation and Housing Agency of the State of California, or any successor.

“Caltrans Agreement” shall mean that agreement relating to the San Joaquin Hills Transportation Corridor System entered into on or about November 14, 1988 by and between the Agency and Caltrans pursuant to Section 66484.3 of the California Government Code, as heretofore amended and supplemented ~~on or about May 13, 1993,~~ and as it may be further supplemented from time to time.

“Capital Appreciation Bond” shall mean a Bond, the interest on which shall be compounded periodically, shall be payable only at maturity or redemption prior to maturity, and shall be determined by subtracting from the Accreted Amount thereof the original principal amount thereof.

“Capital Appreciation Bonds Sinking Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Capitalized Interest” shall mean the portion of the proceeds from the sale of each Series of Bonds and any cash on hand at the Delivery Date which is designated as such at the time of issuance of each such Series.

~~“Capitalized Interest Account Chair” shall mean the account so designated in the Debt Service Fund.~~ “Chairman” shall mean the Chairman Chair of the Agency and his or her successors.

“Code” shall mean the Internal Revenue Code of 1986, as amended, and the United States Treasury Regulations proposed or in effect with respect thereto.

“Construction Fund” shall mean the fund created and so designated by Section 4.1.

“Convertible Capital Appreciation Bond” shall mean any Bond as to which interest accruing is not paid prior to the expiration of the specified Accretion Period and, prior thereto, is compounded periodically on certain designated dates.

“Convertible Capital Appreciation Bonds Sinking Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Cost” shall mean with respect to any ~~Pledged~~ Facility, to the extent permitted by the Act, all or any part of:

- (a) the cost of construction, reconstruction, restoration, repair and rehabilitation of such facility or portion thereof;
- (b) the cost of acquisition of all real or personal property, rights, rights of way, franchises, easements and interests acquired or used for such facility or portion thereof;
- (c) the cost of demolishing or removing any structures on land so acquired, including the cost of acquiring any land to which the structures may be removed;
- (d) any cost necessary or desirable to satisfy conditions associated with the issuance of any permit for the construction thereof (including the costs of environmental mitigation required in connection therewith);

- (e) the cost of all machinery and equipment, vehicles, materials and rolling stock;
- (f) financing charges (including costs associated with the issuance of Bonds (including fees for any policy of bond insurance relating thereto and the initial fees for any Credit Facility relating thereto), as well as the initial costs of obtaining one or more contracts which the Agency determines to be necessary or appropriate to place the Bonds in question, or any of them, on the interest rate, currency, cash flow, or other basis desired by the Agency, including, without limitation, interest rate swap agreements, currency swap agreements, forward payment conversion agreements, futures, contracts providing for payments based on levels of or changes in interest rates, currency exchange rates, stock or other indices, or contracts to exchange cash flows or a series of payments, and contracts including, without limitation, interest rate floors or caps, options puts or calls to hedge payment, currency rate, spread or similar exposure, and all fees and expenses payable by the Agency pursuant to any Reimbursement Agreement), interest on Bonds and on any Reimbursement Obligation for the period prior to, during and for a period after completion of construction as determined by the Agency, provisions for working capital, reserves for principal and interest and for extensions, enlargements, additions, replacements, renovations and improvements;
- (g) the cost of architectural, engineering, environmental, financial and legal services;
- (h) plans, specifications, estimates and administrative and other expenses which are necessary or incidental to the determination of the feasibility of constructing such facility or portion thereof or incidental to the obtaining of construction contracts or to the construction (including construction administration and inspection), acquisition or financing thereof and which constitute capital costs;
- (i) Current Expenses, provided that the Trustee has received an opinion of Bond Counsel (which opinion may address either specific Current Expenses or categories of Current Expenses) to the effect that the treatment of such Current Expenses as a Cost will not adversely affect the exclusion of interest on the Bonds from gross income for federal income tax purposes;
- (j) the repayment of any loan or advance for any of the foregoing; and
- (k) with respect to the use of Bond proceeds, such other costs and expenses as are permitted by the Act at the time such Bonds are issued.

“Credit Facility” shall mean, as to any particular Series of Bonds, a letter of credit, a line of credit, a guaranty or another credit or liquidity enhancement facility (other than an insurance policy issued by a Bond Insurer), as described in the Supplemental Indenture providing for the issuance of such Bonds.

“Current Expenses” shall mean the Agency’s reasonable and necessary current operating expenses (but only to the extent that such expenses are not payable from the “Maintenance and Operations Fund” established pursuant to the 1993 Indenture), determined in accordance with generally accepted accounting principles, with respect to the ~~Pledged~~ Facilities (excluding the administration, maintenance, repair and operation of the ~~Pledged~~ Facilities, which is provided by Caltrans pursuant to the Caltrans Agreement), which may include payments with respect to financing leases and installment purchase agreements (but only leases and installment purchase agreements pertaining to toll collection and revenue management systems, including transponders), transponder

purchases, annually recurring premiums and reserves for insurance, fees and expenses of the Trustee, the Registrar, the Paying Agent, remarketing agents, auction agents, tender agents, and broker-dealers and amounts required to be deposited into the Rebate Account pursuant hereto and any other such operating expenses required or permitted to be paid by the Agency under the provisions of this Indenture and the Act, but shall not include depreciation or any reserves for extraordinary maintenance or repair.

“Current Interest Bond” shall mean a Bond the interest on which is payable periodically and which is not a Convertible Capital Appreciation Bond.

~~“Debt Service Fund” shall mean the fund created and so designated pursuant to Section 4.3.~~

“Default” or “Event of Default” shall mean any occurrence or event specified in Section 8.1.

“Defeasance Securities” shall mean:

1. Cash,
2. U.S. Treasury Certificates, Notes and Bonds (including State and Local Government Series – “SLGs”),
3. Direct obligations of the Treasury which have been stripped by the Treasury itself, CATS, TIGRS and similar securities,
4. Resolution Funding Corp. strips which have been stripped by request to the Federal Reserve Bank of New York in book entry form are acceptable
5. Pre-refunded municipal bonds rated Aaa by Moody’s, AAA by S&P and, if rated by Fitch, AAA by Fitch. (If, however, the issue is only rated by S&P (i.e., there is no Moody’s or Fitch rating), then the pre-refunded bonds must have been pre-refunded with cash, direct U.S. or U.S. guaranteed obligations, or AAA rated pre-refunded municipals), and
6. Obligations issued by the following agencies which are backed by the full faith and credit of the U.S.:
 - a. U.S. Export Import Bank (Eximbank)
Direct obligations or fully guaranteed certificates of beneficial ownership
 - b. Farmers Home Administration (FmHA)
Certificates of beneficial ownership
 - c. Federal Financing Bank
 - d. General Services Administration
Participation certificates
 - e. U.S. Maritime Administration
Guaranteed Title XI financing
 - f. U.S. Department of Housing and Urban Development (HUD)
Project Notes
Local Authority Bonds
New Communities Debentures - U.S. government guaranteed debentures
U.S. Public Housing Notes and Bonds - U.S. government guaranteed public housing notes and bonds

“Deficiency” shall mean, depending on the context, the difference between the amount on deposit in one of the accounts for the payment of principal of or interest on Bonds established in ~~the~~ **either the Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds Debt Service Fund**

or in a Series Credit Facility Fund on parity with either such fund and the applicable Accrued Interest or Accrued Principal and Accrued Premium or the applicable Reimbursement Obligation, as the case may be, which is payable and which is unpaid as of the date on which the calculation is being made.

“Delivery Date” shall mean the date on which a Series of Bonds is delivered to the original purchasers thereof.

“Development Impact Fee Account” shall mean the account in the Revenue Fund created and so designated by Section 4.2.

“Development Impact Fees” shall mean those fees with respect to the San Joaquin Hills Transportation Corridor System collected by the ~~member entities of the Agency~~**Members** pursuant to the Joint Powers Agreement, Section 66484.3 of the California Government Code and the ordinances of each of the Members adopted pursuant to the authority thereof.

~~“Eligible Additional Costs” shall mean costs incurred by the Agency in connection with (w) managing and maintaining the Development Impact Fee program, (x) overseeing Caltrans maintenance work on the San Joaquin Hills Transportation Corridor and any Special Project, (y) managing and administrating the Agency’s planning and environmental activities and (z) court ordered non-recurring payments; provided that the aggregate amount of Eligible Additional Costs in any Fiscal Year may not, without the consent of the Bond Insurer and the Owners of a majority in Principal Obligation of the Bonds, exceed \$2,000,000 (adjusted each July 1, commencing July 1, 2012, by the percentage change in the construction cost index for the Los Angeles region for the prior Fiscal Year as published in the Engineering News Record or, if such index is no longer available, by the percentage change in such other construction cost index as the Agency may reasonably select).~~**Enhanced Adjusted Net Toll Revenues” shall mean, for any Fiscal Year, the sum of the Adjusted Net Toll Revenues for such Fiscal Year plus the Development Impact Fees in excess of \$5,000,000 received by the Agency in such Fiscal Year.**

“Excess Deposit” shall mean, with respect to a calendar month, the amount, if any, by which the sum of the Net Revenues deposited into an account for the payment of interest on Bonds in the **Senior Lien Bonds Debt Service Fund over the Junior Lien Bonds** Debt Service Fund plus the amount on deposit in any related capitalized interest account exceeds the amount of interest which actually accrued on the applicable Outstanding Bonds during such calendar month.

~~“Federal Line of Credit” shall mean the line of credit established for the benefit of Agency by the United States pursuant to the provisions of Section 356 of Public Law 104 50, or any comparable line of credit from the United States in favor of the Agency pertaining to the~~**Existing San Joaquin Hills Transportation Corridor System” shall mean the portion of the San Joaquin Hills Transportation Corridor System in operation as of the date of this Indenture.**

“Facilities” shall mean the Existing San Joaquin Hills Transportation Corridor System and the Special Project.

“Financial Consultant” shall mean any financial advisor or firm of financial advisors of favorable national reputation for skill and experience in performing the duties for which a Financial Consultant is required to be employed pursuant to the provisions hereof and who is retained by the Agency as a Financial Consultant for the purposes hereof.

“Fiscal Year” shall mean the period of time beginning on July 1 of each given year and ending on June 30 of the immediately subsequent year, or such other similar period as the Agency designates as its fiscal year.

“Fitch” shall mean Fitch ~~Investors Service, LLP~~Ratings and its successors and assigns and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, “Fitch” shall be deemed to refer to any other nationally recognized rating agency designated by the Agency.

“Fixed Rate Indebtedness” shall mean (i) any indebtedness incurred pursuant to this Indenture other than Variable Rate Indebtedness and (ii) indebtedness incurred pursuant to this Indenture which, except for this clause (ii), would be Variable Rate Indebtedness but with respect to which the Agency has entered into an Approved Swap Agreement pursuant to which agreement the Agency makes interest payments based on one or more rates of interest each of which is established at a single numerical rate for the entire remaining term of such agreement, provided that such Variable Rate Indebtedness shall be deemed to be Fixed Rate Indebtedness only while such Approved Swap Agreement remains in effect and only if the counterparty thereto is not in default thereunder, and provided further that, for purposes of determining whether the conditions set forth in Section 2.11 have been satisfied, such Variable Rate Indebtedness shall be deemed to be Fixed Rate Indebtedness only if the terms of such Approved Swap Agreement provide that it will remain in effect as long as any Bond to which such agreement relates is Outstanding. Notwithstanding the foregoing, if two series of Bonds constituting Variable Rate Indebtedness, or one or more maturities within a Series, are issued simultaneously with inverse floating interest rates providing a composite fixed interest rate for such Bonds taken as a whole, such Bonds shall constitute Fixed Rate Indebtedness.

“Government Obligations” shall mean (a) direct obligations of the United States of America (including obligations issued or held in book entry form on the books of the Department of the Treasury of the United States of America) or obligations the payment of the principal of and the interest on which is fully guaranteed by the United States of America; (b) obligations of the Resolution Funding Corporation (“REFCORP”); (c) obligations of state or local government municipal bond issuers, provision for the payment of the principal of and the premium, if any, and the interest on which shall have been made by deposit with a trustee or escrow agent of Government Obligations described in (a) or (b) above, the maturing principal of and interest on which, when due and payable, will provide sufficient money to pay the principal of, premium, if any, and interest on such obligations of state or local government municipal bond issuers, provided that such obligations shall be rated in the highest Rating Category by each and every Rating Agency ~~then rating any Series of Bonds at the request of the Agency~~; (d) U.S. Treasury Strips; and (e) REFCORP Strips (stripped by the Federal Reserve Bank of New York).

“Indenture” shall mean this Master Indenture of Trust together with all amendments and supplements hereto.

“Information Services” shall mean such services providing information with respect to called bonds as the Agency may designate in a certificate of an Authorized Agency Representative delivered to the Trustee.

“Initial Bonds” shall mean the **Outstanding 1997 Bonds (including the Restructured Bonds) and any** Bonds issued ~~under the first Supplemental Indenture.~~**in calendar year 2014.**

~~“Initial Insured Bonds” shall mean the Outstanding Initial Bonds that are Current Interest Bonds issued under the first Supplemental Indenture with maturity dates of January 15, 2029 and January 15, 2030 and all the Outstanding Initial Bonds that are Capital Appreciation Bonds issued under the first Supplemental Indenture except those with the maturity date of January 15, 2002.~~

~~“Initial Pledged Facilities” shall mean the San Joaquin Hills Transportation Corridor. “Interest Account” shall mean the account so designated in the Debt Service Fund.~~

~~“Interest Payment Date” shall mean each January 15 and July 15, commencing for each Series of Bonds, on the date or dates set forth in the document providing for the issuance thereof, provided that in the case of Variable Rate Indebtedness “Interest Payment Date” shall mean each date on which interest thereon is payable, as set forth in the document providing for the issuance thereof.~~

~~“Joint Exercise of Powers Agreement” shall mean that certain first amended and restated joint exercise of powers agreement dated as of January 30, 1986, among the Members, pursuant to which the Agency was formed, as amended and restated from time to time.~~

“Junior Indebtedness” shall have the meaning ascribed to it in Section 8.13.

~~“Junior Lien Interest” shall mean:~~ **Bond” shall mean (i) any Bond which is expressly designated as a Junior Lien Bond by the Supplemental Indenture pursuant to which it is issued and (ii) any Bond issued on parity therewith.**

~~(a) — in the aggregate for all Restructured Bonds for any Fiscal Year, the remainder of (i) the sum of the principal of and interest on the 1997 Bonds and the Restructured Bonds coming due in said Fiscal Year minus (ii) the sum of the principal of and interest on the 1997 Bonds for such Fiscal Year as shown in the Original Debt Service Schedule for such Fiscal Year;~~

~~(b) — in the aggregate for all Restructured Bonds of any particular maturity for any Fiscal Year, the amount so designated with respect thereto in the Second Supplemental Indenture; and~~

~~(c) — for any particular Restructured Bond of any given maturity for any Fiscal Year, the product of (x) the aggregate amount of Junior Lien Interest for all Restructured Bonds of that maturity for such Fiscal Year times (y) a fraction the numerator of which is the principal amount of such Restructured Bond and the denominator of which is the total principal amount of all Restructured Bonds of that maturity;~~

~~“Junior Lien Bonds Capitalized Interest Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.~~

~~“Junior Lien Interest Account Deficiency” shall mean the difference between (x) the Accrued Junior Lien Interest which is payable and which is unpaid as of the date on which the calculation is being made and (y) the amount then on deposit in the Junior Lien Interest Account. Bonds Debt Service Fund” shall mean the fund so designated established pursuant to Section 4.4.~~

“Junior Lien Bonds Interest Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.

“Junior Lien Bonds Prepayment Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.

“Junior Lien Bonds Principal Account” shall mean the account so designated in the Junior Lien Bonds Debt Service Fund.

“Junior Lien Bonds Reserve Fund” shall mean the fund so designated established pursuant to Section 4.6.

“Junior Lien Bonds Reserve Fund Requirement” shall mean an amount equal to the least of (i) 10% of the initial principal amount of the Junior Lien Bonds, as calculated by the Agency pursuant to the Regulations, (ii) Maximum Annual Debt Service on the Junior Lien Bonds or (iii) 125% of average Annual Debt Service on the Junior Lien Bonds, determined on the date each Series of Junior Lien Bonds is issued, subject to being reduced (but never increased) thereafter as necessary to reflect reductions in Annual Debt Service on the Junior Lien Bonds resulting only from the redemption or payment at maturity or defeasance of a Junior Lien Bond.

“Mail” shall mean by first class United States mail, postage prepaid.

“Maximum Annual Debt Service” shall mean at any point in time the maximum amount of Annual Debt Service becoming due in the then current or any future Fiscal Year.

“Maximum Auction Rate” shall mean the highest rate of interest permitted to be borne by Auction Rate Indebtedness under the terms of the Supplemental Indenture pursuant to which such Auction Rate Indebtedness was issued. Legal Rate” shall mean twelve percent (12%) per year calculated on the basis of a 360 day year consisting of twelve 30-day months.

“MBIA” shall mean MBIA Insurance Corporation, and its successors.

“Members” shall mean the member entities of the Agency under the Joint Exercise of Powers Agreement, as identified from time to time and which, on the date of execution of this Indenture, are the County of Orange and the Cities of Costa Mesa, Dana Point, Irvine, Laguna Hills, Laguna Niguel, Mission Viejo, Newport Beach, San Clemente, San Juan Capistrano, and Santa Ana.

“Moody’s” shall mean Moody’s Investors Service, a corporation organized and existing under the laws of the State of Delaware, its successors and their assigns, and, if such corporation shall for any reason no longer perform the functions of a securities rating agency, “Moody’s” shall be deemed to refer to any other nationally recognized rating agency designated by the Agency.

“Municipal Bond Insurance Policy” shall mean anythe policy of insurance issued by MBIA National Public Finance Guarantee Corporation insuring any of the Initial Insured Bonds.

“Net Revenues” shall mean, for any period, the excess, if any, of Revenues for such period over Current Expenses for such period paid from Revenues for such period.

“Outstanding” or “Bonds Outstanding” or “Outstanding Bonds,” when used in reference to any 1993 Bond, shall have the meaning ascribed thereto in the 1993 Indenture and otherwise shall mean all Bonds which have been authenticated and delivered under this Indenture, except:

(a) Bonds cancelled or purchased by the Trustee for cancellation or delivered to or acquired by the Trustee for cancellation and, in all cases, with the intent to extinguish the debt represented thereby;

(b) Bonds deemed to be paid in accordance with Article ~~7~~**VII**;

(c) Bonds in lieu of which other Bonds have been authenticated under Section 2.5;

(d) Bonds that have become due (at maturity, on redemption, by acceleration or otherwise) and for the payment of which sufficient moneys, including interest accrued to the due date, are held by the Trustee or a Paying Agent;

(e) Bonds which, under the terms of the Supplemental Indenture pursuant to which they were issued, are deemed to be no longer ~~outstanding~~**Outstanding**; and

(f) for purposes of any consent or other action to be taken by the Owners of a specified percentage of Bonds under this Indenture, Bonds held by or for the account of the Agency or by any person controlling, controlled by or under common control with the Agency, unless such Bonds are pledged to secure a debt to an unrelated party, in which case such Bonds shall, for purposes of consents and other Bond Owner action, be deemed to be Outstanding and owned by the party to which such Bonds are pledged. **Upon request of the Trustee, the Agency shall specify in a certificate to the Trustee those Bonds disqualified hereunder; and the Trustee may conclusively rely on such certificate.**

~~“Outstanding 1993 Bonds” shall mean the 1993 Bonds which have a maturity date of January 1, 2033, except any such 1993 Bonds which, under the terms of the 1993 Indenture, are deemed to be no longer outstanding.~~

~~“Original Debt Service Schedule” shall mean the combined debt service owed on the 1993 Bonds and the 1997 Bonds as shown in the column of Exhibit A hereto entitled “Combined Debt Service Requirements” (said exhibit being the table contained on page 48 of the Agency’s Official Statement dated September 27, 1997).~~

~~“Owner,” when used in reference to the 1993 Bonds, shall have the meaning ascribed to the term “Owner” in the 1993 Indenture.~~

~~“Parity Swap Agreement” shall mean an interest rate swap agreement, interest rate cap or other agreement of a type described in Section 2.12 which satisfies the requirements established in Section 2.12 in order that some or all of the amounts payable by the Agency pursuant to such agreement may be secured by the Pledged Funds on parity with the Bonds to which such agreement relates.~~

~~“Parity Swap Agreement Counterparty” shall mean the counterparty to a Parity Swap Agreement with the Agency or with the Trustee.~~

~~“Paying Agent” or “Paying Agents” shall mean the Trustee and/or any entity appointed by the Agency as a Paying Agent pursuant to Section 9.11.~~

“Permitted Investments” shall mean Government Obligations and:

(a) ~~bonds~~**Bonds**, debentures or notes or other evidence of indebtedness issued by any one or a combination of any of the following federal agencies and provided such obligations are backed by the full faith and credit of the United States of America: U.S. Export Import Bank (direct obligations or fully guaranteed certificates of beneficial ownership), Federal Financing Bank, Farmer’s Home Administration (certificates of beneficial ownership), Federal Housing Administration Debentures, General Services Administration (participation certificates) U.S. Maritime Administration (guaranteed Title XI financing), U.S. Department of Housing and Urban Development (project notes, local authority bonds, new communities debentures U.S. government guaranteed debentures, U.S. public housing notes and bonds U.S. government guaranteed public housing notes and bonds) and Government National Mortgage Association (GNMA guaranteed mortgage backed bonds, GNMA guaranteed pass-through obligations);

(b) Bonds, debentures, notes or other evidence of indebtedness issued or guaranteed by any of the following non full faith and credit U.S. government agencies (stripped securities are only permitted if they have been stripped by the agency itself): Federal Home Loan Bank System (Senior debt obligations); Federal Home Loan Mortgage Corporation (Participation Certificates, Senior debt obligations); Federal National Mortgage Association (Mortgage backed securities and senior debt obligations); Student Loan Marketing Association (Senior debt obligations); Resolution Funding Corp. (obligations); and Farm Credit System (Consolidated systemwide bonds and notes);

(c) Money market funds registered under the Federal Investment Company Act of 1940, whose shares are registered under the Federal Securities Act of 1933, ~~including funds for which the Trustee, its parent, its affiliates or its subsidiaries provide investment advisory or other management services, and which have a rating by S&P of AAAm G; AAA mAAA; or AA mAAm and, if rated by Moody’s, rated Aaa, Aa1 or Aa2 and, if rated by Fitch, rated AAA or AA-~~ **including such funds for which the Trustee, its affiliates or subsidiaries provide investment advisory or other management services or for which the Trustee or an affiliate of the Trustee serves as investment administrator, shareholder servicing agent, and/or custodian or subcustodian, notwithstanding that (i) the Trustee or an affiliate of the Trustee receives fees from funds for services rendered, (ii) the Trustee collects fees for services rendered pursuant to this Indenture, which fees are separate from the fees received from such funds, and (iii) services performed for such funds and pursuant to this Indenture may at times duplicate those provided to such funds by the Trustee or an affiliate of the Trustee;**

(d) Certificates of deposit secured at all times by collateral described in (A) and/or (B) above. Such certificates must be issued by commercial banks (including the Trustee, its parent, its affiliates or its subsidiaries), savings and loan associations or mutual savings banks. The collateral must be held by a third party and the Bondholders must have a perfected first security interest in the collateral.

(e) Certificates of deposit, savings accounts, deposit accounts or money market deposits which are fully insured by the FDIC, ~~including BIF and SAIF.~~

(f) Investment Agreements, including guaranteed investment contracts (“GIC’s”), Forward Purchase Agreements and Reserve Fund Put Agreements acceptable to the Bond Insurer.

(g) Commercial paper rated, at the time of purchase, Prime - 1 or better by Moody's and A-1 or better by S&P and, if rated by Fitch, rated F-1 or better.

(h) Bonds or notes issued by any state or municipality which are rated by Moody's and S&P in one of the two highest rating categories assigned by such agencies and, if rated by Fitch, in one of the two highest rating categories assigned by it.

(i) Federal funds or bankers acceptance with a maximum term of one year of any bank, **including the Trustee and its affiliates,** which has an unsecured, uninsured and unguaranteed obligation rating of Prime 1 or A3 or better by Moody's and A 1 or A or better by S&P and, if rated by Fitch, a rating of F-1 or A or better.

(j) Repurchase Agreements ("Repos") meeting the following criteria:

1. Repos must be between the Agency or Trustee and a dealer bank or securities firm
 - a. Primary dealers on the Federal Reserve reporting dealer list which are rated A or better by S&P and Moody's and, if rated by Fitch, rated A or better, or
 - b. Banks rated "A" or above by S&P and Moody's and, if rated by Fitch, rated A or above.
2. The written repo contract must include the following:
 - a. Securities which are acceptable for transfer are:
 - (1) Direct U.S. governments, or
 - (2) Federal agencies backed by the full faith and credit of the U.S. government (and FNMA & FHLMC),
 - b. The term of the repo may ~~be up to~~ **not exceed** 30 days ~~(a repo in excess of thirty days must be~~ **unless** approved by **the** Bond Insurer),
 - c. The collateral must be delivered to the Agency or the Trustee (if Trustee is not supplying the collateral) or third party acting as agent for the Trustee (if the Trustee is supplying the collateral) before/simultaneous with payment (perfection by possession of certificated securities),
 - d. Valuation of Collateral
 - (1) The securities must be valued weekly, marked to market at current market price plus accrued interest,
 - ~~(a2)~~ **2** The value of collateral must be equal to 104% of the amount of cash transferred by the Agency or the Trustee to the dealer bank or security firm under the repo plus accrued interest. If

the value of securities held as collateral slips below 104% of the value of the cash transferred by the Agency or the Trustee, then additional cash and/or acceptable securities must be transferred. If, however, the securities used as collateral are FNMA or FHLMC, then the value of collateral must equal 105%, ~~and~~

3. Legal opinion which must be delivered to the Agency and Trustee:
 - a. Repo meets guidelines under state law for legal investment of public funds;

(k) ~~medium~~**Medium**-term obligations of a maximum maturity of five years issued by corporations organized and operating within the United States, or by depository institutions licensed by the United States or any state and operating in the United States, which are rated in one of the three highest applicable Rating Categories, or approved in writing, by S&P and, if rated by Fitch, rated in one of the three highest applicable Rating Categories; and

(l) **Investment agreements, including guaranteed investment contracts, forward purchase agreements and reserve fund put agreements, and** any such other investment as an Authorized Agency Representative shall certify to the Trustee or the Agency, as the case may be, as being permitted by the Act, provided that ~~such investment is approved in writing by each Rating Agency which has assigned a rating to the Bonds at the request of the Agency and by the Bond Insurer~~**the Rating Agency Condition shall have been satisfied.**

“Pledged Bonds” shall mean ~~a Bond~~**Bonds** purchased by the Paying Agent with amounts received pursuant to a drawing under a Credit Facility and pledged to or registered in the name of a Bank which is a provider of such Credit Facility or its designee.

~~“Pledged Facilities” shall mean the Initial Pledged Facilities and the Special Projects.~~

“Pledged Funds” shall mean (i) the Net Revenues, (ii) amounts transferred to the Trustee by the 1993 Trustee from the “Senior Lien Bonds Reserve Fund” and the “Use and Occupancy Fund” established under the 1993 Indenture and (iii) moneys on deposit in any fund or account held by or for the benefit of the Trustee hereunder except ~~(y)~~ the Rebate Fund and any Series Credit Facility Fund and ~~except also (z)~~ such other funds and accounts as may be established pursuant to a Supplemental Indenture which provides that the moneys therein shall not constitute Pledged Funds.

~~“Prepayment Account” shall mean the account so designated in the Debt Service Fund.~~

~~“Principal Account” shall mean the account so designated in the Debt Service Fund.~~

“Principal Obligation” shall mean the sum of the principal amount of Current Interest Bonds and the Accreted Amount of Capital Appreciation Bonds and Convertible Capital Appreciation Bonds Outstanding hereunder as of any date of calculation.

“Principal Office” shall mean, in the case of the Trustee, the Trustee’s principal corporate trust office in Los Angeles, California, and in the case of a Paying Agent or a Registrar, the office so designated pursuant to Section 9.11 or 9.12, as the case may be, provided that, with respect to the presentation of Bonds for payment or for registration of transfer and exchange, such term shall mean

the office or agency of the Trustee, Paying Agent or Registrar at which, at any particular time, its corporate trust agency business is being conducted.

“Rating Agency” shall mean each of Fitch, Moody’s, S&P ~~or~~ and such other nationally recognized securities rating agency as may be so designated in writing to the Trustee by an Authorized Agency Representative but only in each case if such firm has assigned a rating to any Outstanding Bond at the request of the Agency.

“Rating Agency Condition” shall mean, with respect to any action, that the Agency shall have received and delivered or caused to be delivered to the Trustee written confirmation from each Rating Agency that such action will not result in a suspension, reduction or withdrawal of the then current rating of any of the Bonds by such Rating Agency.

“Rating Category” shall mean each major rating classification established by a Rating Agency, determined without regard to gradations such as “1,” “2” and “3” or “plus” and “minus.”

“Rebate Fund” shall mean the fund created and so designated pursuant to Section 4.7.4.9.

“Rebate Regulations” shall mean the Treasury Regulations issued under Section 148(f) of the Code.

“Record Date” shall mean, with respect to any Series of Bonds, the date so specified in the document providing for the issuance of such Series.

“Refunding Bond” shall mean any Bond which is issued solely for the purposes of (i) providing funds for the payment of principal, interest and redemption premium with respect to all Outstanding 1993 Bonds and the Bonds of any one or more Series or a portion of any Series in accordance with and as permitted by the Act and the Supplemental Indenture under which such Refunding Bonds are issued, (ii) paying the costs of issuing such Refunding Bonds and (iii) funding a reserve fund for such Refunding Bonds.

“Registrar” shall mean the Trustee and/or any entity appointed by the Agency as a Registrar pursuant to Section 9.12.

“Regulations” shall mean the regulations adopted or proposed by the Department of Treasury from time to time with respect to obligations issued pursuant to Section 103 of the Code.

“Reimbursement Agreement” shall mean an agreement between the Agency and one or more Banks pursuant to which, among other things, such Bank or Banks issue a Credit Facility with respect to Bonds of one or more Series and the Agency agrees to reimburse such Bank or Banks for any drawings made thereunder, including any security or pledge agreement entered into in connection therewith pursuant to which the Agency grants the Bank or Banks a security interest in any collateral to secure its obligations to the Bank or Banks.

“Reimbursement Obligation” shall mean an obligation of the Agency pursuant to a Reimbursement Agreement to repay any amounts drawn under a Credit Facility, ~~to pay~~ and any interest on such drawn amounts pursuant to such Reimbursement Agreement ~~and to pay any Bank Fee owed pursuant thereto.~~

~~“Reserve Fund” shall mean the fund created and so designated by Section 4.4. “Reserve Fund Requirement” shall mean an amount equal to the greater of (i) Maximum Annual Debt Service less the amount on deposit in the “Senior Lien Bonds Reserve Fund” established pursuant to the 1993 Indenture or (ii) Maximum Annual Debt Service calculated without regard to the Outstanding 1993 Bonds.~~

“Responsible Officer” shall mean an officer or assistant officer of the Trustee assigned by the Trustee to administer this Indenture.

“Restructured Bonds” shall mean ~~1997 Bonds~~ **the Outstanding Initial Bonds that mature on January 15, 2037, 2038, 2040, 2041 and 2042 and** whose terms are ~~amended~~ **were restructured pursuant to the Second Supplemental Indenture of Trust, dated as of May 1, 2011, by and between the Agency and the Trustee.**

“Revenue Fund” shall mean the fund created and so designated by Section 4.2.

“Revenues” shall mean: (i) for any period while there are Outstanding 1993 Bonds, the sum of (a) the amounts paid to the Trustee **or the Agency** by the 1993 Trustee from the “Surplus Revenues Fund” established pursuant to the 1993 Indenture, (b) earnings derived from the investment of moneys in the funds and accounts established hereunder (whether held by the Trustee or the Agency) except the Rebate Fund, and (c) such other sources of funds as may be identified as Revenues in a Supplemental Indenture; and (ii) for any period after there are no longer any Outstanding 1993 Bonds, **the sum of** (a) the Tolls, (b) **Development Impact Fees (but only if and to the extent that they are transferred to the Trustee pursuant to Section 4.2),** (c) earnings derived from the investment of moneys in the funds and accounts established hereunder (whether held by the Trustee or the Agency) except the **Capital Appreciation Bonds Sinking Account, the Senior Subordinated Interest Sinking Account, the Development Impact Fee Account and the** Rebate Fund; (d) liquidated damages or similar payments (net of offsets required or permitted by the applicable agreement) payable under any toll collection or revenue management contract or any operating or maintenance contract relating to a Pledged-Facility (including the Caltrans Agreement); (e) proceeds of revenue interruption insurance maintained by or for the benefit of the Agency; (f) net proceeds of eminent domain proceedings and casualty insurance maintained by or for the benefit of the Agency to the extent such proceeds are not promptly applied by the Agency either to the replacement or restoration of the Pledged-Facility taken or damaged or to the redemption of Bonds; (g) ~~proceeds of loans received by the Agency under the Federal Line of Credit to pay expenses and debt service (but not proceeds of loans thereunder to pay for capital expenditures);~~ and (h) such other sources of funds as may be identified as Revenues in a Supplemental Indenture. Except to the extent specifically otherwise provided above or in a Supplemental Indenture, “Revenues” shall not include (x) the proceeds of any Bonds or other indebtedness issued or incurred by the Agency, (y) Development Impact Fees **that are not transferred to the Trustee pursuant to Section 4.2** or (z) rebates of premiums received by the Agency or the Trustee in connection with insurance policies maintained by or for either of them. Notwithstanding the foregoing, earnings derived from the investment of moneys in the Toll Stabilization Fund shall not constitute “Revenues.”

“S&P” shall mean Standard & Poor’s **Ratings Services**, a division of **The McGraw Hill, Inc. Companies**, a corporation **duly** organized and existing under **and by virtue of** the laws of the State of New York, its successors and their assigns, and if ~~such corporation~~ **it** shall for any reason no longer perform the functions of a securities rating agency, “S&P” shall be deemed to refer to any other nationally recognized securities rating agency designated by the Agency.

“San Joaquin Hills Transportation Corridor” shall mean the toll road generally referred to by said name and consisting generally of a six-lane, limited access highway from the prior terminus of the Corona del Mar Freeway to Interstate 5 in San Juan Capistrano, together with all related toll collection facilities.

~~“Second Supplemental Indenture” shall mean the Second Supplemental Indenture of Trust, dated as of April 1, 2011, by and between the Agency and the Trustee, setting forth the provisions of the Restructured Bonds.~~

“Secured Owner” shall mean, as to any particular Series of Bonds, each person who is a “Bond Owner”, “Holder”, “Owner” or “registered owner” of the Bonds of such Series, each Parity Swap Agreement Counterparty providing a Parity Swap Agreement with respect to such Bonds, each Bank providing a Credit Facility with respect to such Bonds and each Bond Insurer providing a bond insurance policy with respect to such Bonds.

“Securities Depositories” shall mean: The Depository Trust Company, 55 Water Street, 50th Floor, New York, New York, 10041-0099, Attn: Call Notification Department, Fax (212) 855-7232; and, in accordance with then current guidelines of the Securities and Exchange Commission, such other addresses as such depository may specify and/or such other securities depositories as the Agency may designate in a certificate of an Authorized Agency Representative delivered to the Trustee.

“Senior Indebtedness” shall have the meaning ascribed to it in Section 8.13.

“Senior Lien Bond” shall mean any Bond which is expressly designated as a Senior Lien Bond by the Supplemental Indenture pursuant to which it is issued.

“Senior Lien Bonds Capitalized Interest Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Debt Service Fund” shall mean the fund so designated established pursuant to Section 4.3.

“Senior Lien Bonds Interest Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Prepayment Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Principal Account” shall mean the account so designated in the Senior Lien Bonds Debt Service Fund.

“Senior Lien Bonds Reserve Fund” shall mean the fund so designated established pursuant to Section 4.5.

“Senior Lien Debt Service Reserve Fund Deficiency Amount” shall mean the difference between Maximum Annual Debt Service on the Senior Lien Bonds and the amount on deposit in the Senior Lien Bonds Reserve Fund as of the date of execution and delivery of this First Amended and Restated Master Trust Indenture, as such deficiency may be reduced in accordance with the provisions of Section 4.2(d)(ii).

“Senior Lien Bonds Reserve Fund Requirement” shall mean: (i) during the period in which there are any 1993 Bonds Outstanding, an amount equal to the greater of (a) Maximum Annual Debt Service, calculated without regard to Annual Debt Service on Junior Lien Bonds, less the amount on deposit in the “Senior Lien Bonds Reserve Fund” established pursuant to the 1993 Indenture or (b) Maximum Annual Debt Service, calculated without regard to Annual Debt Service on the 1993 Bonds and without regard to Annual Debt Service on the Junior Lien Bonds; and (ii) during the period in which there are no 1993 Bonds Outstanding, the least of: (x) 10% of the initial principal amount of the Senior Lien Bonds, as calculated by the Agency pursuant to the Regulations, (y) Maximum Annual Debt Service on the Senior Lien Bonds, and (z) 125% of average Annual Debt Service on the Senior Lien Bonds, as determined on the date each Series of Senior Lien Bonds is issued subject to being reduced (but never increased) thereafter as necessary to reflect reductions in Annual Debt Service on the Senior Lien Bonds resulting only from the redemption or payment at maturity or defeasance of a Senior Lien Bond.

“Series” shall mean one or more Bonds issued at the same time, or sharing some other common term or characteristic, and designated as a separate Seriesseries or subseries in the Supplemental Indenture pursuant to which it or they are issued.

“Series Credit Facility Fund” shall mean any fund established by a Supplemental Indenture as a fund from which to pay to the applicable Bank or Banks such amounts as may be required to be paid with respect to the Agency’s Reimbursement Obligations to such Bank or Banks.

“Special Project” shall mean any addition to, or any betterment, improvement or enlargement of, the Initial Pledged Facilities which is so designated by the Agency in a resolution of the Board a certified copy of which is delivered to the Trustee.

“State” shall mean the State of California.

“Subordinated Indebtedness” shall have the meaning ascribed to it in Section 8.14.

“Supplemental Indenture” shall mean any supplemental indenture then in full force and effect which has been duly approved by resolution of the Board and signed by the Agency and the Trustee and providing for the issuance of a Series or multiple Series of Bonds, amending and/or supplementing this Indenture or amending and/or supplementing another Supplemental Indenture.

“Supplemental Reserve Fund” shall mean the fund created and so designated by Section 4.13.

“Supplemental Reserve Fund Requirement” shall mean: (i) for any period while there are Outstanding 1993 Bonds, an amount equal to \$664,000,000, provided that said amount may be reduced with the consent of the Bond Insurer, the Owners of a majority in Principal Obligation of the Bonds and the Owners of a majority in Principal Obligation of the 1993 Bonds, and (ii) for any period after there are no longer any Outstanding 1993 Bonds, an amount equal to 50% of Maximum Annual Debt Service.

“Surplus Revenues Fund” shall mean the fund created and so designated pursuant to Section 4.6.4.8.

“Tax Certificate” shall mean the certificate by that name to be executed by the Agency on a Delivery Date to establish certain facts and expectations and which contains certain covenants relevant to compliance with the Code.

“Swap Termination Payment” shall mean an amount payable by the Agency or a Parity Swap Agreement Counterparty in accordance with a Parity Swap Agreement to compensate the other party to the Parity Swap Agreement for any losses and costs that such other party may incur as a result of the early termination of the obligations, in whole or in part, of the parties under such Parity Swap Agreement.

“Tender Indebtedness” shall mean any Bond or portion thereof a feature of which is an option, on the part of the Bond Owner, or an obligation, under the terms of such Bond, to tender all or a portion of such Bond to the Agency, the Trustee, the Paying Agent or other fiduciary or agent for payment or purchase and requiring that such Bond or portion thereof be purchased if properly presented. Auction Rate Indebtedness shall not constitute Tender Indebtedness.

“Term Rate Indebtedness” shall mean any Bond or portion thereof a feature of which is an obligation on the part of the owner thereof, under the terms of such Bond, to tender all or a portion of such Bond to the Agency, the Trustee, the Paying Agent or other fiduciary or agent for purchase and requiring that such Bond or portion thereof be purchased if and only if proceeds from the remarketing thereof and/or other funds made available for such purpose at the option of the Agency are sufficient to pay the applicable purchase price.

“Tolls” shall mean all rates, rents, fees **(including, but not limited to, account maintenance fees, transponder fees and other similar charges)**, charges, fines, or other income derived by the Agency from vehicular usage of the Pledged Facilities, and all rights to receive the same, **but excluding therefrom any portion thereof derived from the vehicular usage of a Special Project that is required to be paid to a contractor pursuant to a contract for the acquisition or construction of such Special Project as a result of the early completion of such Special Project or any segment thereof.**

“Toll Stabilization Fund” shall mean the fund created and so designated by Section 4.12.

“Toll Stabilization Fund Requirement” shall mean an amount equal to \$664,000,000, provided that said amount may be reduced with the consent of the Bond Insurer, the Owners of a majority in Principal Obligation of the Bonds and the Owners of a majority in Principal Obligation of the 1993 Bonds.

“Traffic Consultant” shall mean any traffic and revenue consultant or firm of traffic and revenue consultants of favorable national reputation for skill and experience in performing the duties for which a Traffic Consultant is required to be employed pursuant to the provisions of this Indenture and who is retained by the Agency as a Traffic Consultant for the purposes of this Indenture.

“Trust Estate” shall mean the Pledged Funds.

“Trustee” shall mean the entity named as such in the heading of this Indenture until a successor replaces it in accordance with the provisions of Section 9.9, and thereafter means such successor.

“Unrestricted Funds” shall mean money held by or for the benefit of the Agency in a fund or account other than the funds and accounts established pursuant to this Indenture or any Supplemental Indenture that can be used by the Agency for any lawful purpose.

“Use and Occupancy Fund” shall mean the fund created and so designated by Section 4.5.4.7.

“Use and Occupancy Fund Requirement” shall mean (i) for any period while there are Outstanding 1993 Bonds, **zero dollars (\$0)** and (ii) for any period after there are no Outstanding 1993 Bonds, the greater of (i) \$25,000,000 **15,000,000** and (ii) such amount as may from time to time be specified by the Agency.

“Variable Rate Indebtedness” shall mean: (i) any indebtedness incurred pursuant to this Indenture the interest rate applicable to which is not established at the time of incurring of such indebtedness at a rate which cannot increase during the entire term thereof or has not at some subsequent date been established at a rate which cannot increase during the entire term thereof and (ii) indebtedness incurred pursuant to this Indenture which, except for this clause (ii), would be Fixed Rate Indebtedness but with respect to which the Agency has entered into an Approved Swap Agreement pursuant to which Approved Swap Agreement the Agency makes interest payments based on a rate of interest which is not established at a single numerical rate for the entire remaining term of such Approved Swap Agreement, provided that such Fixed Rate Indebtedness shall be deemed to be Variable Rate Indebtedness only while such agreement remains in effect and only if the counterparty thereto is not in default thereunder.

ARTICLE II

FORM, EXECUTION, DELIVERY AND REGISTRATION OF BONDS

Section 2.1 ~~**Section 2.1. Issuance of Bonds; Forms.**~~ The Agency hereby authorizes the issuance of Bonds hereunder from time to time. The Bonds shall be designated the “San Joaquin Hills Transportation Corridor Agency, Toll Road Refunding Revenue Bonds, Series 1997A,” inserting in the blank an appropriate identifying series letter, number and/or year and including such other characteristics as may be provided by a Supplemental Indenture. The Bonds may have any notations, legends or endorsements required by law or custom and usage, and Bonds issued in whole or in part to refund other Bonds may include the ~~words~~ **“Senior,” “Junior,” “Subordinate” and/or “Refunding”** in their name. The Bonds shall be numbered and dated as provided in the applicable Supplemental Indenture.

All Bonds shall contain on the face thereof a statement to the following effect:

Neither the faith and the credit nor the taxing power of the State of California or any public agency thereof, other than the San Joaquin Hills Transportation Corridor Agency to the extent of the Pledged Funds, is pledged to the payment of the principal of, or interest on, this Bond.

Section 2.2 ~~**Section 2.2. Terms of the Bonds.**~~ The Bonds shall be issued in the principal amounts, bear interest at a rate or rates (including variable or adjustable rates), not exceeding the maximum rate then permitted by law, shall mature and shall be subject to redemption prior to their respective maturities, all as shall be set forth in a Supplemental Indenture. ~~The maturity date of any Initial Bond shall not be later than January 15, 2038.~~ The Bonds shall be payable in lawful money of

the United States, and the payment of principal of, premium, if any, and interest on the Bonds shall be made as specified in the Supplemental Indenture providing for the issuance thereof or as provided in such Bonds themselves.

Section 2.3 ~~**Section 2.3.**~~ **Execution and Authentication.** The Bonds will be signed for the Agency with the manual or facsimile signatures of its ~~Chairman~~**Chair**, its Vice ~~Chairman~~**Chair** or its Chief Executive Officer and either its Secretary or an Assistant Secretary. The Agency may deliver to the Trustee or its agent duly executed Bonds for authentication from time to time by the Trustee or its agent as such Bonds may be required. Bonds executed and so delivered and authenticated will be valid. In case any officer of the Agency whose signature or whose facsimile signature shall appear on any Bonds shall cease to be such officer before the authentication of such Bonds, such signature or the facsimile signature thereof shall nevertheless be valid and sufficient for all purposes the same as if he or she had remained in office until authentication. Also, if a person signing a Bond is the proper officer on the actual date of execution, the Bond will be valid even if that person is not the proper officer on the nominal date of action and even though, at the date of this Indenture, or the related Supplemental Indenture such person was not such officer.

A Bond will not be valid until the Trustee or its agent manually signs the certificate of authentication on the Bond. Such signature will be conclusive evidence that the Bond has been authenticated under this Indenture.

The Trustee may appoint an authenticating agent acceptable to the Agency to authenticate Bonds or may appoint different authenticating agents for different Series of Bonds. An authenticating agent may authenticate Bonds whenever the Trustee may do so. Each reference in this Indenture to authentication by the Trustee includes authentication by such agent.

Section 2.4 ~~**Section 2.4.**~~ **Bond Register.** Bonds of each Series may be presented at the Principal Office of the applicable Registrar, unless a different office has been designated for such purpose, for registration, transfer and exchange. The Registrar will keep a register of each Series of Bonds and of their transfer and exchange.

Section 2.5 ~~**Section 2.5.**~~ **Mutilated, Lost, Stolen or Destroyed Bonds.**

(a) In the event any Bond is mutilated or defaced but identifiable by number and description, the Agency shall execute and the Trustee shall authenticate and deliver a new Bond of like Series, date, maturity and denomination as such Bond, upon surrender thereof to the Trustee; provided that there shall first be furnished to the Agency and the Trustee clear and unequivocal proof satisfactory to the Trustee that the Bond is mutilated or defaced to such an extent as to impair its value to the Bond Owner. The Bond Owner shall accompany the above with a deposit of money required by the Agency for the cost of preparing the substitute Bond and all other expenses connected with the issuance of such substitute. The Agency shall then cause proper record to be made of the cancellation of the original, and thereafter the substitute shall have the validity of the original.

(b) In the event any Bond is lost, stolen or destroyed, the Agency may execute and the Trustee may authenticate and deliver a new Bond of like date, maturity and denomination as that Bond lost, stolen or destroyed; provided that there shall first be furnished to the Agency and the Trustee evidence of such loss, theft or destruction satisfactory to the Agency and the Trustee, together with indemnity satisfactory to them and all other expenses connected with the issuance of such

substitute. The Agency shall then cause proper record to be made of the cancellation of the original, and thereafter the substitute shall have the validity of the original.

(c) The Agency and the Trustee shall charge the holder of such Bond all transfer taxes, if any, and their reasonable fees and expenses in this connection. All substitute Bonds issued and authenticated pursuant to this Section shall be issued as a substitute and numbered, if numbering is provided for by the Supplemental Indenture or the Trustee, as determined by the Trustee. In the event any such Bond shall be about to mature or has matured or been called for redemption, instead of issuing a substitute Bond, the Trustee may pay the same at its maturity or redemption without surrender thereof.

Section 2.6 ~~**Section 2.6. Registration and Transfer and Exchange of Bonds; Persons Treated as Owners.**~~ All Bonds shall be issued in fully registered form.

(a) ~~**Book Entry System.**~~ Except as otherwise specified in a Supplemental Indenture, the Agency shall use a book entry system for the registration of transfers and exchanges of the Bonds; and the details of such system shall be as established from time to time by one or more Supplemental Indentures.

(b) ~~**Discontinuance of Book Entry System.**~~ If the Bonds are not restricted to being registered in the Bond Register in the name of a nominee pursuant to a book entry system or any other system for the immobilization of the Bonds, they shall be registered in whatever name or names Owners transferring or exchanging Bonds shall designate, in accordance with the provisions hereof. The cost of printing Bonds and any services rendered or expenses incurred by the Trustee or Registrar in connection with any transfer or exchange, as hereinafter provided, shall be paid by the Agency.

Upon surrender for transfer of any Bond at the Principal Office of the Registrar, the Registrar shall deliver in the name of the Owner or the transferee or transferees, as the case may be, a new fully authenticated and registered Bond or Bonds of Authorized Denominations of the same Series and same maturity for the aggregate principal amount which the Bond Owner is entitled to receive. All Bonds presented for transfer, redemption or payment shall be accompanied by a written instrument or instruments of transfer or authorization for exchange, in form and with guaranty of signature satisfactory to the Agency and the Registrar, duly executed by the Bond Owner or by his duly authorized attorney. The Registrar also may require payment from the Bond Owner of a sum sufficient to cover any tax, or other governmental fee or charge that may be imposed in relation thereto. Such taxes, fees and charges shall be paid before any such new Bond shall be delivered. The Registrar shall not be required to register the transfer of any Bond during the five Business Days preceding the selection of Bonds for redemption or of any Bond selected for redemption.

Bonds delivered upon any transfer as provided herein, or as provided in Section 2.5 hereof, shall be valid limited obligations of the Agency, evidencing the same debt as the Bond surrendered, shall be secured by this Indenture and shall be entitled to all of the security and benefits hereof to the same extent as the Bond surrendered.

The Agency, the Trustee, the Registrar and the Paying Agent shall treat the Bond Owner, as shown on the registration books kept by the Registrar, as the person exclusively entitled to payment of principal, premium, if any, and interest and the exercise of all other rights and powers of the Bond Owner, except that all interest payments will be made to the party who, as of the applicable Record Date, is the Bond Owner.

Section 2.7 ~~**Section 2.7. Destruction of Bonds.**~~ Whenever any Outstanding Bonds shall be delivered to the Trustee for cancellation pursuant to this Indenture, upon payment of the principal amount and interest represented thereby or for replacement pursuant to Section 2.5 or transfer pursuant to Section 2.6, such Bond shall be cancelled and destroyed by the Trustee, and counterparts of a certificate of destruction evidencing such destruction shall be furnished by the Trustee to the Agency.

Section 2.8 ~~**Section 2.8. Temporary Bonds.**~~ Pending preparation of definitive Bonds of any Series, the Agency may execute and the Trustee shall authenticate and deliver, in lieu of definitive Bonds and subject to the same limitations and conditions, interim receipts, certificates or temporary Bonds which shall be exchanged for the Bonds.

If temporary Bonds shall be issued, the Agency shall cause the definitive Bonds to be prepared and to be executed, authenticated and delivered to the Trustee, and the Trustee, upon presentation to it of any temporary Bond, shall cancel the same and deliver in exchange therefor at the place designated by the Bond Owner, without charge to the Bond Owner thereof, definitive Bonds of an equal aggregate principal amount, of the same Series, maturity and bearing interest at the same rate or rates as the temporary Bonds surrendered. Until so exchanged, the temporary Bonds shall in all respects be entitled to the same benefit and security of this Indenture as the definitive Bonds to be issued and authenticated hereunder.

Section 2.9 ~~**Section 2.9. Issuance of Series of Bonds; Supplemental Indenture; Application of Bond Proceeds.**~~ Bonds may be issued in Series from time to time, subject to the conditions of this Section, for the purposes of (i) financing Costs and (ii) refunding any Bond or other indebtedness of the Agency theretofore issued.

Each Supplemental Indenture under which such Bonds are issued to finance Costs shall specify the ~~Pledged~~ Facilities the Costs of which are to be paid in whole or in part with the proceeds derived from the sale of such Bonds, provided that any surplus remaining after the completion thereof may be expended for other Costs even though not so specified or may be otherwise applied as set forth in such Supplemental Indenture.

Such Supplemental Indenture may provide for the appointment of a Registrar or Registrars and a Paying Agent or Paying Agents in addition to or in place of the Trustee, may provide for the establishment of ~~a Series Reserve Fund and~~ a Series Credit Facility Fund, and may pledge moneys to the payment thereof in addition to the Pledged Funds. Such Supplemental Indenture may also provide that the interest rate on Bonds of the Series thereby authorized and the duration of the periods during which such interest accrues may from time to time be adjusted (provided that the Bond interest rate shall never exceed the maximum interest rate permitted by law, if any) and that such Bonds may be purchased upon the demand of the Owners thereof or shall be subject to mandatory purchase upon the occurrence of certain events or certain times, and such provisions may include, without limitation, the creation of objective standards for such adjustments, the appointment of agents to apply such standards to such Bonds, the criteria for such purchases upon demand and the procurement of Credit Facilities with respect to such Bonds.

Each of the Bonds of a Series, upon execution by the Agency, shall be deposited with the Trustee or the Trustee's agent for authentication and delivery, but prior to or simultaneously with the delivery of such Bonds, there shall be filed with the Trustee the following:

(a) an original executed counterpart or a copy, certified by an Authorized Agency Representative, of this Indenture, together with all prior Supplemental Indentures;

(b) an original executed counterpart or a copy, certified by an Authorized Agency Representative, of the Supplemental Indenture providing for the issuance of such Series of Bonds and setting forth the terms of such Bonds and, among other matters, the amount, if any, of the Capitalized Interest with respect thereto;

(c) if credit enhancement or liquidity support is to be provided at the time of issuance of the Series, the executed bond insurance policy, surety bond, or Credit Facility, if any, relating to such Bonds;

(d) in the event one or more Credit Facilities or bond insurance policies or surety bonds are then in effect in connection with any Outstanding Series, a certificate of the Agency executed by an Authorized Agency Representative to the effect that all conditions precedent to the issuance of the proposed Bonds established by each of the applicable Reimbursement Agreements and other similar agreements have been fulfilled;

(e) except as otherwise provided in Section 2.10, a certificate of the Agency executed by an Authorized Agency Representative, in each case as provided for in Section 2.11;

(f) except in the case of the Initial Bonds and except also in the case of Bonds satisfying the requirements of Section 2.10, a certificate of the Agency executed by an Authorized Agency Representative, in each case to the effect that concurrently with the issuance of such Bonds the Reserve Fund will be funded in an amount not less than the Reserve Fund Requirement (determined as if the proposed Bonds were Outstanding);

(g) written instructions from the Agency, executed by an Authorized Agency Representative, to the Trustee setting forth the respective portions of the proceeds from the sale of such Bonds to be deposited in the various funds and accounts established hereunder or under any Supplemental Indenture held by the Trustee;

(h) if any such Bonds constitute Balloon Indebtedness, the written consent of the Bond Insurer to the issuance of such Bonds; and

(i) ~~(h)~~-written instructions from the Agency, executed by an Authorized Agency Representative, to authenticate the Bonds and, upon receipt of the purchase price, to deliver the Bonds to or upon the order of the purchasers named in such instructions.

When the documents mentioned in clauses (a) to ~~(h)~~, inclusive, of this Section shall have been filed with the Trustee and when such Bonds shall have been executed and authenticated, the Trustee or authenticating agent shall (i) deliver such Bonds to or upon the order of the purchasers thereof, but only upon payment by the purchasers of the purchase price of such Bonds, and (ii) deposit proceeds from the sale of such Bonds to the credit of the Reserve Fund to the extent necessary to achieve the balance referred to in (f) above and apply the remainder of such proceeds as directed by the Agency.

Section 2.10 Refunding Bonds. Without satisfying the requirements of Section 2.11, Refunding Bonds may be issued under and secured by this Indenture provided that:

(a) Refunding Bonds. Without satisfying the requirements of Section 2.11, Bonds may be issued under and secured by this Indenture solely for the purposes of (i) providing funds for the payment of principal and interest and redemption premium on the 1993 Bonds or any portion thereof, or the Outstanding Bonds of any one or more Series, or a portion of any Series thereof in accordance with and as permitted by the Act and the Supplemental Indenture under which such refunding Bonds are issued, (ii) paying the costs of issuing such refunding Bonds, and (iii) funding a reserve fund for such refunding Bonds, provided that such Bonds may be issued During the period in which any 1997 Bonds the terms of which have not been amended subsequent to the date of this Indenture remain Outstanding, (i) such Bonds may be issued as Senior Lien Bonds without satisfying the provisions of Section 2.11 only if either ~~(a)~~ the Bonds being issued constitute Fixed Rate Indebtedness and are for the purpose of refunding 1993 Bonds or then Outstanding Bonds which constitute Fixed Rate Indebtedness and there is delivered to the Trustee a certificate of an Authorized Agency Representative showing that Annual Debt Service (exclusive of Junior Lien Interest) payable on all Senior Lien Bonds that will be Outstanding after the issuance of the refunding Refunding Bonds will not exceed Annual Debt Service (exclusive of Junior Lien Interest) on all Senior Lien Bonds Outstanding prior to the issuance of such Refunding Bonds in each Fiscal Year in which any such Senior Lien Bonds would have been Outstanding but for the issuance of such refunding Refunding Bonds; or ~~(b)~~ there shall be delivered to the Trustee a certificate of an Authorized Agency Representative showing that the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant, ~~which estimate shall have been approved in writing by the Bond Insurer~~) to be received in the then current Fiscal Year and in each Fiscal Year thereafter is not less than 1.3 times Annual Debt Service on Senior Lien Bonds, taking into account the Bonds proposed to be issued, for each such Fiscal Year and (ii) such Bonds may be issued as Junior Lien Bonds without satisfying the provisions of Section 2.11 only if there shall be delivered to the Trustee a certificate of an Authorized Agency Representative showing that the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant) to be received in the then current Fiscal Year and in each Fiscal Year thereafter is not less than 1.1 times Annual Debt Service on all Bonds, taking into account the Bonds proposed to be issued, for each such Fiscal Year. In estimating the amount of future Tolls for purposes of the ~~preceding paragraph~~ foregoing, the Traffic Consultant may take into account any revisions of the Tolls which have been approved by the Board and which will be effective during such period, and any additional Tolls which the Traffic Consultant estimates will be received by the Agency following the completion of any Pledged Facility then being constructed, or proposed to be constructed by or on behalf of the Agency, provided that an Authorized Agency Representative shall have certified in writing as to the estimated completion date of such Pledged Facility and an Authorized Agency Representative shall have certified in writing as to the sufficiency of funds available with which to complete the same; and

(b) Subsequent to the period described in subdivision (a) above, (i) such Bonds may be issued as Senior Lien Bonds without satisfying the provisions of Section 2.11 only if there is delivered to the Trustee a certificate of an Authorized Agency Representative showing that Annual Debt Service payable on all Senior Bonds that will be Outstanding after the issuance of the Refunding Bonds will not exceed Annual Debt Service payable on all Senior Lien Bonds Outstanding prior to the issuance of such Refunding Bonds in each Fiscal Year (and only in each Fiscal Year) in which any such Senior Lien Bonds would have been Outstanding but for the issuance of such Refunding Bonds, and (ii) such Bonds may be issued as Junior Lien Bonds without satisfying the provisions of Section 2.11 only if there is delivered to the Trustee a certificate of an Authorized Agency Representative showing that Annual Debt Service on all Bonds that will be Outstanding after the issuance of the Refunding Bonds will not exceed

Annual Debt Service on all Outstanding Bonds Outstanding prior to the issuance of such Refunding Bonds in each Fiscal Year (and only in each Fiscal Year) in which any such Bonds would have been Outstanding but for the issuance of such Refunding Bonds.

Section 2.11 ~~Section 2.10.~~ **Tests for Issuance of Certain Bonds.** Except as provided in Section 2.10 hereof, subsequent to the issuance of the Initial Bonds, as a condition to the issuance of any **Senior Lien** Bonds, there shall first be delivered to the Trustee a certificate of an Authorized Agency Representative showing that (i) either (a) the aggregate amount of the Adjusted Net Toll Revenues (exclusive of any amounts available to the Agency under the Federal Line of Credit) during any twelve month period during the most recent eighteen month period preceding the date on which such **Senior Lien** Bonds are proposed to be issued for which such data are available was not less than 1.3 times Maximum Annual Debt Service; **on Senior Lien Bonds and not less than 1.1 times the Maximum Annual Debt Service on the Bonds, in each case** taking into account the **Senior Lien** Bonds then proposed to be issued, or (b) the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant, which estimate shall have been approved in writing by MBIA, but without regard to amounts available to the Agency under the Federal Line of Credit) to be received in the then current Fiscal Year and in each Fiscal Year thereafter is not less than two times Annual Debt Service, taking into account the **on Senior Lien Bonds during the period in which any 1997 Bonds the terms of which have not been amended subsequent to the date of this Indenture remain Outstanding and thereafter not less than 1.5 times Annual Debt Service on Senior Lien Bonds and not less than 1.2 times the Annual Debt Service on all Bonds for each such Fiscal Year, in each case taking into account the Senior Lien** Bonds proposed to be issued, for each such Fiscal Year; and; (ii) each Rating Agency then rating the **Senior Lien** Bonds will not withdraw its rating or reduce its then outstanding rating below the initial rating it assigned to the **Senior Lien** Bonds (without regard to the availability of bond insurance) as a direct consequence of the issuance of the proposed Bonds; **Senior Lien Bonds; and (iii) concurrently with the issuance of such Senior Lien Bonds the Senior Lien Bonds Reserve Fund will be funded in an amount not less than the Senior Lien Bonds Reserve Fund Requirement (determined as if the proposed Senior Lien Bonds were Outstanding), provided that the test set forth in this clause (iii) may be satisfied in whole or in part with an insurance policy, surety bond, or letter of credit as described in Section 4.5.**

Except as provided in Section 2.10 hereof, subsequent to the issuance of the Initial Bonds, as a condition to the issuance of any Junior Lien Bonds, there shall first be delivered to the Trustee a certificate of an Authorized Agency Representative showing that (i) either (a) the aggregate amount of the Adjusted Net Toll Revenues during any twelve month period during the most recent eighteen month period preceding the date on which such Junior Lien Bonds are proposed to be issued for which such data are available was not less than 1.1 times the Maximum Annual Debt Service on all Bonds, in each case taking into account the Junior Lien Bonds proposed to be issued, or (b) the aggregate amount of Adjusted Net Toll Revenues (determined based on the Tolls estimated by a Traffic Consultant) to be received in the current Fiscal Year and in each Fiscal Year thereafter is not less than 1.1 times the Annual Debt Service on all Bonds for each such Fiscal Year, in each case taking into account the Junior Lien Bonds proposed to be issued; (ii) each Rating Agency then rating the Junior Lien Bonds will not withdraw its rating or reduce its then outstanding rating assigned to the Junior Lien Bonds (without regard to the availability of bond insurance) as a direct consequence of the issuance of the proposed Junior Lien Bonds; and (iii) concurrently with the issuance of such Junior Lien Bonds the Junior Lien Bonds Reserve Fund will be funded in an amount not less than the Junior Lien Bonds Reserve Fund Requirement (determined as if the proposed Junior Lien Bonds were Outstanding),

provided that the test set forth in this clause (iii) may be satisfied in whole or in part with an insurance policy, surety bond, or letter of credit as described in Section 4.6.

In estimating the amount of future Tolls for purposes of the preceding ~~paragraph~~**paragraphs**, the Traffic Consultant may take into account any ~~revisions of the Tolls which have been approved by the Board and which will be effective during such period, and any~~ additional Tolls which the Traffic Consultant estimates will be received by the Agency following the completion of any Pledged Facility then being constructed, or proposed to be constructed by or on behalf of the Agency, provided that an Authorized Agency Representative shall have certified in writing as to the estimated completion date of such Pledged Facility and an Authorized Agency Representative shall have certified in writing as to the sufficiency of funds available with which to complete the same.

Section 2.12 ~~Section 2.11.~~ **Certain Contracts and Swaps.** Without entering into a Supplemental Indenture with respect thereto, upon receipt of an opinion of Bond Counsel to the effect that such action is permitted under the laws of the State and will not adversely affect the exclusion from gross income of interest on the Bonds for federal income tax purposes, the Agency may and the Trustee shall, if so directed in writing by an Authorized Agency Representative, enter into one or more contracts in order to place any Series, or any portion thereof, on the interest rate, currency, cash flow, or other basis desired by the Agency, including, without limitation, interest rate swap agreements, currency swap agreements, forward payment conversion agreements, futures contracts, contracts providing for payments based on levels of or changes in interest rates, currency exchange rates, stock or other indices, or contracts to exchange cash flows or a series of payments, and contracts including, without limitation, interest rate floors or caps, options, puts or calls to hedge payment, currency rate, spread or similar exposure; provided that if such contract is entered into prior to the issuance of the Bonds to which it relates, the latter portion of the opinion of Bond Counsel referred to hereinabove need not be delivered until such Bonds are issued.

The amounts received by the Agency or the Trustee, if any, pursuant to such a contract shall be applied as set forth below (to the extent required) and otherwise may be applied to the various deposits required hereunder or under any Supplemental Indenture with respect to the Bonds in question.

Amounts payable by the Agency under such a contract may be secured by the Pledged Funds on parity with the Bonds to which such contract relates but only to the extent so provided in such contract, **provided that under no circumstances shall a Swap Termination Payment be secured by the Pledged Funds on parity with any Senior Lien Bond.** In the event and to the extent that amounts payable by the Agency under such a contract are secured by the Pledged Funds on parity with the Bonds to which such contract relates, the Agency shall pay to the Trustee for deposit into the Interest Account **for the Bonds to which such contract relates** the net amount payable, if any, to the Parity Swap Agreement Counterparty as if such amounts were additional amounts of interest due on said Bonds; and the Trustee shall pay to the Parity Swap Agreement Counterparty, to the extent required under the Parity Swap Agreement, amounts deposited in the aforesaid account.

Net amounts received by the Agency or the Trustee from the counterparty pursuant to a swap agreement shall be deposited to the credit of the Interest Account **for the Bonds to which such contract relates** or, if money has been deposited to the credit of ~~the said~~ Interest Account from a drawing pursuant to a Credit Facility, to the credit of the applicable Series Credit Facility Fund.

Unless it has received an opinion from Bond Counsel to the effect that such action will not adversely affect the exclusion from gross income of interest on the Bonds for federal income tax

purposes, once it has entered into a Parity Swap Agreement the Agency will take no action the effect of which would be to either terminate the Parity Swap Agreement in advance of its scheduled expiration date or cause the notional amount thereunder to be different from the principal amount of the then Outstanding Bonds to which such Parity Swap Agreement relates.

~~**Section 2.12. Conversions of Variable Rate Indebtedness to Fixed Rate Indebtedness.** Other than to the extent permitted pursuant to Section 2.12, Variable Rate Indebtedness shall not be converted to Fixed Rate Indebtedness unless either (i) the highest rate of interest to be borne by such converted Fixed Rate Indebtedness does not exceed the Assumed Non Auction Variable Rate then applicable to such Variable Rate Indebtedness (or, in the case of Auction Rate Indebtedness, the Assumed Auction Rate) or (ii) the requirements set forth in Section 2.11 have been satisfied (treating the proposed conversion as if it were the issuance of additional Bonds and computing Annual Debt Service with respect to the Bonds proposed to be converted on the basis of the proposed fixed rates applicable thereto). Other than to the extent permitted pursuant to Section 2.12, Variable Rate Indebtedness which is not Auction Rate Indebtedness shall not be converted to Auction Rate Indebtedness and vice versa, unless the requirements set forth in Section 2.11 have been satisfied (treating the proposed conversion as if it were the issuance of additional Bonds and computing Annual Debt Service with respect to the Bonds proposed to be converted on the basis of the proposed rates applicable thereto).~~

ARTICLE III

REDEMPTION OF BONDS

Section 3.1 ~~**Section 3.1. Bonds Redeemable.**~~ The Bonds of each Series issued under the provisions of Article ~~2~~II may be made subject to redemption either in whole or in part and at such times, prices and in such order and under such terms as may be provided by the Supplemental Indenture providing for the issuance of such Bonds. The Agency may provide for the redemption of Bonds from any funds available to the Agency and not obligated to be used for other purposes.

Section 3.2 ~~**Section 3.2. Selection of Bonds To Be Redeemed.**~~ If less than all the Bonds shall be called for redemption, the Bonds to be redeemed shall be selected from such Series of Bonds as the Agency shall determine, and, within a Series of Bonds, if less than all of the Bonds of that Series are to be redeemed, Bonds shall be selected as provided in the Supplemental Indenture under which such Bonds were issued.

Section 3.3 ~~**Section 3.3. Notice of Redemption.**~~ In the event any of the Bonds are called for redemption, the Trustee shall give notice, at the times and in the manner specified by Supplemental Indenture, in the name of the Agency, to the Owners of the Bonds, of the redemption of such Bonds, which notice shall (i) specify the Bonds to be redeemed, the redemption date, the redemption price and the place or places where amounts due upon such redemption will be payable and, if less than all of the Bonds are to be redeemed, the numbers of the Bonds, and the portions of Bonds, to be redeemed, (ii) state any condition to such redemption, (iii) state that on the redemption date, and upon the satisfaction of any such condition, the Bonds or portions thereof to be redeemed shall cease to bear interest, and state that a new Bond of the same Series, maturing on the same date and bearing interest at the same rate and in the same principal amount as the unredeemed portion of any Bond redeemed only in part will be registered in the name of and returned to the Owner of any such Bond in exchange therefor. Such notice may set forth any additional information relating to such redemption. Notice may provide for purchase in lieu of redemption or conditional redemption as provided by a Supplemental Indenture.

Notwithstanding the foregoing, a Supplemental Indenture may provide for redemption of Bonds of a Series, under certain circumstances, without notice and for the revocation of a notice and the cancellation of the redemption described therein.

Neither failure to receive any such notice nor any defect in any notice so given shall affect the sufficiency of the proceedings for the redemption of such Bonds.

In addition to any notice of redemption required pursuant to a Supplemental Indenture, further notice shall be given by the Trustee as set out below, but no defect in said further notice nor any failure to give all or any portion of such further notice shall in any manner defeat the effectiveness of a call for redemption if notice thereof is given as above prescribed.

(a) Each further notice of redemption given hereunder shall contain the information required above for an official notice of redemption plus (i) ~~the date of issue of the Bonds as originally issued;~~ (ii) the rate of interest borne by each Bond being redeemed; and (iii) any other descriptive information needed to identify accurately the Bonds being redeemed.

(b) Each further notice of redemption shall be sent by registered or certified mail or overnight delivery service ~~to the registered securities depositories listed below~~ on the same day on which notice is provided to Owners, ~~to any other registered securities depositories then in the business of holding substantial amounts of obligations of types comprising the Bonds, to one or more of the national information services listed below that disseminate notice of redemption of obligations such as the Bonds and~~ to the Bond Insurer, if any, insuring such Bonds **and to the Information Services and the Securities Depositories.**

Registered Securities Depositories

~~The Depository Trust Company
711 Stewart Avenue
Garden City, New York 11530
Telecopy: (516) 227 4039 or 4190~~

~~Midwest Securities Trust Company
Capital Structures Call Notification
440 South LaSalle Street
Chicago, Illinois 60605
Telecopy: (312) 663 2343~~

~~Philadelphia Depository Trust Company
Reorganization Division
1900 Market Street
Philadelphia, Pennsylvania 19103
Attention: Bond Department
Telecopy: (215) 496 5058~~

National Information Services

~~Financial Information, Inc.'s "Financial
Daily Called Bond Service"~~

~~30 Montgomery Street, 10th Floor
Jersey City, New Jersey 07302
Attention: Editor~~

~~Kenny Information Service's "Called Bond Service"
65 Broadway, 16th Floor
New York, New York 10006~~

~~Moody's Investors Service
"Municipal and Government"
5250 77 Center Drive, Suite 150
Charlotte, North Carolina 28217
Attention: Municipal News Reports~~

~~Standard & Poor's "Called Bond Record"
25 Broadway, 3rd Floor
New York, New York 10004~~

Section 3.4 ~~**Section 3.4. Effect of Call for Redemption.**~~ On the date so designated for redemption, notice having been given in the manner and under the conditions provided herein and in the Supplemental Indenture relating to such Bonds as are to be redeemed, and moneys for payment of the redemption price being held in trust to pay the redemption price, unless otherwise provided in a Supplemental Indenture, the Bonds or portions thereof so called for redemption shall become and be due and payable on the redemption date, interest thereon shall cease to accrue, such Bonds or portions thereof shall cease to be entitled to any lien, benefit or security under this Indenture and the owners of such Bonds shall have no rights in respect thereof except to receive payment of the redemption price.

Bonds which have been duly called for redemption under the provisions of this Article and for the payment of the redemption price of which moneys shall be held in trust for the Owners of the Bonds to be redeemed, all as provided in this Indenture, shall not be deemed to be Outstanding under the provisions of this Indenture.

Section 3.5 ~~**Section 3.5. Purchase in Lieu of Redemption.**~~ Unless otherwise provided in a Supplemental Indenture, in lieu of redeeming Bonds the Agency shall have the option to tender to the Trustee any amount of Bonds subject to redemption which have been purchased by the Agency. The Agency may purchase such Bonds at public or private sale as and when and at such prices as the Agency may in its discretion determine, provided that such price shall not exceed the principal amount or the Accreted Amount, as the case may be, of the subject Bonds plus interest, if any, accrued thereon to the date of purchase.

Section 3.6 ~~**Section 3.6. Mandatory Tender for Repurchase.**~~ Unless otherwise provided in a Supplemental Indenture, the Bonds shall be subject to mandatory tender for repurchase by or for the benefit of the Agency on the same dates, in the same amounts, at the same prices, upon the same notification, and subject in all respects to the same provisions as are applicable to the calling of Bonds for redemption, provided that no Bond repurchased by or on behalf of the Agency shall be remarketed after a period of 30 days unless the Agency delivers to the Trustee an opinion of Bond Counsel to the effect that such action will not adversely affect the exclusion from gross income for federal income tax purposes of the interest on Bonds issued on a tax exempt basis.

~~Section 3.7. Detachable Call Options. Nothing contained herein shall be deemed to prohibit the Agency from providing for the delivery of a Series of Bonds or a portion of a Series of Bonds incorporating detachable call options if it is authorized by law to do so and if such action will not adversely affect the exclusion from gross income for federal income tax purposes of the interest on Bonds issued on a tax exempt basis.~~

ARTICLE IV

REVENUES AND FUNDS

~~Section 4.1. Construction Fund and Certain Accounts.~~ **Section 4.1** A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Construction Fund” (the “Construction Fund”); said fund shall be held by the Agency. The Construction Fund shall include such accounts as may be provided for from time to time by a Supplemental Indenture.

The Agency shall credit to the Construction Fund (i) the amounts from time to time required to be so credited pursuant to a Supplemental Indenture or other agreement to which the Agency is a party and (ii) such other amounts as may be received by the Agency from time to time, to the extent such amounts are determined by the Agency to be appropriate for deposit into the Construction Fund.

The moneys in the Construction Fund shall be held by the Agency in trust for the benefit of the Bonds, the Parity Swap Agreements and the Reimbursement Obligations and applied as hereinafter provided or as provided in a Supplemental Indenture or in the written instructions of the Agency referred to hereinabove and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners and for the further security of such Secured Owners until paid out or transferred as hereinafter provided.

Moneys on deposit in the Construction Fund may be withdrawn therefrom to pay (i) a Cost and (ii) if moneys are not available in any capitalized interest account for the payment of interest on Bonds, at the option of the Agency, as set forth in a certificate executed by an Authorized Agency Representative, to pay any Reimbursement Obligation or any obligation of the Agency under a Parity Swap Agreement then due or to pay interest on Bonds. Moneys remaining on deposit in the Construction Fund following the completion of such Pledged ~~the~~ Facilities shall be applied as provided specified in the Supplemental Indenture or Supplemental Indentures pursuant to which such Pledged Facilities were financed shall be applied as provided herein or therein, provided that (unless specifically prohibited by such Supplemental Indenture or Supplemental Indentures) any surplus remaining after the completion of such Facilities may be expended for other Costs, even though not so specified, or may be applied as set forth in such Supplemental Indenture.

~~Section 4.2. Revenue Fund.~~ **Section 4.2** A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Revenue Fund” (the “Revenue Fund”); said fund shall be held by the Agency. A separate account in the Revenue Fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Development Impact Fee Account” (the “Development Impact Fee Account”). The Agency covenants that it will deposit all Revenues (other than Development Impact Fees) when and as received by it into the Revenue Fund and that it will deposit all Development Impact Fees as and when received by it into the Development Impact Fee Account. All moneys in the Revenue Fund shall be held by the Agency in trust for the benefit of the Bonds, the Parity Swap Agreements and the

Reimbursement Obligations and applied as provided in this Article and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners and for the further security of such Secured Owners until paid out or transferred as hereinafter provided.

The Agency shall withdraw from the Revenue Fund such amounts as it shall from time to time determine necessary (i) to pay the Current Expenses that are then due and payable, (ii) to pay the Current Expenses that the Agency expects to become due and payable in the next succeeding calendar month, and (iii) to maintain a reserve, the amount of which reserve shall not exceed one-twelfth of the total Current Expenses shown in the Annual Operating Budget for the then current Fiscal Year. Amounts so withdrawn from the Revenue Fund shall be applied to the payment of Current Expenses. **In addition to the foregoing, the Agency may withdraw from the Development Impact Fee Account such amounts as it may from time to time deem necessary or desirable, provided that the aggregate amount so withdrawn during any six month period commencing July 1 and ending December 31 shall not exceed \$2,500,000 and the aggregate amount so withdrawn during any 12 month period commencing July 1 and ending June 30 shall not exceed \$5,000,000. In addition, the Agency may also withdraw from the Development Impact Fee Account the amounts described in the penultimate paragraph of this Section. Amounts so withdrawn from the Development Impact Fee Account shall be applied as determined by the Agency.**

On or before the last Business Day of each month, after making the ~~withdrawal~~**withdrawals** described in the preceding paragraph, the Agency shall withdraw from the Revenue Fund **(but not from the Development Impact Fee Account)** and transfer to the Trustee ~~or to the Agency itself,~~ as the case may be, the balance then on deposit therein for transfer, deposit or payment by the Trustee ~~or the Agency~~ in the following order of priority (and for such purpose earnings on the **Senior Lien Bonds Debt Service Fund, the Senior Lien Bonds Reserve Fund, the Junior Lien Bonds Debt Service Fund, the Junior Lien Bonds Reserve Fund** and the Use and Occupancy Fund received by the Trustee during such period shall be deemed to have been so withdrawn and transferred; **and, in connection therewith, the Trustee may establish, as it deems necessary, a temporary fund or account on its books and records to facilitate the deposits and transfers set forth herein**):

(a) to the Trustee for deposit to the credit of the **Senior Lien Bonds Interest Account** ~~and, the Senior Lien Bonds Principal Account~~ (or to a Series Credit Facility Fund in lieu of either of the foregoing; to the extent set forth below) ~~(and, the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account and,~~ if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in this ~~clause~~**subdivision** (a):

(i) to the credit of the **Senior Lien Bonds Interest Account** (but only after the Trustee shall first have withdrawn from the **Senior Lien Bonds Capitalized Interest Account** and credited to the **Senior Lien Bonds Interest Account** such amounts as may from time to time be specified in a **Supplemental Indenture or a** written direction to the Trustee from an Authorized Agency Representative), an amount equal to (a) the unpaid Aggregate Accrued Interest on the **Senior Lien Bonds** for the current calendar month, less (b) any Excess Deposit made with respect to a preceding calendar month to the extent such Excess Deposit has not been previously credited against a transfer to the **Senior Lien Bonds Interest Account**, plus (c) any Deficiency with respect to a preceding calendar month existing on the first day of such current calendar month, plus (d) any amount of interest which has become due on the **Senior Lien Bonds** and has not been paid, and (e) any amount of interest which will accrue and become payable in the next succeeding calendar month, and for which there are insufficient funds in the **Senior Lien Bonds Interest Account** or another special account to be

used to make such payment; provided that, if an Authorized Agency Representative gives the Trustee written direction to deposit to the credit of the Senior Lien Bonds Interest Account an amount larger than the amount specified above, said larger amount shall be so deposited; and provided further that any amount remaining in the Senior Lien Bonds Interest Account following the payment of interest on the Senior Lien Bonds on each January 15 and July 15 that is in excess of the interest, if any, then accrued on the Bonds shall be withdrawn therefrom and applied in the manner set forth below; and provided further that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Senior Lien Bonds Interest Account to pay such Aggregate Accrued Interest from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant to the Supplemental Indenture applicable to such Senior Lien Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund in an amount sufficient to reimburse the applicable Bank for such drawing and (but without duplication) to pay any applicable Bank Fees then payable to such Bank; and **provided further that if the Revenues transferred to the Trustee as provided for hereinabove are at any time insufficient to make the deposits required to be made pursuant to the provisions of this subparagraph, upon receipt of the written instruction of an Authorized Agency Representative to do so, the Trustee shall withdraw from the Senior Lien Bonds Principal Account and credit to the Senior Lien Bonds Interest Account the amount of such insufficiency;**

(ii) to the credit of the Senior Lien Bonds Principal Account, the Aggregate Accrued Principal of the Senior Lien Bonds for the current calendar month, plus any Accrued Premium and plus any Deficiency existing on the first day of such current calendar month plus any amount of principal of Senior Lien Bonds which has become due and has not been paid and for which there are insufficient funds in the Senior Lien Bonds Principal Account or another special account to be used to make such payment, provided that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Senior Lien Bonds Principal Account to pay such Aggregate Accrued Principal or Accrued Premium from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant to the Supplemental Indenture applicable to such Senior Lien Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund to reimburse the applicable Bank for such drawing;

(iii) to the credit of the Capital Appreciation Bonds Sinking Account, the amount, if any, required pursuant to a Supplemental Indenture; and

(iv) to the credit of the Convertible Capital Appreciation Bonds Sinking Account, the amount, if any, required pursuant to a Supplemental Indenture; and

(b) to the Trustee for deposit to the credit of the Junior Lien Interest Account, an amount equal to the aggregate unpaid Accrued Junior Lien Interest on the Restructured Bonds for the current calendar month plus any Junior Lien Interest Account Deficiency with respect to a preceding calendar month existing on the first day of such current calendar month, plus any amount of Junior Lien Interest which has become due on the Restructured Bonds and has not been paid; **credit of the Senior Lien Bonds Reserve Fund, if and to the extent the balance on deposit therein is less than the Senior Lien Bonds Reserve Fund Requirement as a result of a withdrawal of funds therefrom, an amount equal to 1/6th of the aggregate amount theretofore withdrawn from the Senior Lien Bonds Reserve Fund and transferred to the Senior Lien Bonds Debt Service Fund pursuant to Section 4.5;**

(c) to the Trustee for deposit to the credit of the Reserve Fund, if and to the extent the balance on deposit therein is less than the Reserve Fund Requirement, the amount necessary to cause the balance on deposit therein to equal the Reserve Fund Requirement; credit of the Junior Lien Bonds Interest Account and the Junior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of them to the extent set forth below) and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in this subdivision (c):

(i) to the credit of the Junior Lien Bonds Interest Account (but only after the Trustee shall first have withdrawn from the Junior Lien Bonds Capitalized Interest Account and credited to the Junior Lien Bonds Interest Account such amounts as may from time to time be specified in a Supplemental Indenture or a written direction to the Trustee from an Authorized Agency Representative), an amount equal to (a) the unpaid Aggregate Accrued Interest on the Junior Lien Bonds for the current calendar month, less (b) any Excess Deposit made with respect to a preceding calendar month to the extent such Excess Deposit has not been previously credited against a transfer to the Junior Lien Bonds Interest Account, plus (c) any Deficiency with respect to a preceding calendar month existing on the first day of such current calendar month, plus (d) any amount of interest which has become due on the Junior Lien Bonds and has not been paid, and (e) any amount of interest which will accrue and become payable in the next succeeding calendar month, and for which there are insufficient funds in the Junior Lien Bonds Interest Account or another special account to be used to make such payment; provided that, if an Authorized Agency Representative gives the Trustee written direction to deposit to the credit of the Junior Lien Bonds Interest Account an amount larger than the amount specified above, said larger amount shall be so deposited; and provided further that any amount remaining in the Junior Lien Bonds Interest Account following the payment of interest on the Bonds on each January 15 and July 15 that is in excess of the interest, if any, then accrued on the Bonds shall be withdrawn therefrom and applied in the manner set forth below; and provided further that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Junior Lien Bonds Interest Account to pay such Aggregate Accrued Interest from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant to the Supplemental Indenture applicable to such Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund in an amount sufficient to reimburse the applicable Bank for such drawing and (but without duplication) to pay any applicable Bank Fees then payable to such Bank; and provided further that if the Revenues transferred to the Trustee as provided for hereinabove are at any time insufficient to make the deposits required to be made pursuant to the provisions of this subparagraph, upon receipt of the written instruction of an Authorized Agency Representative to do so, the Trustee shall withdraw from the Junior Lien Bonds Principal Account and credit to the Junior Lien Bonds Interest Account the amount of such insufficiency; and

(ii) to the credit of the Junior Lien Bonds Principal Account, the Aggregate Accrued Principal of the Junior Lien Bonds for the current calendar month, plus any Accrued Premium and plus any Deficiency existing on the first day of such current calendar month plus any amount of principal of Junior Lien Bonds which has become due and has not been paid and for which there are insufficient funds in the Principal Account or another special account to be used to make such payment, provided that if, pursuant to the provisions of any Supplemental Indenture, money has been deposited to the credit of the Junior Lien Bonds Principal Account to pay such Aggregate Accrued Principal or Accrued Premium from drawings pursuant to one or more Credit Facilities, then if and to the extent required pursuant

to the Supplemental Indenture applicable to such Junior Lien Bonds, Revenues shall be deposited to the applicable Series Credit Facility Fund to reimburse the applicable Bank for such drawing;

(d) to the credit of the Senior Lien Bonds Reserve Fund: (i) if and to the extent the balance on deposit therein is less than the Senior Lien Bonds Reserve Fund Requirement, other than due to a Senior Lien Debt Service Reserve Fund Deficiency Amount (which is being funded in accordance with clause (ii) of this subdivision (d)), the amount necessary to restore said balance to the Senior Lien Bonds Reserve Fund Requirement (less any Senior Lien Debt Service Reserve Fund Deficiency Amount) and (ii) if and to the extent that the balance on deposit therein is less than Maximum Annual Debt Service on the Senior Lien Bonds due to a Senior Lien Debt Service Reserve Fund Deficiency Amount, the lesser of (A) 50% of the Revenues remaining after making all of the transfers and deposits described above and (B) the amount necessary to fully fund in the aggregate the Senior Lien Debt Service Reserve Fund Deficiency Amount;

(e) to the credit of the Junior Lien Bonds Reserve Fund, if and to the extent the balance on deposit therein is less than the Junior Lien Bonds Reserve Fund Requirement, the amount necessary to restore said balance to the Junior Lien Bonds Reserve Fund Requirement;

~~(f) (d) to the Trustee for deposit to the credit of the Use and Occupancy Fund if and to the extent the balance on deposit therein is less than the Use and Occupancy Fund Requirement, the amount necessary to cause the balance on deposit therein to equal the Use and Occupancy Fund Requirement;~~

~~(e) to the Agency to make such other transfers, deposits and payments as may be required in connection with subordinated obligations issued or incurred by the Agency pursuant to Section 5.16;~~

~~(f) to the Agency to pay Eligible Additional Costs;~~

(g) commencing January 2024, the lesser of (A) 50% of the Revenues remaining after making all of the transfers and deposits described above and (B) the amount specified by the Agency as being necessary to pay or to provide for the payment of all amounts payable by the Agency to the Foothill/Eastern Transportation Corridor Agency pursuant to the Agreement Terminating First Amended and Restated Mitigation Payment and Loan Agreement, dated as of August 14, 2014, by and between the Foothill/Eastern Transportation Corridor Agency and the Agency to transfer to the Agency for payment to the Foothill/Eastern Transportation Corridor Agency on January 15, 2025 and each January 15 thereafter;

~~(h) (g) to the Trustee for deposit to the credit of the Toll Stabilization Supplemental Reserve Fund, if and to the extent that the balance on deposit therein is less than the Toll Stabilization Fund Requirement, the amount necessary to cause the balance on deposit therein to equal the Toll Stabilization Fund Requirement~~in the Supplemental Reserve Fund is less than the Supplemental Reserve Fund Requirement, 50% of the Revenues remaining after making all of the transfers and deposits described above or, if the report filed by the Agency with the Trustee for the preceding Fiscal Year pursuant to Section 5.2 indicates that the Enhanced Adjusted Net Toll Revenues for such Fiscal Year were less than either (i) 1.3 times

Annual Debt Service on the Senior Lien Bonds or (ii) 1.1 times Annual Debt Service on all Bonds, 100% of such remaining Revenues;

(i) (h) to the Agency to the extent necessary for it to make such transfers, deposits and payments as may be required in connection with obligations issued or incurred by the Agency to ~~pay~~**reimburse** the Bond Insurer in accordance with a Supplemental Indenture ~~or an agreement with~~**for amounts paid by** the Bond Insurer **under a Municipal Bond Insurance Policy or any related insurance agreement** (to the extent such amounts have not been paid to the Bond Insurer on account of its subrogation rights), **to pay any Bank Fees payable to a Bank pursuant to a Reimbursement Agreement, and to make such other transfers, deposits and payments as may be required in connection with subordinated obligations issued or incurred by the Agency pursuant to Section 5.16 and, if the amount available is insufficient to provide for all such transfers, deposits and payments, to each in proportion to the respective amount thereof, all as directed in writing by an Authorized Agency Representative;** and

(j) (i) to transfer to the Agency for deposit to the credit of the Surplus Revenues Fund, any Revenues remaining after making the **transfers and** deposits described in clauses **subdivisions** (a) through (h), inclusive.

If the Revenues so transferred to the Trustee pursuant to the foregoing subdivisions are, on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Senior Lien Bonds Debt Service Fund or any account therein and from the Supplemental Reserve Fund, less than the aggregate amount of the deposits required by subdivisions (a) and (b) above, then prior to any transfer of funds from the Senior Lien Bonds Reserve Fund, the Trustee shall promptly give telephonic notice to the Agency of the amount of the insufficiency (which notice shall be confirmed in writing as soon as reasonably practicable); and, not later than the Business Day following its receipt of such notice, the Agency shall transfer to the Trustee the amount of such insufficiency from the following sources in the following order: first, from the Surplus Revenues Fund, and then from any fund or account established pursuant to a Supplemental Indenture in which funds are available for such purpose, and finally from the Development Impact Fee Account. If the Revenues so transferred to the Trustee pursuant to the foregoing subdivisions are, on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Junior Lien Bonds Debt Service Fund or any account therein or from the Supplemental Reserve Fund, less than the aggregate amount of the deposits required by subdivision (c) above, then prior to any transfer of funds from the Junior Lien Bonds Reserve Fund, the Trustee shall promptly give telephonic notice to the Agency of the amount of the insufficiency (which notice shall be confirmed in writing as soon as reasonably practicable); and, not later than the Business Day following its receipt of such notice, the Agency shall transfer to the Trustee the amount of such insufficiency from the following sources in the following order: first, from the Surplus Revenues Fund, then from any fund or account established pursuant to a Supplemental Indenture in which funds are available for such purpose and finally from the Development Impact Fee Account. Any amount remaining on deposit in the Development Impact Fee Account at the close of business on each January 15 and July 15 may be withdrawn by the Agency and used for any lawful purpose of the Agency.

If the Revenues are at any time insufficient to make the deposits required by this Section, or at anytime, the Agency may, at its election, deposit with the Trustee funds from any available sources with the direction that such funds be deposited into the funds and accounts or specified funds and accounts held by the Trustee.

Section 4.3 ~~Section 4.3. Senior Lien Bonds Debt Service Fund and Certain Accounts.~~

A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Senior Lien Bonds Debt Service Fund” (the “Senior Lien Bonds Debt Service Fund”), which fund shall be held by the Trustee. There are hereby created in the Debt Service Fund ~~five~~ separate accounts designated the “Senior Lien Bonds Capitalized Interest Account,” the “~~Interest Account~~,” the “~~Junior~~Senior Lien Bonds Interest Account,” the “Senior Lien Bonds Principal Account,” and the “Capital Appreciation Bonds Sinking Account,” the “Senior Lien Bonds Prepayment Account” ~~and the “Convertible Capital Appreciation Bonds Sinking Account.”~~

The Trustee shall deposit into these accounts such amounts as are specified in Sections 4.2, 4.4, 4.5, ~~4.7, 4.8~~ and ~~4.6~~4.13 and as are specified in any Supplemental Indenture and shall also deposit into such accounts and subaccounts such amounts as are received with instructions from the Agency to the Trustee to deposit such amounts into a specific account or subaccount.

The moneys in each of such accounts shall be held by the Trustee in trust for the benefit of the Senior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations applicable to the Senior Lien Bonds to the extent the foregoing are payable from such accounts, shall be applied as hereinafter provided with regard to each such account and, to said extent and pending such application, shall be subject to a lien and charge in favor of the Secured Owners of Senior Lien Bonds until paid out or transferred as hereinafter provided. Notwithstanding the foregoing, the amounts on deposit in the Capital Appreciation Bonds Sinking Account shall be subject to a lien and charge in favor of only the Secured Owners of the 1997 Bonds that are Capital Appreciation Bonds, and the amounts on deposit in the Convertible Capital Appreciation Bonds Sinking Account shall be subject to a lien and charge in favor of only the Secured Owners of the Restructured Bonds. There shall be withdrawn from the Senior Lien Bonds Interest Account (and, if the amount therein is insufficient, from the Senior Lien Bonds Capitalized Interest Account) and the Senior Lien Bonds Principal Account from time to time and set aside or deposited with the Paying Agent sufficient money for paying the interest (other than ~~Junior~~the Subordinated Senior Lien Interest) on and the principal (except to the extent payable from the Capital Appreciation Bonds Sinking Account) of and premium on the Senior Lien Bonds and the amounts, if any, owed to each such Parity Swap Agreement Counterparty or in respect of such Reimbursement Obligations as the same shall fall due, except to the extent such interest, principal or other amounts are payable from a fund or account other than the Senior Lien Bonds Debt Service Fund as provided in any Supplemental Indenture. ~~There shall be withdrawn from the Junior Lien Interest Account from time to time and set aside or deposited with the Paying Agent sufficient money for paying Junior Lien Interest as the same shall fall due.~~

The moneys in the Capital Appreciation Bonds Sinking Account shall be withdrawn therefrom and applied to the payment of the Accreted Amount of 1997 Bonds that are Capital Appreciation Bonds as the same shall become due or as otherwise provided in a Supplemental Indenture. Earnings derived from the investment of amounts on deposit in the Capital Appreciation Bonds Sinking Account shall be paid to the Agency following the payment of debt service on the Bonds on each January 15.

The moneys in the Senior Lien Bonds Prepayment Account shall be withdrawn therefrom and applied to the redemption of Senior Lien Bonds, or the purchase thereof in lieu of redemption, from time to time as specified in a certificate of an Authorized Agency Representative; and, to the extent provided in a Supplemental Indenture, the moneys in the Senior Lien Bonds Prepayment Account shall also be applied to repurchase of ~~Auction~~Term Rate Indebtedness in the event of a failed ~~auction~~remarketing thereof.

The moneys in the Convertible Capital Appreciation Bonds Sinking Account shall be withdrawn therefrom and applied to the payment of interest on the Restructured Bonds as the same shall become due or as otherwise provided in a Supplemental Indenture. Earnings derived from the investment of amounts on deposit in the Convertible Capital Appreciation Bonds Sinking Account shall be paid to the Agency following the payment of debt service on the Bonds on each January 15.

Section 4.4 ~~Section 4.4. Reserve Fund~~**Junior Lien Bonds Debt Service Fund and Certain Accounts.** A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Reserve**Junior Lien Bonds Debt Service** Fund” (the “Reserve**Junior Lien Bonds Debt Service** Fund”), which fund shall be held by the Trustee. There are hereby created in the Debt Service Fund separate accounts designated the “Junior Lien Bonds Capitalized Interest Account,” the “Junior Lien Bonds Interest Account,” the “Junior Lien Bonds Principal Account,” and the “Junior Lien Bonds Prepayment Account.”

The Trustee shall deposit into ~~the~~these accounts such amounts as are specified in Sections 4.2, 4.6, 4.7, 4.8 and 4.13 and as are specified in any Supplemental Indenture and shall also deposit into such accounts and subaccounts such amounts as are received with instructions from the Agency to the Trustee to deposit such amounts into a specific account or subaccount.

The moneys in each of such accounts shall be held by the Trustee in trust for the benefit of the Junior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations applicable to the Junior Lien Bonds to the extent the foregoing are payable from such accounts, shall be applied as hereinafter provided with regard to each such account and, to said extent and pending such application, shall be subject to a lien and charge in favor of the Secured Owners of Junior Lien Bonds until paid out or transferred as hereinafter provided. There shall be withdrawn from the Junior Lien Bonds Interest Account (and, if the amount therein is insufficient, from the Junior Lien Bonds Capitalized Interest Account) and the Junior Lien Bonds Principal Account from time to time and set aside or deposited with the Paying Agent sufficient money for paying the interest on and the principal of and premium on the Junior Lien Bonds and the amounts, if any, owed to each such Parity Swap Agreement Counterparty or in respect of such Reimbursement Obligations as the same shall fall due, except to the extent such interest, principal or other amounts are payable from a fund or account other than the Junior Lien Bonds Debt Service Fund as provided in any Supplemental Indenture.

The moneys in the Junior Lien Bonds Prepayment Account shall be withdrawn therefrom and applied to the redemption of Junior Lien Bonds, or the purchase thereof in lieu of redemption, from time to time as specified in a certificate of an Authorized Agency Representative; and, to the extent provided in a Supplemental Indenture, the moneys in the Prepayment Account shall also be applied to the repurchase of Term Rate Indebtedness in the event of a failed remarketing thereof.

Section 4.5 Senior Lien Bonds Reserve Fund. A special fund is hereby created and designated the San Joaquin Hills Transportation Corridor Agency Revenue Bonds Senior Lien Bonds Reserve Fund (the “Senior Lien Bonds Reserve Fund”), which fund shall be held by the Trustee. The Trustee shall deposit into the Senior Lien Bonds Reserve Fund such amounts as are specified in Sections 4.2 and 4.6, such amounts as may be transferred to it by the 1993 Trustee from the

~~“Senior Lien Bonds Reserve Fund” established pursuant to the 1993 Indenture, 4.8~~ and such amounts as are received with instructions from ~~the~~ an Authorized Agency Representative to so deposit said amounts. Moneys in the Senior Lien Bonds Reserve Fund shall be held by the Trustee in trust for the benefit of all Senior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations relating thereto and, but only to the extent hereinafter provided, for the benefit of the Outstanding 1993 Bonds; and said moneys shall be applied as hereinafter provided and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners of Senior Lien Bonds and, but only to the extent hereinafter provided, the owners of the Outstanding 1993 Bonds until paid out or transferred as hereinafter provided. Notwithstanding the foregoing, the Trustee shall establish such accounts in the Senior Lien Bonds Reserve Fund, for the purpose of investing moneys on deposit therein, as may from time to time be directed in writing by an Authorized Agency Representative.

In the event that the moneys on deposit in any account in the Senior Lien Bonds Debt Service Fund are insufficient, after any transfer of funds thereto from the ~~Toll Stabilization Fund or the Surplus Revenues Supplemental Reserve~~ Supplemental Reserve Fund required or permitted hereunder or any other source from which such transfers may be made, to pay the interest or principal coming due on the Senior Lien Bonds on any Interest Payment Date ~~(including the Junior Lien Interest coming due on the Restructured Bonds)~~ or in the event ~~or~~ the moneys on deposit in the applicable Series Credit Facility Fund are insufficient to pay, as it becomes due, any Reimbursement Obligation resulting from a draw on a Credit Facility to pay principal of or interest on Senior Lien Bonds and any obligation under a Parity Swap Agreement relating thereto, in each such case to the extent such interest or principal is payable from such account or such Reimbursement Obligation is payable from a Series Credit Facility Fund on parity therewith, the Trustee shall withdraw from the Senior Lien Bonds Reserve Fund and shall deposit to the credit of such account and/or each such Series Credit Facility Fund, as the case may be, an amount sufficient to remedy said deficiency (and if the amount available is insufficient for such purposes, ~~first to the credit of each such account or fund other than the Junior Lien Interest Account in proportion to the respective amount of its deficiency and then, to the extent of any remaining funds, to the credit of the Junior Lien Interest Account~~), there to be available to principal of or interest on Senior Lien Bonds.

In the event that on December 31, 2032 the 1993 Trustee delivers to the Trustee a certificate to effect that the moneys then available under the 1993 Indenture for the payment of the principal of the Outstanding 1993 Bonds coming due and payable on January 1, 2033 are insufficient to make such payment and specifying the additional amount required in order to make such payment in full, the Trustee shall immediately withdraw from the Reserve Fund and transfer to the 1993 Trustee in immediately available funds the amount that the 1993 Trustee certified as being necessary to make the aforesaid payment.

Any earnings derived from the investment of money on deposit in the Senior Lien Bonds Reserve Fund shall be deemed to have been deposited by the Agency in the Revenue Fund and transferred to the Trustee pursuant to Section 4.2.

~~Amounts on deposit in the~~ In the event that the Senior Lien Bonds Reserve Fund Requirement will be reduced upon the issuance of Refunding Bonds, then concurrently with the issuance of the Refunding Bonds and as directed in writing by an Authorized Agency Representative, the Trustee shall withdraw the amount of such reduction from the Senior Lien Bonds Reserve Fund and apply it to the redemption of the Bonds being refunded or as otherwise directed in writing by an Authorized Agency Representative. Except as otherwise provided in the immediately preceding sentence, amounts on deposit in the Senior Lien Bonds Reserve Fund

at the close of business on January 15, 2016 and each January 15 thereafter in excess of the **Senior Lien Bonds** Reserve Fund Requirement (other than any earnings derived from the investment thereof that have not yet been **deemed to have been** transferred to the Revenue Fund) shall be transferred **(i) first,** to the Use and Occupancy Fund if and to the extent the amount then on deposit in the Use and Occupancy Fund is less than the Use and Occupancy Fund Requirement ~~and~~, **(ii) then, to the extent not required to be so transferred, to the Supplemental Reserve Fund if and to the extent the amount then on deposit in the Supplemental Reserve Fund is less than the Supplemental Reserve Fund Requirement and (iii) and finally,** to the extent not required to be so transferred, to the Surplus Revenues Fund.

The **Senior Lien Bonds** Reserve Fund Requirement may be satisfied, in whole or in part, with an insurance policy, surety bond, or letter of credit as hereinafter described.

An insurance policy or surety bond may be used to satisfy said requirement if it is issued to the Trustee, as trustee for the Secured Owners, by a company licensed to issue an insurance policy guaranteeing the timely payment of debt service on municipal bonds, the claims paying ability of which company shall be rated in its highest Rating Category by each Rating Agency which has assigned a rating both to any such Outstanding **Senior Lien** Bond ~~(at the request of the Agency)~~ and to such claims paying ability. The use of such insurance policy or surety bond shall be subject to the receipt by the Trustee of an opinion of counsel as to the due authorization, execution, delivery and enforceability of such instrument in accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

In order for a letter of credit to satisfy the aforesaid requirement it shall be an unconditional irrevocable letter of credit issued to the Trustee, as trustee for the Secured Owners, by a bank which has unsecured, uninsured and unguaranteed long term obligations rated in one of its three highest Rating Categories (but not less than the highest Rating Category to which the **Senior Lien** Bonds are then assigned) by each Rating Agency which has assigned a rating both to any Outstanding **Senior Lien** Bond ~~(at the request of the Agency)~~ and to such obligation. Any such letter of credit shall be payable in one or more draws upon presentation by the beneficiary of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal of or interest on such **Senior Lien** Bonds, which draw shall be payable within two days of presentation of the sight draft. In addition, such letter of credit shall be for a term not less than three years, the issuer thereof shall be required to notify the Trustee not later than thirty days prior to the stated expiration date of the letter of credit of such expiration, and the Trustee shall be required to make a full draw thereunder if such letter of credit has not been renewed or replaced at least two weeks prior to the expiration or termination thereof. The use of such a letter of credit shall be subject to the Trustee's receipt of one or more opinions of counsel as to the due authorization, execution, delivery and enforceability thereof in accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

The Agency covenants that when all of the Outstanding 1993 Bonds have been paid in full, or when provision for such payment has been made as provided for in the 1993 Indenture, it will cause the 1993 Trustee to transfer or assign, as the case may be, to the Trustee all amounts then remaining on deposit in, and all insurance policies, surety bonds and letters of credit held by the 1993 Trustee for the benefit of, the "Senior Lien Bonds Reserve Fund" established pursuant to the 1993 Indenture.

Section 4.6 Junior Lien Bonds Reserve Fund. A special fund is hereby created and designated the San Joaquin Hills Transportation Corridor Agency Revenue Bonds Junior Lien

Bonds Reserve Fund (the “Junior Lien Bonds Reserve Fund”), which fund shall be held by the Trustee. The Trustee shall deposit into the Junior Lien Bonds Reserve Fund such amounts as are specified in Sections 4.2 and 4.8 and such amounts as received with instructions from an Authorized Agency Representative to so deposit said amounts. Moneys in the Junior Lien Bonds Reserve Fund shall be held by the Trustee in trust for the benefit of all Restructured Bonds and all Junior Lien Bonds and the Parity Swap Agreements and the Reimbursement Obligations relating thereto; and said moneys shall be applied as hereinafter provided and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners of the Junior Lien Bonds until paid out or transferred as hereinafter provided. Notwithstanding the foregoing, the Trustee shall establish such accounts in the Junior Lien Bonds Reserve Fund, for the purpose of investing moneys on deposit therein, as may from time to time be directed in writing by an Authorized Agency Representative.

In the event that the moneys on deposit in any account in the Junior Lien Bonds Debt Service Fund are insufficient, after any transfer of funds thereto from the Supplemental Reserve Fund required or permitted hereunder or any other source from which such transfers may be made, to pay the interest or principal coming due on the Junior Lien Bonds on any Interest Payment Date or the moneys on deposit in the applicable Series Credit Facility Fund are insufficient to pay, as it becomes due, any Reimbursement Obligation resulting from a draw on a Credit Facility to pay principal of or interest on Junior Lien Bonds and any obligation under a Parity Swap Agreement relating thereto, in each such case to the extent such interest or principal is payable from such account or such Reimbursement Obligation is payable from a Series Credit Facility Fund on parity therewith, the Trustee shall withdraw from the Junior Lien Bonds Reserve Fund and shall deposit to the credit of such account and/or each such Series Credit Facility Fund, as the case may be, an amount sufficient to remedy said deficiency (and if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of its deficiency), there to be available to principal of or interest on Junior Lien Bonds.

Any earnings derived from the investment of money on deposit in the Junior Lien Bonds Reserve Fund shall be deemed to have been deposited by the Agency in the Revenue Fund and transferred to the Trustee pursuant to Section 4.2.

In the event that the Junior Lien Bonds Reserve Fund Requirement will be reduced upon the issuance of Refunding Bonds, then concurrently with the issuance of the Refunding Bonds and as directed in writing by an Authorized Agency Representative, the Trustee shall withdraw the amount of such reduction from the Junior Lien Bonds Reserve Fund and apply it to the redemption of the Bonds being refunded or as otherwise directed in writing by an Authorized Agency Representative. Except as otherwise provided in the immediately preceding sentence, amounts on deposit in the Junior Lien Bonds Reserve Fund at the close of business on January 15, 2016 and each January 15 thereafter in excess of the Junior Lien Bonds Reserve Fund Requirement (other than any earnings derived from the investment thereof that have not yet been deemed to have been transferred to the Revenue Fund) shall be transferred (i) first, to the Use and Occupancy Fund if and to the extent the amount then on deposit in the Use and Occupancy Fund is less than the Use and Occupancy Fund Requirement, (ii) then, to the extent not required to be so transferred, to the Supplemental Reserve Fund if and to the extent the amount then on deposit in the Supplemental Reserve Fund is less than the Supplemental Reserve Fund Requirement and (iii) and finally, to the extent not required to be so transferred, to the Surplus Revenues Fund.

The Junior Lien Bonds Reserve Fund Requirement may be satisfied, in whole or in part, with an insurance policy, surety bond, or letter of credit as hereinafter described.

An insurance policy or surety bond may be used to satisfy said requirement if it is issued to the Trustee, as trustee for the Secured Owners, by a company licensed to issue an insurance policy guaranteeing the timely payment of debt service on municipal bonds, the claims paying ability of which company shall be rated in its highest Rating Category by each Rating Agency which has assigned a rating both to any such Outstanding Junior Lien Bond and to such claims paying ability. The use of such insurance policy or surety bond shall be subject to the receipt by the Trustee of an opinion of counsel as to the due authorization, execution, delivery and enforceability of such instrument in accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

In order for a letter of credit to satisfy the aforesaid requirement it shall be an unconditional irrevocable letter of credit issued to the Trustee, as trustee for the Secured Owners, by a bank which has unsecured, uninsured and unguaranteed long term obligations rated in one of its three highest Rating Categories (but not less than the highest Rating Category to which the Junior Lien Bonds are then assigned) by each Rating Agency which has assigned a rating both to any Outstanding Junior Lien Bond and to such obligation. Any such letter of credit shall be payable in one or more draws upon presentation by the beneficiary of a sight draft accompanied by its certificate that it then holds insufficient funds to make a required payment of principal of or interest on such Junior Lien Bonds, which draw shall be payable within two days of presentation of the sight draft. In addition, such letter of credit shall be for a term not less than three years, the issuer thereof shall be required to notify the Trustee not later than thirty days prior to the stated expiration date of the letter of credit of such expiration, and the Trustee shall be required to make a full draw thereunder if such letter of credit has not been renewed or replaced at least two weeks prior to the expiration or termination thereof. The use of such a letter of credit shall be subject to the Trustee's receipt of one or more opinions of counsel as to the due authorization, execution, delivery and enforceability thereof in accordance with its terms, subject to applicable laws affecting creditors' rights generally and to the application of general equitable principles.

Section 4.7 ~~**Section 4.5. Use and Occupancy Fund.**~~ A special fund is hereby created and designated the San Joaquin Hills Transportation Corridor Agency Revenue Bonds Use and Occupancy Fund (the "Use and Occupancy Fund"), which fund shall be held by the Trustee. The Trustee shall deposit into the Use and Occupancy Fund such amounts as are specified in Sections 4.2, ~~4.4, 4.2~~ and 4.6, ~~4.8~~, such amounts as may be transferred to it by the 1993 Trustee from the "Use and Occupancy Fund" established pursuant to the 1993 Indenture, and such amounts as are received with instructions from the Agency to so deposit said amounts. Moneys on deposit in the Use and Occupancy Fund may be withdrawn therefrom and applied as follows ~~in the order of priority specified below:~~

(a) Upon receipt of and in accordance with written instructions from an Authorized Agency Representative **specifying the payee, the amount to be paid and the payment instructions**, the Trustee ~~may, to the extent permitted by law,~~ **shall** apply amounts on deposit in the Use and Occupancy Fund to pay all or any part of the cost of reconstructing, restoring, repairing or rehabilitating a ~~Pledged~~ Facility or any portion thereof which has been destroyed or damaged by any cause other than ordinary and usual usage thereof. **Each such written instruction shall be sufficient evidence to the Trustee of the facts stated therein, and the Trustee shall have no duty to confirm the accuracy of such facts.**

(b) If the other amounts then available for transfer into the Senior Lien Bonds Debt Service Fund (including amounts on deposit in the Supplemental Reserve Fund, the Surplus Revenues Fund, the Toll Stabilization Fund, Development Impact Fee Account and the Senior Lien Bonds Reserve Fund) are insufficient to cause the amounts on deposit in the Senior Lien Bonds Interest Account, the Senior Lien Bonds Principal Account or the Junior Lien Interest, the Convertible Capital Appreciation Bonds Sinking Account or the Capital Appreciation Bonds Sinking Account to equal the respective amounts required by Section 4.3, the Trustee shall withdraw from the Use and Occupancy Fund and transfer first to the Interest Account, then, to the extent of any excess remaining thereafter, to the Principal Account and finally, to the extent of any excess remaining thereafter, to the Junior Lien Interest Account to such accounts the respective amounts necessary to cause the balances on deposit therein to equal the amounts required by Section 4.3. 4.3 and, if the amounts available in the Use and Occupancy Fund is insufficient for such purposes, to the credit of each such account in proportion to the respective amount of its deficiency.

(c) ~~Upon receipt of and in accordance with written instructions from an Authorized Agency Representative, the Trustee may apply any amount on deposit in the Use and Occupancy Fund to the payment of premiums from one or more policies of insurance specified by such Authorized Agency Representative.~~ If the other amounts then available for transfer into the Junior Lien Bonds Debt Service Fund (including amounts on deposit in the Supplemental Reserve Fund, the Surplus Revenues Fund, the Development Impact Fee Account and the Junior Lien Bonds Reserve Fund) are insufficient to cause the amounts on deposit in the Junior Lien Bonds Interest Account or the Junior Lien Bonds Principal Account to equal the respective amounts required by Section 4.4, the Trustee shall withdraw from the Use and Occupancy Fund and transfer to the Junior Lien Bonds Interest Account and the Junior Lien Bonds Principal Account the respective amounts necessary to cause the balances on deposit therein to equal the amounts required by Section 4.4 and, if the amounts available in the Use and Occupancy Fund is insufficient for such purposes, to the credit of each such account in proportion to its deficiency.

At least \$15,000,000 of the Use and Occupancy Requirement must be satisfied with cash and Permitted Investments. The portion of the Use and Occupancy Fund Requirement in excess of \$15,000,000 may be satisfied through insurance notwithstanding that such insurance may provide for the payment of benefits solely for the purposes described in clause (a) above and not for the purposes described in clause (b) and notwithstanding that such policy or policies may require a self insured retention in an amount not exceeding \$15,000,000 of the Use and Occupancy Fund Requirement, provided that the terms of such policy or policies are consistent with the provisions hereof.

The Agency covenants that when all of the Outstanding 1993 Bonds have been paid in full, or when provision for such payment has been made as provided for in the 1993 Indenture, it will cause the 1993 Trustee to transfer or assign, as the case may be, to the Trustee all amounts then remaining on deposit in, and all insurance policies held by the 1993 Trustee for the benefit of, the "Use and Occupancy Fund" established pursuant to the 1993 Indenture.

Section 4.8 ~~**Section 4.6. Surplus Revenues Fund.**~~ A special fund is hereby created and designated the "San Joaquin Hills Transportation Corridor Agency Revenue Bonds Surplus Revenues Fund" (the "Surplus Revenues Fund"), which fund shall be held by the Agency in trust for the benefit of the Bonds, the Parity Swap Agreements and the Reimbursement Obligations. The Agency shall deposit into this fund from Revenues such amounts as are specified in ~~Sections~~ **Section 4.2 and 4.4** as well as such amounts as are specified in any Supplemental Indenture and shall also deposit into such

fund such amounts as are received by the Agency from time to time, to the extent such amounts are determined by the Agency to be appropriate for deposit into the Surplus Revenues Fund.

Moneys on deposit in the Surplus Revenues Fund shall be withdrawn therefrom and applied in the order of priority as follows and, pending such application, shall be subject to a lien and charge in favor of the Secured Owners until paid out or transferred as hereinafter provided:

(a) If the other amounts then available for transfer into the Senior Lien Bonds Debt Service Fund (exclusive of amounts held in the Senior Lien Bonds Reserve Fund, and the Use and Occupancy Fund ~~and the Toll Stabilization Fund~~) are insufficient to cause the amounts on deposit in the Senior Lien Bonds Debt Service Fund to equal the amount required by Section 4.2, ~~4.3~~, the Agency shall withdraw from the Surplus Revenues Fund (prior to any withdrawal from the Senior Lien Bonds Reserve Fund, or the Use and Occupancy Fund ~~and the Toll Stabilization Fund~~) and transfer to the Senior Lien Bonds Debt Service Fund the amount necessary to cause the balance on deposit therein to equal the amount so required;

(b) If the other amounts then available for transfer into the Junior Lien Bonds Debt Service Fund (exclusive of amounts held in the Junior Lien Bonds Reserve Fund and the Use and Occupancy Fund) are insufficient to cause the amounts on deposit in the Junior Lien Bonds Debt Service Fund to equal the amount required by Section 4.4, the Agency shall withdraw from the Surplus Revenues Fund (prior to any withdrawal from the Junior Lien Bonds Reserve Fund or the Use and Occupancy Fund) and transfer to the Junior Lien Bonds Debt Service Fund the amount necessary to cause the balance on deposit therein to equal the amount so required;

(c) If the amount on deposit in the Senior Lien Bonds Reserve Fund is less than the Senior Lien Bonds Reserve Fund Requirement, there shall be withdrawn from the Surplus Revenues Fund and transferred to the Trustee for deposit into the Senior Lien Bonds Reserve Fund the amount necessary to remedy such deficiency;

~~(d)~~ (b)-If the amount on deposit in the Junior Lien Bonds Reserve Fund is less than the Junior Lien Bonds Reserve Fund Requirement, there shall be withdrawn from the Surplus Revenues Fund and transferred to the Trustee for deposit into the Junior Lien Bonds Reserve Fund the amount necessary to remedy such deficiency;

~~(e)~~ (c)-If the amount on deposit in the Use and Occupancy Fund is less than the Use and Occupancy Fund Requirement, there shall be withdrawn from the Surplus Revenues Fund and transferred to the Trustee for deposit into the Use and Occupancy Fund the amount necessary to remedy such deficiency;

~~(d)~~ — If the amount on deposit in the Toll Stabilization Fund is less than the Toll Stabilization Fund Requirement, there shall be withdrawn from the Surplus Revenues Fund and transferred to the Trustee for deposit into the Toll Stabilization Fund the amount necessary to remedy such deficiency; and

(f) (e)-After all of the foregoing transfers have been completed, the Agency may withdraw any amount on deposit in the Surplus Revenues Fund on the last Business Day of each month to prepay Current Expenses and/or withdraw any such amount from the Surplus

Revenues Fund. Upon withdrawal from the Surplus **Revenues** Fund such funds shall cease to be Pledged Funds.

Section 4.9 ~~**Section 4.7. Rebate Fund.**~~ A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds Rebate Fund” (the “Rebate Fund”) which is to be held by the Trustee. Absent an opinion of Bond Counsel that the exclusion from gross income for federal income tax purposes of interest on the applicable Bonds will not be adversely affected, the Agency shall cause to be deposited in each such account of the Rebate Fund such amounts as are required to be deposited therein pursuant to each Supplemental Indenture and the applicable Tax Certificate. All money at any time deposited in the Rebate Fund shall be held by the Trustee in trust, for payment to the United States Treasury.

Section 4.10 ~~**Section 4.8. Moneys Held by Paying Agents in Trust; Unclaimed Moneys.**~~ All moneys which shall have been withdrawn from the **Senior Lien Bonds Debt Service Fund or the Junior Lien Bonds** Debt Service Fund and set aside or deposited with a Paying Agent for the purpose of paying any of the Bonds hereby secured, either at the maturity thereof or upon call for redemption, shall be held in trust for the respective Owners of such Bonds; ~~and such funds shall be held uninvested or in Government Obligations with a maturity not later than the date on which funds will be needed to make payments on the Bonds, provided that the Paying Agent shall not be required to invest such funds if to do so would, in the judgment of the Paying Agent, adversely affect the ability of the Paying Agent to make timely payment to the Bond Owners. Any earnings on such funds not required to be rebated to the United States shall periodically, not less frequently than quarterly, be paid to the Agency. But, to the maximum extent permitted by law,~~ **Subject to the escheat laws of the State,** any moneys which shall be so set aside or deposited and which shall remain unclaimed by the holders of such Bonds for a period of one (1) year after the date on which such Bonds shall have become due and payable shall be paid to the Agency, and thereafter the holders of such Bonds shall look only to the Agency for payment; and the Agency shall be obligated to make such payment, but only to the extent of the amounts so received pursuant to this Section without any interest thereon and not from Pledged Funds, and the Paying Agents shall have no responsibility with respect to any of such moneys.

Section 4.11 ~~**Section 4.9. Additional Funds and Accounts.**~~ The Agency may, by Supplemental Indenture, create additional funds and accounts under this Indenture and for such purposes as the Agency deems appropriate, including separate funds available only for specified Bonds or Series of Bonds; however, the Revenues shall, in all events, first be used to make the deposits set forth in paragraphs (a) through (e~~f~~) of Section 4.2 hereof before any amounts of Revenues are used to fund any other funds or accounts.

Section 4.12 ~~**Section 4.10. Additional Security.**~~ Except as otherwise provided or permitted herein, the Pledged Funds secure ~~all~~ **(a) all Senior Lien Bonds issued under the terms of this Indenture and all Parity Swap Agreements and Reimbursement Obligations relating thereto on an equal and ratable basis and (b) all Junior Lien** Bonds issued under the terms of this Indenture and all Parity Swap Agreements and Reimbursement Obligations relating thereto on an equal and ratable basis. The Agency may, however, in its discretion, provide additional security or credit enhancement for specified Bonds or Series of Bonds or Parity Swap Agreements or Reimbursement Obligations with no obligation to provide such additional security or credit enhancement to other Bonds or Reimbursement Obligations, except that no additional security or credit enhancement shall be provided unless there shall have been first delivered to the Trustee an opinion of Bond Counsel that the exclusion from gross income of interest on the Bonds for federal income tax purposes will not be adversely affected thereby. Moreover, the Agency may provide in a Supplemental Indenture that

Bonds issued thereunder are not secured, or are secured only in part or only under certain circumstances, by Pledged Funds.

Section 4.13 ~~**Section 4.11. Bankruptcy Proceeds**~~**Supplemental Reserve Fund**. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds ~~Bankruptcy Proceeds Fund~~” (the “~~Bankruptcy Proceeds Fund~~”), which fund shall be held by the Trustee. The Trustee shall deposit in the ~~Bankruptcy Proceeds Fund~~ such amounts as are received by it with instructions from the Agency to so deposit said amounts; and the Trustee shall apply amounts on deposit in the ~~Bankruptcy Proceeds Fund~~ as from time to time are directed in writing by an Authorized Agency Representative. **Supplemental Reserve Fund” (the “Supplemental Reserve Fund”), which fund shall be held by the Trustee. The Trustee shall deposit into the Supplemental Reserve Fund such amounts as are specified in the Section 4.2.**

(a) ~~**Section 4.12. Toll Stabilization Fund**~~. A special fund is hereby created and designated the “San Joaquin Hills Transportation Corridor Agency Revenue Bonds ~~Toll Stabilization Fund~~” (the “~~Toll Stabilization Fund~~”), which fund shall be held by the Trustee. The Trustee shall deposit into the ~~Toll Stabilization Fund~~ (i) Net Revenues remaining after the obligations identified in Section 4.2 (a) through (f) have been satisfied and (ii) such amounts as are received by it with instructions from the Agency to so deposit said amounts. **During any period in which there are Outstanding 1993 Bonds, the provisions of this subsection (a) shall apply. Moneys in the Supplemental Reserve** Fund shall be held by the Trustee in trust for benefit of the Bonds and the 1993 Bonds. Said moneys shall be applied as hereinafter provided; and, pending such application, such moneys shall be subject to a lien and charge in favor of the Secured Owners and the Owners of the 1993 Bonds until paid or transferred as hereinafter provided.

Moneys on deposit in the ~~Toll Stabilization~~**Supplemental Reserve** Fund shall be withdrawn therefrom and transferred or applied by the Trustee for the following purposes in the following order of priority:

(i) (i)—the Trustee shall transfer to the 1993 Trustee an amount required by the 1993 Trustee to pay interest coming due on the 1993 Bonds on any interest payment date for the 1993 Bonds if the amount available for such purpose in the Senior Lien Bonds Interest Account of the Senior Lien Bonds Debt Service Fund established pursuant to the 1993 Indenture is insufficient for such purpose, all as set forth in a request from the 1993 Trustee;

(ii) (ii)—the Trustee shall transfer to the 1993 Trustee an amount required by the 1993 Trustee to pay principal coming due on the 1993 Bonds on any principal payment date for the 1993 Bonds if the amount available for such purpose in the Senior Lien Bonds Principal Account of the Senior Lien Bonds Debt Service Fund established pursuant to the 1993 Indenture is insufficient for such purpose, all as set forth in a request from the 1993 Trustee;

(iii) (iii)—in the event that the moneys on deposit in any account in the Debt Service Fund (other than the Junior Lien Interest Account **(as defined in the 1997 Indenture)**) are insufficient, after any transfer of funds thereto from the Surplus Revenues Fund required or permitted hereunder but prior to any transfer of funds thereto from the Reserve Fund required or permitted hereunder, to pay the interest coming due on the Bonds (other than Junior Lien Interest **(as defined in the 1997 Indenture)**) on any Interest Payment Date or the moneys on deposit in the applicable Series Credit Facility Fund are insufficient to pay, as it becomes due, any Reimbursement Obligation resulting from a draw on a Credit Facility to pay principal of or interest on Bonds and any

obligation under a Parity Swap Agreement relating thereto, in each such case to the extent such interest or principal is payable from such account or such Reimbursement Obligation is payable from a Series Credit Facility Fund on parity therewith, the Trustee shall withdraw from the ~~Toll Stabilization~~ Supplemental Reserve Fund and shall deposit to the credit of such account and/or each such Series Credit Facility Fund, as the case may be, an amount sufficient to remedy said deficiency (and if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of its deficiency); and

(iv) ~~(iv)~~—in the event that the moneys on deposit in the Junior Lien Interest Account (as defined in the 1997 Indenture) of the Debt Service Fund are insufficient, after any transfer of funds thereto from the Surplus Revenues Fund required or permitted hereunder but prior to any transfer of funds thereto from the Reserve Fund required or permitted hereunder, to pay the Junior Lien Interest (as defined in the 1997 Indenture) coming due on the Restructured Bonds on any Interest Payment Date, the Trustee shall withdraw from the ~~Toll Stabilization~~ Supplemental Reserve Fund and shall deposit to the credit of the Junior Lien Interest Account an amount sufficient to remedy said deficiency.

Notwithstanding the foregoing, funds may be released from the ~~Toll Stabilization~~ Supplemental Reserve Fund at the request of the Agency and transferred to the Agency to pay for proposed revenue generating additions, enhancements or other improvements to the San Joaquin Hills Transportation Corridor, but only with the consents of the Bond Insurer, the Owners of a majority in Principal Obligation of the 1993 Bonds and the Owners of a majority in Principal Obligation of the Bonds.

Within 60 days of the end of each Fiscal Year, the Agency shall report to the Trustee and the Bond Insurer the balance remaining on deposit in the ~~Toll Stabilization~~ Supplemental Reserve Fund after accounting for the transfer of funds for any approved project as described above and after accounting for transfers described in Section 4.2 for such Fiscal Year. If such balance is not less than \$500,000 above the “Target Annual Toll Stabilization Amount” for such Fiscal Year shown in the Table 1 (such amount, as shown in Table 1, the “Target Amount”), then as soon as practicable, the Agency shall employ a Traffic Consultant to produce the projection of Tolls and shall complete the work necessary to produce Agency projections of other Revenues and Current Expenses needed to determine if the sum of the balances then on deposit in the Reserve Fund and the ~~Toll Stabilization~~ Supplemental Reserve Fund plus Net Revenues estimated to be received by the Agency prior to January 15, 2028 (said sum, the “Projected Available Funds”) exceeds all debt service coming due on the Bonds prior to and including such date (“Debt Service Through January 15, 2028”). Promptly after completion of such projection and work, the Agency will deliver to the Trustee and the Bond Insurer a certificate from an Authorized Agency Representative setting forth the results thereof. If such certificate demonstrates that the Projected Available Funds do exceed Debt Service Through January 15, 2028, the Trustee shall transfer to the Prepayment Account of the Debt Service Fund to be applied to the redemption of Outstanding Series 1997A Current Interest Bonds maturing on January 15, 2028 an amount equal to the largest integral multiple of \$5,000 by which the aforesaid balance remaining on deposit in the ~~Toll Stabilization~~ Supplemental Reserve Fund exceeds the aforesaid Target Amount (or such lesser amount as may be permitted by the Bond Insurer).

Notwithstanding the foregoing, the amount required to be transferred to the Prepayment Account of the Debt Service Fund and applied to the redemption of Outstanding Series 1997A Current Interest Bonds maturing on January 15, 2028 may be reduced or eliminated altogether if the Trustee

receives the written consent thereto of the Owners of a majority in Principal Obligation of the Series 1997A Current Interest Bonds maturing on January 15, 2028.

Table 1

Target Annual Toll Stabilization Amount

June 30, 2011	\$ 27,500,000
June 30, 2012	27,500,000
June 30, 2013	30,500,000
June 30, 2014	33,500,000
June 30, 2015	37,500,000
June 30, 2016	31,500,000
June 30, 2017	32,000,000
June 30, 2018	57,500,000
June 30, 2019	83,000,000
June 30, 2020	114,000,000
June 30, 2021	139,500,000
June 30, 2022	147,500,000
June 30, 2023	176,500,000
June 30, 2024	166,000,000
June 30, 2025	80,500,000
June 30, 2026	82,000,000

After all Series 1997A Current Interest Bonds maturing on January 15, 2028 have been paid, either at maturity or by earlier redemption, money on deposit in the ~~Toll Stabilization~~ **Supplemental Reserve** Fund may be used to redeem other Outstanding Bonds and the Outstanding 1993 Bonds subject to the consent of the Bond Insurer.

Amounts on deposit in the ~~Toll Stabilization~~ **Supplemental Reserve** Fund shall be invested in the same manner and with the same limitations as provided in Article VI with respect to amounts on deposit in the Reserve Fund.

Amounts on deposit in the ~~Toll Stabilization~~ **Supplemental Reserve** Fund in excess of the ~~Toll Stabilization~~ **Supplemental Reserve** Fund Requirement following any transfer to the Prepayment Account described above and the payment of principal of and interest on the Bonds and the 1993 Bonds shall be withdrawn therefrom and deposited to the credit of the Surplus Fund.

(b) During any period in which there are no Outstanding 1993 Bonds the provisions of this subsection (b) shall apply. Moneys in the Supplemental Reserve Fund shall be held by the Trustee in trust for benefit of the Secured Owners and applied as described below; and, pending such application, such moneys shall be subject to a lien and charge in favor of the Secured Owners.

If the Revenues transferred to the Trustee pursuant to Section 4.2, are on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Senior Lien Bonds Debt Service Fund or any account therein, less than the aggregate amount of the deposits required by subdivision (a) of Section 4.2, the Trustee shall transfer the aggregate amount of such deficiencies from the Supplemental Reserve Fund to the Senior Lien Bonds

Interest Account, the Senior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of the foregoing to the extent set forth above), the Capital Appreciation Bonds Sinking Account and the Convertible Capital Appreciation Bonds Sinking Account and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in subdivision (a) of Section 4.2.

If the Revenues transferred to the Trustee pursuant to Section 4.2, are on the third last Business Day prior to an Interest Payment Date and after any transfer of funds to the Junior Lien Bonds Debt Service Fund or any account therein, less than the aggregate amount of the deposits required by subdivision (c) of Section 4.2, the Trustee shall transfer (after making any transfers described in the preceding paragraphs) the aggregate amount of such deficiencies from the Supplemental Reserve Fund to the Junior Lien Bonds Interest Account and the Junior Lien Bonds Principal Account (or to a Series Credit Facility Fund in lieu of either of the foregoing to the extent set forth above) and, if the amount available is insufficient for such purposes, to the credit of each such account or fund in proportion to the respective amount of the deposit thereto described in subdivision (c) of Section 4.2.

Section 4.14 Additional Moneys Not To Be Commingled. Whenever the Trustee receives moneys from the Agency (other than Revenues) accompanied by instructions from the Agency to deposit such moneys into a particular fund or account the Trustee shall establish a subaccount in said fund or account, shall deposit such moneys in said subaccount, and shall hold such moneys separate and apart from, and not commingle them with, any other moneys held in such fund or account.

ARTICLE V

COVENANTS OF THE AGENCY

Section 5.1 ~~Section 5.1. Payment of Principal, Premium and Interest.~~ The Agency covenants and agrees that it will duly and punctually pay or cause to be paid from the Pledged Funds hereinabove described and to the extent thereof the principal of, premium, if any, and interest on every Bond at the place and on the dates and in the manner herein and in the Bonds specified, according to the true intent and meaning thereof, and that it will faithfully do and perform all covenants and agreements herein and in the Bonds contained; and the Agency agrees that time is of the essence of this Indenture, provided that the Agency's obligation to make payment of the principal of, premium, if any, and interest on the Bonds shall be limited to payment from the Pledged Funds, the funds and accounts pledged therefor in the Granting Clause of this Indenture or in any Supplemental Indenture and any other source which the Agency may specifically provide for such purpose, and no Bond Owner shall have any right to force payment from any other funds of the Agency.

Section 5.2 ~~Section 5.2. Tolls.~~ The Agency covenants that it will fix and prescribe Tolls so that: (i) during any period in which there are one or more Outstanding 1993 Bonds, the sum of projected (a) amounts payable to the Trustee by the 1993 Trustee from the "Surplus Revenues Fund" established pursuant to the 1993 Indenture, plus (b) amounts transferred to the Debt Service Fund from the Toll Stabilization Fund, the Reserve Fund and the Use and Occupancy Fund minus (c) Current Expenses will be at least equal each Fiscal Year to 100% of 1997 Bond Annual Debt Service, and (ii) during any period in which there are no Outstanding 1993 Bonds, the sum of projected (a) Tolls, plus (b) amounts transferred to the Debt Service Fund from the Toll Stabilization Fund, the Reserve Fund

~~and the Use and Occupancy Fund minus (c) Current Expenses will be at least equal each Fiscal Year to 100% of Annual Debt Service on the 1997 Bonds and the Restructured Bonds.~~**Tolls. The Agency covenants that, for as long as it is permitted to do so pursuant to the Caltrans Agreement, prior to the commencement of each Fiscal Year it will fix and prescribe toll rates so that Adjusted Net Toll Revenues for such Fiscal Year are forecasted to be at least equal to: (i) 1.3 times Annual Debt Service on the Senior Lien Bonds and (ii) 1.1 times Annual Debt Service on all Bonds; and the Annual Operating Budget required to be adopted by the Agency for each Fiscal Year pursuant to Section 5.3 shall include a demonstration that said requirements will be satisfied for such Fiscal Year and shall also include the cash balances projected to remain in each of the funds established pursuant to this Indenture at the end of such Fiscal Year. However, the failure of toll rates to yield the amount described herein shall not be deemed to constitute an Event of Default so long as the Agency complies with the requirements of the succeeding paragraphs and is not otherwise in default under this Indenture.**

~~The Agency covenants that it will review the then current schedule of toll rates prior to the commencement of each Fiscal Year; and, in connection with such review, it~~**Prior to January 31 of each Fiscal Year the Agency will cause its Chief Financial Officer to (i) review the Adjusted Net Toll Revenues received by it in the first half of such Fiscal Year and the Adjusted Net Toll Revenues that the Chief Financial Officer expects the Agency will receive in the second half of such Fiscal Year, (ii) determine whether the sum of those Adjusted Net Toll Revenues is less than 1.3 times Annual Debt Service on the Senior Lien Bonds or less than 1.1 times Annual Debt Service on all Bonds, in each case calculating Annual Debt Service without any adjustment thereto otherwise permitted pursuant to the provisions of subdivision (i) of the definition thereof, and (iii) if the Chief Financial Officer so determines, promptly notify the Board of such determination. As soon as reasonably practicable following the Board's receipt of any such notification, the Agency** will retain a Traffic Consultant to provide it with a review of its current toll rate schedule, multiple possible toll rate schedules for at least the upcoming Fiscal Year, their respective impacts on transactions and toll revenues and recommended changes in toll rates to maximize toll revenues while minimizing negative long term impacts from traffic diversion resulting from potential toll increases. ~~If Adjusted Net Toll Revenues for such Fiscal Year are projected to be less than 1.30 times total Annual Debt Service for such Fiscal Year as shown in the Original Debt Service Schedule~~**The Agency may adopt any of the Traffic Consultant's recommended toll rate schedules that are forecasted to produce Adjusted Net Toll Revenues (as projected by the Agency) for such upcoming Fiscal Year of at least 1.3 times Annual Debt Service on the Senior Lien Bonds and 1.1 times Annual Debt Service on all Bonds. If none of the Traffic Consultant's recommended toll rate schedules produce Adjusted Net Toll Revenues (as projected by the Agency) for such upcoming Fiscal Year of at least 1.3 times Annual Debt Service on the Senior Lien Bonds and 1.1 times Annual Debt Service on all Bonds,** the Agency shall adopt the toll rate structure recommended by the Traffic Consultant that produces the maximum amount of Adjusted Net Toll Revenues unless either (i) the Agency both (x) identifies an alternative toll rate structure that the Traffic Consultant agrees will produce not less than 97.5% of the Adjusted Net Toll Revenues that the Traffic Consultant projects would be generated by the Traffic Consultant's recommended toll rate structure and (y) forecasts (and the Traffic Consultant concurs) that the Agency can generate at least the 2.5% difference from operating sources in addition to tolls themselves (including but not limited to account fees or violation fees and penalties) or (ii) both the Bond Insurer and the Owners of a majority in Principal Obligation of the Bonds consent to the adoption of an alternative toll rate schedule.

~~The Annual Operating Budget required to be adopted by the Agency for each Fiscal Year pursuant to Section 5.3 shall include a demonstration that the requirement of the first paragraph of this~~

Section will be satisfied for such Fiscal Year and shall also include the cash balances projected to remain in each of the funds established pursuant to this Indenture at the end of such Fiscal Year.

Within 60 days after the end of each Fiscal Year, commencing with Fiscal Year 2015-2016, the Agency will file with the Trustee a report setting forth the Enhanced Adjusted Net Toll Revenues for such Fiscal Year. If such report for any Fiscal Year indicates that the Enhanced Adjusted Net Toll Revenues for such Fiscal Year were less than either (i) 1.3 times Annual Debt Service on the Senior Lien Bonds or (ii) 1.1 times Annual Debt Service on all Bonds, then as soon as practicable after delivering such report to the Trustee, the Agency shall (i) notify each Bond Insurer and each Rating Agency of that fact and (ii) if the Agency has not already employed a Traffic Consultant to provide toll rate schedules for such Fiscal Year, employ a Traffic Consultant to review and analyze its toll rates and methods of operation and to submit to the Board, as soon as practicable (but not later than such date as will enable the Board to act upon it within 180 days after the end of the Fiscal Year), a written report which shall include the actions that the Traffic Consultant recommends should be taken by the Agency with respect to revising the toll rates, altering its methods of operation or taking other action projected to produce the amount so required in the following twelve month period (or, if less, the maximum amount deemed feasible by the Traffic Consultant) and that the Traffic Consultant estimates will not adversely affect the amount of Adjusted Net Toll Revenues. Promptly upon its receipt of such written report (and, in any case, within 180 days after the end of the Fiscal Year), after giving due consideration thereto, the Agency will revise the toll rates, as permitted by law, alter its methods of operation or take such other action as it deems appropriate. Such revisions, alterations or actions need not comply with the recommendations of the Traffic Consultant so long as Adjusted Net Toll Revenues projected by the Traffic Consultant to be produced by the revisions, alterations or actions then taken by the Agency are at least equal to the amount required hereinabove.

The Trustee shall have no responsibility to review any written report received pursuant to this Section.

The Agency further covenants that ~~Tolls~~such toll rates for traffic using the Pledged-Facilities will be established and maintained in a reasonable way to cover all traffic (other than Agency and Caltrans vehicles used for maintaining the Pledged-Facilities; vehicles used by persons employed to collect ~~Tolls~~operate and maintain the Toll collection equipment to drive to and from their respective duty stations~~such equipment in connection with such operation and maintenance~~; police, fire, and other public emergency vehicles; buses owned and operated by the Orange County Transportation Authority; and vehicles in a public emergency declared by the Agency's Chief Executive Officer) consistent with the requirements hereof, but with such classifications as the Agency may deem appropriate; provided that nothing in this Section shall be deemed to require the Agency to collect Tolls during a period of less than eight consecutive hours in any twenty four hour period with respect to which the Board has determined, based upon a report from a Traffic Consultant, the costs of such collection would exceed the amount of Tolls expected to be collected; and provided further that nothing contained in this Section shall prevent the Agency from temporarily reducing or eliminating Tolls in connection with programs which it intends to use to increase Adjusted Net Toll Revenues.

The Agency also covenants to use its best efforts to extend the term of the Caltrans Agreement if necessary to provide for the payment of any Bonds that remain Outstanding after January 15, 2050.

Section 5.3 ~~Section 5.3.~~ **Annual Operating Budget.** The Agency covenants that on or before the commencement of each Fiscal Year it will adopt the Annual Operating Budget for such Fiscal Year. On or before the 20th day of July in such Fiscal Year copies of the Annual Operating Budget shall be filed with the Trustee **and the Bond Insurer.** The Trustee shall have no responsibility to review the Annual Operating Budget.

If for any reason the Agency shall not have adopted the Annual Operating Budget before the first day of any Fiscal Year, the budget for the preceding Fiscal Year shall, until the adoption of the Annual Operating Budget, be deemed to be in force and shall be treated as the Annual Operating Budget hereunder for such Fiscal Year.

The Agency may at any time adopt an amended or supplemental Annual Operating Budget for the remainder of the then current Fiscal Year. Copies of any such amended or supplemental Annual Operating Budget shall be filed with the Trustee.

Section 5.4 ~~Section 5.4.~~ **Use and Operation of Pledged Facilities.** The Agency covenants that, to the maximum extent it is permitted by law to do so: (i) it will ~~establish and enforce reasonable rules and regulations governing the use of the Pledged Facilities and the operation thereof,~~ (ii) it will ~~operate the Pledged~~ **operate the** Facilities **owned by it** in an efficient and economical manner, (iii) it will promptly notify Caltrans of any damage to or destruction of any of the ~~Pledged~~ Facilities **owned by Caltrans** of which the Board has actual knowledge, (iv) it will enforce the Caltrans Agreement, (v) it will take no action with respect to any of the ~~Pledged~~ Facilities that would materially impair its ability to meet the requirements of the covenant set forth in Section 5.2 hereof, and (vi) it will observe and perform all of the terms and conditions contained in the Act.

The Agency further covenants that in the event of damage to or destruction of all or any part of any ~~Pledged~~ Facilities it will use its best efforts to cause the ~~Pledged~~ Facilities or such part thereof to be repaired, restored or replaced so that the efficiency and value of the ~~Pledged~~ Facilities as a revenue producing toll road will not be impaired or in the alternative to redeem the Bonds then Outstanding.

Section 5.5 ~~Section 5.5.~~ **Payment of Lawful Charges.** The Agency covenants that, except as otherwise permitted herein, it will not create or suffer to be created any lien or charge upon the ~~Pledged~~ Facilities **owned by it** or upon the Revenues ~~therefrom~~ except the lien and charge of the 1993 Bonds, the Bonds, the Parity Swap Agreements and the Reimbursement Obligations secured hereby upon such Revenues and the lien, if any, in favor of any Bank to secure the obligations of the Agency to such Bank under the applicable Reimbursement Agreement and related documents, and that, from such Revenues or other available funds, it will pay or cause to be discharged, or will make adequate provision to satisfy and discharge, within 60 days after the same shall accrue, all lawful claims and demands for labor, materials, supplies or other objects that, if unpaid, might by law become a lien upon the ~~Pledged~~ Facilities **owned by it** or the Revenues ~~therefrom~~; provided however, that nothing in this Section shall require the Agency to pay or cause to be discharged, or make provision for, any such lien or charge so long as the validity thereof shall be contested in good faith.

Section 5.6 ~~Section 5.6.~~ **Construction or Maintenance Permitted from Other Funds.** Notwithstanding any other provision of this Indenture, the Agency may permit the United States of America, the State or any of their respective agencies, departments or political subdivisions to pay all or any part of the cost of constructing, maintaining, repairing and operating the ~~Pledged~~ Facilities.

Section 5.7 ~~**Section 5.7. Insurance.**~~ The Agency covenants that it will maintain or cause to be maintained a practical insurance program, with such reasonable terms, conditions, provisions and costs, as the Agency in its sole discretion determines will afford adequate insurance protection. The Agency shall provide insurance against loss caused by damage to or destruction of all or any part of any of the ~~Pledged~~ Facilities owned by it; comprehensive public liability insurance for bodily injury and property damage relating to any part of the ~~Pledged~~ Facilities owned by it and such other insurance as the Agency in its sole discretion may determine. All such insurance policies shall be carried with a responsible insurance company or companies authorized and qualified under State law or otherwise to assume the risks thereof or shall be provided under a self insurance program if and to the extent that such program provides coverage in the amounts and manner usually maintained in connection with facilities similar to that portion of the ~~Pledged~~ Facilities owned by the Agency and provided that such program is, in the written opinion of an accredited actuary filed with the Trustee ~~at least annually~~ **prior to the close of each Fiscal Year**, actuarially sound.

All such policies shall be for the benefit of the 1993 Trustee, the Trustee and the Agency as their interests shall appear, shall be made payable to the 1993 Trustee, the Trustee and the Agency as their interests shall appear, and shall remain with the Agency.

Subject to the provisions of the 1993 Indenture and the rights of the 1993 Trustee, the Trustee shall have the sole right to receive the proceeds of physical loss insurance. Immediately upon receipt thereof the Trustee shall ~~deposit~~ **transfer to the Agency** the proceeds of physical loss insurance ~~to the credit of~~ **for deposit in** the Construction Fund. Proceeds so deposited to the credit of the Construction Fund shall be promptly applied to paying Costs incurred in repairing, restoring or replacing the ~~Pledged~~ Facilities or portion thereof with respect to which the insurance proceeds were received or shall be used to redeem Bonds (if such redemption is permitted by a Supplemental Indenture), as directed in writing by an Authorized Agency Representative.

Nothing contained herein shall be deemed or construed to prevent the Agency from maintaining policies of insurance in which other parties are named as dual obligee beneficiaries, provided that such other parties shall be limited to contractors constructing Special Projects and persons supplying toll collection and revenue management system equipment or facilities.

The Trustee shall have no responsibility for the sufficiency of insurance or the compliance of the Agency with this Section.

Section 5.8 ~~**Section 5.8. Inspection of Insurance Policies.**~~ All insurance policies referred to in Section 5.7 shall be open at all reasonable times to inspection by the Trustee and the Bond Owners and their agents and representatives. The Agency covenants that it will take such action as may be necessary to demand, collect and sue for any insurance money that may become due and payable under any policy payable to the Agency or the Trustee.

Any appraisal or adjustment of any loss or damage under any policy payable to the Agency or the Trustee and any settlement or payment of indemnity under any such policy that may be agreed upon by the Agency and any insurer shall be evidenced by a certificate, signed by the ~~Chairman~~ **Chair** and the Chief Executive Officer of the Agency and filed with the Trustee.

Section 5.9 ~~**Section 5.9. Accurate Records; Reports; Audits.**~~ The Agency and the Trustee shall each keep proper books of record and accounts containing complete and correct entries of all transactions made by it relating to the receipt, investment, disbursement, allocation and application

of the moneys related to the Bonds, including moneys derived from, pledged to, or to be used to make payments on the Bonds. Such records shall specify the fund, account, or subaccount to which each contract or investment (or portion thereof) is to be allocated and shall set forth in the case of each investment security (i) its purchase price, (ii) identifying information, including par amount, coupon rate, and payment dates, (iii) the amount received at maturity or its sale price, as the case may be, including accrued interest, (iv) the amounts and dates of any payments made with respect thereto, and (v) the dates of acquisition and disposition or maturity. The Agency covenants that it will keep the funds, accounts and subaccounts established pursuant hereto separate from all other funds and accounts, if any, of the Agency and that it will keep an accurate record of the total cost of the ~~Pledged~~ Facilities, of the Revenues collected from the ~~Pledged~~ Facilities, of the number of toll transactions with respect to the ~~Pledged~~ Facilities, the Pledged Funds, and of the application of such Revenues and Pledged Funds. Such records shall be open at all reasonable times to the inspection by the Trustee and the Secured Owners and their agents and representatives.

The Agency further covenants that promptly after the close of each Fiscal Year it will cause an audit to be made of its books and accounts relating to the ~~Pledged~~ Facilities for the preceding Fiscal Year by an independent firm of certified public accountants of recognized ability and standing to be chosen by the Agency. The Trustee shall make available to such accountants all its books and records pertaining to the ~~Pledged~~ Facilities. Each such audit report shall be prepared in accordance with generally accepted accounting principles and shall set forth in respect of the preceding Fiscal Year, the findings of such certified public accountants as to whether the moneys received by the Agency under the provisions of this Indenture during such Fiscal Year have been applied in accordance with the provisions of this Indenture, whether any obligations for Current Expenses were incurred in the preceding Fiscal Year in excess of the total amount provided for Current Expenses in the Annual Operating Budget for such Fiscal Year, whether the Tolls for the preceding Fiscal Year have exceeded or were less than the amount required for such Fiscal Year under the terms of Section 5.2, and whether any Event of Default has occurred and not been cured as of the end of such Fiscal Year of which such certified public accountants have knowledge. Such report and audit reports shall be open at all reasonable times to the inspection of the Secured Owners and their agents and representatives.

The Agency further covenants that it will cause any additional reports or audits relating to the ~~Pledged~~ Facilities to be made as required by law and that, as often as may be requested, it will furnish to the Trustee and the Secured Owners such other information concerning the ~~Pledged~~ Facilities or the operation thereof as any of them may reasonably request.

The cost of the reports and audits referred to in this Section shall be treated as a Current Expense.

Section 5.10 ~~Section 5.10. Covenant Against Sale or Encumbrance; Exceptions.~~ The Agency covenants that, except as permitted in this Section, it will not sell or otherwise dispose of or, except upon the conditions and in the manner provided in Sections 2.9, 2.10, 2.11, ~~2.12, 2.13~~ **2.12** and 5.16, encumber the right to receive Revenues from or with respect to the ~~Pledged~~ Facilities or any part thereof. The Agency has, however, executed and delivered the 1993 Indenture and has transferred to Caltrans that portion of the ~~Pledged~~ Facilities required to be so transferred pursuant to the Caltrans Agreement (substantially all portions thereof which are roads, arterials, ramps, bridges and similar transportation facilities); and the Agency may in the future transfer to Caltrans or other public agencies all or portions of Special Projects, other than the right to receive Revenues from or with respect thereto. In addition, the Agency may, from time to time, sell or encumber for consideration not less than the fair market value thereof any machinery, fixtures, apparatus, tools, instruments or other movable property,

equipment or materials acquired by it from the proceeds of the Bonds or from the Revenues provided that such actions do not impair the ability of the Agency to pay the principal of or interest or other amounts owing with respect to Bonds or any Parity Swap Agreements or Reimbursement Obligations. To the extent that they are not required to be deposited pursuant to the 1993 Indenture, the proceeds thereof shall be deposited to the credit of the Construction Fund or the Revenue Fund, as an Authorized Agency Representative may determine. Upon any disposition of property under the provisions of this Section, the Agency shall notify the Trustee of the property so sold and the amount, if any, and disposition of the proceeds thereof.

The Agency may lease, or grant easements, franchises or concessions for the use of, any part of the ~~Pledged~~ Facilities, provided that such actions do not impair the ability of the Agency to pay the principal of or interest or other amounts owing with respect to Bonds or any Parity Swap Agreements or Reimbursement Obligations; and, ~~to~~ To the extent that they are not required to be deposited pursuant to the 1993 Indenture, the net proceeds from any such lease, easement, franchise, or concession shall be deposited as earned to the credit of the Revenue Fund.

Nothing contained herein shall be deemed or construed to prevent the Agency from acquiring and encumbering toll collection and revenue management systems (including transponders) through a lease-purchase agreement, an installment purchase agreement or any other instrument providing for or relating to the financing of such acquisition.

Section 5.11 ~~Section 5.11.~~ Performance of Covenants by Agency; Authority; Due Execution. The Agency covenants that it will faithfully perform at all times any and all covenants, undertakings, stipulations and provisions contained in this Indenture, in any and every Bond executed, authenticated and delivered hereunder and in all of its proceedings pertaining hereto. The Agency covenants that it is duly authorized under the Constitution and laws of the State, including particularly the Act, to enter into this Indenture, to issue the Bonds and pledge the Pledged Funds thereto and to the Parity Swap Agreements and the Reimbursement Obligations and that the Agency has not previously pledged such Pledged Funds to secure other obligations.

Section 5.12 ~~Section 5.12.~~ Instruments of Further Assurance. The Agency covenants that it will do, execute, acknowledge and deliver, or cause to be done, executed, acknowledged and delivered, such Supplemental Indentures, and such further acts, instruments and transfers as the Trustee may reasonably request for the better assuring and confirming to the Trustee all and singular the rights and obligations of the Agency under and pursuant to this Indenture. The Agency shall, upon the reasonable request of the Trustee, from time to time execute and deliver such further instructions and take such further action as may be reasonable and as may be required to effectuate the purposes of this Indenture or any provisions hereof; provided, however, that no such instruments or actions shall pledge the full faith and credit or the taxing powers of the State or any public agency thereof.

Section 5.13 ~~Section 5.13.~~ Receipt and Deposit of Cash Advances. The Agency covenants and agrees that, immediately upon receipt of cash advances representing deposits against future toll payments from users or potential users of ~~Pledged~~ Facilities, it will (i) deposit and hold such moneys in a special account, separate from other assets of the Agency, or cause such moneys to be deposited with and held by a bank or trust company (which may be the Trustee), (ii) invest such moneys only in Government Obligations or Permitted Investments of the type described in clause (a) of the definition of said term maturing within thirty (30) days from the date of the investment or in Permitted Investments of the type described in clause (c) of said definition and (iii) to the extent that they are not required to be deposited pursuant to the 1993 Indenture, promptly, and in any event within

one Business Day after such deposits become Tolls, transfer or cause the transfer of moneys from such account for credit to the Revenue Fund. The Agency further covenants and agrees that it will not enter into any agreement pursuant to which cash advances received by any other person, business organization or governmental agency may be applied to the payment of Tolls unless such person, business organization or governmental agency, as the case may be, has agreed to take such actions as the Agency may determine are reasonably necessary to assure that the Agency will receive timely payment of such Tolls.

Section 5.14 ~~**Section 5.14. Receipt and Deposit of Revenues - Revenue Fund.**~~ The Agency covenants and agrees that it will immediately upon receipt thereof transfer Revenues for credit to the Revenue Fund except as otherwise provided herein, and during such time as such Revenues are held by the Agency prior to transfer to the Revenue Fund, such Revenues will be impressed with a trust and held for the Secured Owners.

Section 5.15 ~~**Section 5.15. No Inconsistent Action.**~~ The Agency covenants that no contract or contracts will be entered into or any action taken by the Agency which shall be inconsistent with the provisions of this Indenture.

Section 5.16 ~~**Section 5.16. Other Obligations.**~~ The Agency covenants that it will not voluntarily create or cause to be created any debt, lien, pledge, assignment, encumbrance or any other charge having priority to the lien held by the Secured Owners of the **Senior Lien** Bonds and the Parity Swap Agreements and the Reimbursement Agreements relating thereto upon the Pledged Funds, or any part thereof, **or on parity therewith** or having a priority to the lien held by the Secured Owners of the **Junior Lien** Bonds and Parity Swap Agreements and Reimbursement Obligations relating thereto upon the Pledged Funds, or any part thereof, **or on parity therewith, except in accordance with this Indenture.** In connection with the foregoing, the Agency specifically covenants that, other than the Outstanding 1993 Bonds, no additional bonds or other obligations (other than obligations constituting Current Expenses) will be issued under or secured by the 1993 Indenture and that the Agency will not enter into any contract under the provisions of Section 2.12 of the 1993 Indenture if its obligations under such contract would be payable from or secured by a pledge of "Pledged Funds" as defined in the 1993 Indenture. The Agency ~~further covenants that it will not~~**may** ~~issue any obligations, except upon the conditions and in the manner provided in Sections 2.9, 2.10, 2.11, 2.12, and 2.13 of this Indenture,~~**obligations on a subordinated basis provided that any such subordinated obligations issued by the Agency and** payable from the Pledged Funds ~~on parity with the Bonds and Parity Swap Agreements and Reimbursement Obligations relating thereto.~~ **shall contain an express statement that such obligations** are junior and subordinate in all respects to the Bonds, the Parity Swap Agreements and the Reimbursement Obligations as to lien on and source and security for payment from the Pledged Funds.

Section 5.17 ~~**Section 5.17. Maintenance of Powers.**~~ The Agency covenants that it will at all times use its best efforts to maintain the powers, functions, duties and obligations now reposed on it pursuant to the Act and all other laws and will not at any time voluntarily do, suffer or permit any act or thing the effect of which would be to hinder, delay or imperil either the payment of the indebtedness evidenced by any of the Bonds or the performance or observance of any of the covenants herein contained.

Section 5.18 ~~**Section 5.18. Limitation on Use of Surplus Revenues -- Competing Facilities.**~~ The Agency covenants that it will not spend moneys withdrawn from the Surplus Revenues Fund to pay all or any portion of the cost of any transportation facility which would compete with the

Pledged Facilities unless it shall have filed with the Trustee a Certificate of a Traffic Consultant to the effect that the existence of such competing transportation facility would not have a material adverse effect on the ability of the Pledged Facilities to generate the Adjusted Net Toll Revenues necessary to enable the Agency to comply with the provisions of Section 5.2.

~~**Section 5.19. — Actions with Respect to Federal Line of Credit.** During the period in which the Federal Line of Credit is in effect, on the Business Day immediately preceding the thirtieth day prior to each date on which a payment of principal of or interest on Bonds is due (or, if either the United States Department of Transportation or Caltrans requires that the Agency file a request for a loan pursuant to the Federal Line of Credit sooner than such date, then on the third Business Day preceding the date so specified), the Trustee shall determine whether the amounts which will be available for such purpose in the Debt Service Fund on such payment date will be sufficient to make such payment and to pay all Reimbursement Obligations and payments under Parity Swap Agreements due on such payment date (after making any transfers thereto from any fund which are required as a condition precedent to the Agency's obtaining funds pursuant to the Federal Line of Credit). In the event the amounts in either or both such funds are determined to be insufficient for such purpose, the Trustee shall immediately deliver a certification of the amount of such insufficiency to the Agency by facsimile transmission and by Mail. The Agency covenants to promptly file or cause to be filed all documents and to take all other reasonable steps necessary to enable it to receive funds pursuant to the Federal Line of Credit in the maximum amount to which it is entitled to the extent necessary to eliminate such insufficiency. The Agency further covenants that it will not seek funds pursuant to the Federal Line of Credit for any facility other than a Pledged Facility or use such funds to make payments with respect to indebtedness other than the Bonds, the Reimbursement Obligations and Parity Swap Agreements.~~

~~Notwithstanding any other provision of this Indenture, neither the Trustee nor any Owner shall have the right to: (i) compel the federal government or any agency or instrumentality thereof to make any payment with respect to the Federal Line of Credit; or (ii) force the Agency to take action to enable the Agency to receive funds pursuant to the Federal Line of Credit.~~

~~**Section 5.19**~~ **Section 5.20. Development Impact Fees.** The Agency covenants that, at least until the balance on deposit in the Reserve Fund has equaled or exceeded the Reserve Fund Requirement and for at least five consecutive Fiscal Years thereafter the Adjusted Net Toll Revenues have been at least equal to the amount specified in Section 5.2, (a) it will enforce the provisions of the Joint Exercise of Powers Agreement relating to the imposition and collection of Development Impact Fees; (b) it will not authorize or permit revisions or amendments to the Joint Powers Agreement or the ordinances of the Members adopted pursuant to Section 66484.3 of the California Government Code, which revisions or amendments would have a material adverse impact on the financial condition of the Agency; and (c) it will not authorize or permit the elimination or a reduction in the rate of the Development Impact Fees in effect on the date of this Indenture except to the extent required by law; provided, that the Agency shall have the right to make nominal adjustments to the amount of the fee payable by a developer in connection with a grant of appeal or a settlement agreement between the Agency and such developer.

~~**Section 5.20**~~ **Section 5.21. Modifications of the 1993 Indenture.** The Agency covenants that it will not modify or amend the 1993 Indenture in any respect unless it either files with the Trustee certificate executed by an Authorized Agency Representative to the effect that such modification or amendment is not materially adverse to the interests of the Bond Owners or complies with the provisions of Article X of this Indenture (treating such modification or amendment as if it were a modification of or an amendment to this Indenture).

Section 5.21 ~~**Section 5.22.**~~ **Modifications of the 1993 Use and Occupancy Fund.** The Agency covenants that, to the maximum extent it may do so consistent with its obligations under the 1993 Indenture, it will satisfy the “Use and Occupancy Fund Requirement” (within the meaning of the 1993 Indenture) in a manner that does not adversely affect the interests of the Owners of the Bonds.

Section 5.22 ~~**Section 5.23.**~~ **Covenants of Agency Binding on Agency and Successors.** All covenants, stipulations, obligations and agreements of the Agency contained in this Indenture shall be deemed to be covenants, stipulations, obligations and agreements of the Agency to the full extent authorized or permitted by law. If the powers or duties of the Agency shall hereafter be transferred by amendment of the Act or a new act or any provision of the Constitution or any other law of the State or in any other manner there shall be a successor to the Agency, and if such transfer shall relate to any matter or thing permitted or required to be done under this Indenture by the Agency then the entity that shall succeed to such powers or duties of the Agency shall act and be obligated in the place and stead of the Agency as in this Indenture provided, and all such covenants, stipulations, obligations and agreements shall be binding upon the successor or successors thereof from time to time and upon any officer, board, body or commission to whom or to which any power or duty affecting such covenants, stipulations, obligations and agreement shall be transferred by or in accordance with law.

Except as otherwise provided in this Indenture, all rights, powers and privileges conferred and duties and liabilities imposed upon the Agency by the provision of this Indenture shall be exercised or performed by the Agency or by such officers, board, body or commission as may be required by law to exercise such powers or to perform such duties.

Section 5.23 ~~**Section 5.24.**~~ **Indenture of Trust To Constitute a Contract.** This Indenture is executed by the Agency for the benefit of the Secured Owners and constitutes a contract with the Secured Owners.

ARTICLE VI

INVESTMENTS

Moneys held in the funds and accounts created under this Indenture shall be invested and reinvested in Permitted Investments as directed by the Agency, subject to the restrictions set forth in this Article and in any Supplemental Indenture and subject to the investment restrictions imposed upon the Agency by the laws of the State. The Agency shall direct the Trustee with respect to the investment of moneys held by the Trustee by written certificate of an Authorized Agency Representative ~~or by telephone instruction followed by prompt written confirmation by an Authorized Agency Representative.~~ If the Agency fails to direct the investment of moneys as required by this Section, the Trustee shall invest such moneys held by it in a Permitted Investments Investment of the type described in subparagraph (c) of the definition of Permitted Investments, ~~and the~~ **theretofore specified in a written direction from an Authorized Agency Representative or, in the absence of such specification, the Trustee shall hold such moneys uninvested.** ~~The~~ Trustee shall be under no obligation to determine or inquire into the legality of any investment made at the direction of the Agency.

Except as otherwise provided in this paragraph, moneys on deposit in the **Senior Lien Bonds Debt Service Fund and in the Junior Lien Bonds Debt Service Fund** shall be invested only in **(i)** Government Obligations the maturities of which shall not extend beyond the time when funds will be needed therefrom to make payment on the Bonds, the Parity Swap Agreements and the Reimbursement

Obligations, **(ii) Permitted Investments described in subsection (c) of the definition of said term and (iii) any other Permitted Investment with respect to which the Rating Agency Condition is satisfied.** The restriction set forth in the preceding sentence shall not be applicable to moneys in ~~either~~ such ~~fund~~**funds** (other than Eligible Funds (as defined in a Supplemental Indenture) set aside for the redemption of Bonds and moneys derived from a drawing under a Credit Facility, with respect to both of which such restriction shall always be applicable) at such times as one or more Credit Facilities and/or policies of bond insurance are in effect which assure the timely payment of the principal of and interest on all Outstanding Bonds if the Bank or Banks providing such Credit Facilities and/or the Bond Insurer or Bond Insurers providing such insurance policies, as the case may be, so agree in a written instrument filed with the Trustee. Investments in the **Senior Lien Bonds Debt Service Fund and in the Junior Lien Bonds Debt Service Fund** shall be sold or otherwise converted to cash by the Trustee as needed to make payment of principal, premium, if any, and interest on the Bonds, the Parity Swap Agreements and the Reimbursement Obligations, and the Trustee shall have no liability for the selection and liquidation of such investments or for any losses which may be incurred as a result thereof.

The maturities of investments in the Construction Fund shall not extend beyond the time when funds will be needed therefrom to pay Costs.

Without the written consent of ~~MBIA~~**the Bond Insurer**, no moneys on deposit in the Reserve Fund shall be invested in Permitted Investments maturing more than five years after the purchase of the investment. Notwithstanding the foregoing, there shall be no limit on the maturity of an investment in the Reserve Fund if the Agency has entered into an agreement pursuant to which the Agency can, at its sole option, sell to liquidate such investment at par on each applicable Interest Payment Date, and if the entity to whom the Agency can so sell such investment has long-term unsecured, uninsured and unguaranteed obligations rated in one of its two highest long-term Rating Categories by each Rating Agency which has assigned a rating both to any such Outstanding Bond and to such obligation.

Except as otherwise provided herein or in a Supplemental Indenture, (i) investments of moneys in any fund **or account** shall be deemed at all times to be a part of such fund and shall be valued at the ~~amortized-cost~~ thereof **(such valuation of investments in the Senior Lien Bonds Reserve Fund, the Junior Lien Bonds Reserve Fund and the Use and Occupancy Fund to occur on each January 15 commencing January 15, 2016)**, (ii) the interest accruing on and any profit realized from investment of moneys in the ~~Rebate Fund shall be credited to the Rebate Fund, and the interest accruing on and any profit realized from investment of moneys in the Toll Stabilization Fund shall be credited to the Toll Stabilization Fund,~~ (iii) the interest accruing on and any profit realized from investment of moneys in any other fund shall be credited to the Revenue Fund, and (iv) **any fund or account shall be credited to such fund or account, and (iii) any loss resulting from such investment shall be charged to the fund or account** in which such investment is held. Notwithstanding the foregoing, if and to the extent so directed by an Authorized Agency Representative, the interest accruing on and any profit realized from the investment of moneys in any fund or account, other than the **Senior Lien Bonds Debt Service Fund and the Junior Lien Bonds Debt Service Fund**, shall be credited to the Rebate Fund.

The Trustee shall furnish to the Agency monthly cash transaction statements which describe all investment transactions made by the Trustee pursuant to this Indenture. To the extent permitted by law, the Agency waives any right to receive brokerage confirmations of security transactions as they occur to the extent that such a right is conferred upon the Agency by regulations of the Comptroller of the currency or any other applicable regulatory agency. The Trustee, its parent, or any of its affiliates

may act as sponsor, advisor or manager in connection with any investments made by the Trustee under this Indenture.

ARTICLE VII

DEFEASANCE

Bonds or portions thereof (such portions to be in integral multiples of the applicable authorized denomination) which have been paid in full or which are deemed to have been paid in full shall no longer be secured by or entitled to the benefits of this Indenture except for the purposes of payment from moneys or Defeasance Securities held by the Trustee or a Paying Agent for such purpose. When all Bonds and all Reimbursement Obligations relating thereto and all obligations under Parity Swap Agreements have been paid in full or are deemed to have been paid in full, and all other sums payable hereunder by the Agency, including all necessary and proper fees, compensation and expenses of the Trustee, the Registrar and the Paying Agent, have been paid or are duly provided for, then the right, title and interest of the Trustee in and to the Pledged Funds shall thereupon cease, terminate and become void, and thereupon the Trustee shall cancel, discharge and release this Indenture, shall execute, acknowledge and deliver to the Agency such instruments of satisfaction and discharge or release as shall be requisite to evidence such release and such satisfaction and discharge and shall assign and deliver to the Agency any property and Revenues at the time subject to this Indenture which may then be in the Trustee's possession, except funds or securities in which such funds are invested and held by the Trustee or the Paying Agents for payment of the principal of, premium, if any, and interest on the Bonds and all Reimbursement Obligations relating thereto and all obligations under Parity Swap Agreements.

A Bond shall be deemed to be paid within the meaning of this Article and for all purposes of this Indenture when (a) payment of the principal, interest and premium, if any, either (i) shall have been made or caused to be made in accordance with the term of the Bond and this Indenture or (ii) shall have been provided for by irrevocably depositing with the Trustee in trust and irrevocably setting aside exclusively for such payment, (1) moneys sufficient to make such payment and/or (2) non-callable, non-prepayable Defeasance Securities maturing as to principal and interest in such amounts and at such times as will insure the availability of sufficient moneys (as calculated by an independent certified public accountant or firm of independent certified public accountants) to make such payment, and (b) all necessary and proper fees, compensation and expenses of the Trustee, the Registrar and the Paying Agent pertaining to the Bonds with respect to which such deposit is made shall have been paid or provision made for the payment thereof. At such times as Bonds shall be deemed to be paid hereunder, such Bonds shall no longer be secured by or entitled to the benefits of this Indenture, except for the purposes of payment from such moneys or Defeasance Securities.

Notwithstanding the foregoing paragraph, no deposit ~~under clause (a)(ii) of the immediately preceding paragraph~~ pursuant thereto shall be deemed a payment of such Bonds until there has been delivered to the Trustee a written opinion of nationally recognized counsel experienced in bankruptcy matters that the use of the moneys or Defeasance Securities so deposited to make payments on the Bonds will not constitute a voidable preference under the United States Bankruptcy Code and until either (a) proper notice of redemption of such Bonds shall have been given in accordance with Section 3.3, or in the event such Bonds are not to be redeemed within the next succeeding 60 days, until the Agency shall have given the Trustee irrevocable instructions to notify, as soon as practicable, the holders of the Bonds in accordance with Section 3.3, that the deposit required by (a)(ii) above has been made with the Trustee and that such Bonds are deemed to have been paid in accordance with this

Article and stating the maturity or redemption date upon which moneys are to be available for the payment of the principal of and the applicable redemption premium, if any, on such Bonds; or (b) the maturity of such Bonds. Moreover, no Bond the interest rate then applicable to which can change prior to the redemption thereof and no Bond with respect to which a Credit Facility is then in effect shall be deemed to be paid within the meaning of this Article unless the Trustee shall have received written confirmation from each Rating Agency which has assigned a rating to such Bond at the request of the Agency that its rating will not be reduced or withdrawn as a result of the actions taken by the Agency pursuant to the provisions of this Article.

ARTICLE VIII

DEFAULTS AND REMEDIES

Section 8.1 ~~Section 8.1.~~ **Events of Default.** Each of the following events shall constitute and is referred to in this Indenture as an “Event of Default”:

(a) a failure to pay the principal of or premium, if any, on any of the Bonds when the same shall become due and payable at maturity or upon redemption, **provided that the failure to make such a payment with respect to a Junior Lien Bond shall not constitute an Event of Default with respect to the Senior Lien Bonds;**

(b) a failure to pay any installment of interest on any of the Bonds when such interest shall become due and payable;

(c) a failure by the Agency to observe and perform any covenant, condition, agreement or provision (other than as specified in paragraphs (a) and (b) of this Section ~~8.1~~) contained in any of the Bonds or in this Indenture on the part of the Agency to be observed or performed **(provided that if such covenant, condition, agreement or provision is applicable only to Senior Lien Bonds or only to Junior Lien Bonds then such failure shall constitute an Event of Default only with respect to Senior Lien Bonds or Junior Lien Bonds, as the case may be)**, which failure shall continue for a period of 60 days after written notice, specifying such failure and requesting that it be remedied, shall have been given to the Agency by the Trustee (which notice may be given at the discretion of the Trustee and shall be given at the written request of Owners of 25% or more of the Principal Obligation of the Bonds then Outstanding **Senior Lien Bonds then Outstanding (provided that if such Event of Default relates only to Junior Lien Bonds then the written request of Owners of 25% or more of the Principal Obligation of the Junior Lien Bonds in question shall be sufficient for this purpose)**), unless the Trustee, or the Trustee and Owners of Bonds in a Principal Obligation not less than the Principal Obligation of Bonds the Owners of which requested such notice, shall agree in writing to an extension of such period prior to its expiration; provided, however, that the Trustee or the Trustee and the Owners of such Principal Obligation of Bonds shall be deemed to have agreed to an extension of such period if corrective action is initiated by the Agency within such period and is being diligently pursued;

(d) the Agency’s application for or consent to the appointment of a receiver, trustee, liquidator or custodian of the Agency or of all or a substantial part of its property or the Agency’s commencement of a voluntary case or other proceeding seeking liquidation, reorganization or other such relief with respect to the Agency or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or the Agency’s consent to any such relief or to the taking of

possession of its property by another party in any such involuntary case or other proceeding commenced against it;

(e) a diversion or an attempted diversion by the Agency of any Pledged Funds for any use prior to the deposit thereof into the funds and accounts held by the Trustee under this Indenture, or the existence of a lien on or a charge against any Pledged Funds which lien or charge is prior to, or (except to the extent permitted by this Indenture) on parity with that granted to secure the Bonds, the Parity Swap Agreements and related Reimbursement Obligations, or a failure or cessation of the lien against any Pledged Funds to be a valid lien, except in each of the foregoing instances any such event affecting only a *de minimis* portion of Pledged Funds; or

(f) the occurrence of any other Event of Default as is provided in a Supplemental Indenture, **provided that if such Supplemental Indenture establishes said Event of Default as one with respect to only Senior Lien Bonds or only Junior Lien Bonds then said occurrence shall constitute an Event of Default only with respect to Senior Lien Bonds or Junior Lien Bonds, as the case may be.**

If, on any date on which payment of principal of, premium, if any, or interest on the Bonds is due, sufficient moneys are not available to make such payment, the Trustee shall give notice of such insufficiency to the Agency by facsimile transmission and in writing immediately thereafter.

For purposes of clarification, the payment of principal of, premium, if any, or interest on any of the Bonds by the Bond Insurer when the same shall become due and payable shall constitute an Event of Default.

Section 8.2 ~~**Section 8.2-Remedies.**~~ Upon the occurrence and continuance of any Event of Default of the type described in clauses (a), (b) or (e) of Section 8.1 **with respect to Senior Lien Bonds** and the written direction of the Owners of not less than a majority ~~in aggregate principal amount~~ of the **Principal Obligation of the Senior Lien** Bonds then Outstanding, or upon receipt by the Trustee of any notification as a result of which it is compelled to accelerate the indebtedness represented by any Bond, the Trustee shall, upon notice in writing to the Agency, declare the principal of all the Bonds then Outstanding, and the interest accrued thereon, **as well as the Accreted Amount of Capital Appreciation Bonds and Convertible Capital Appreciation Bonds,** to be due and payable immediately, and upon any such declaration the same shall become and be immediately due and payable, anything in this Indenture or in the Bonds contained to the contrary notwithstanding. Upon the occurrence and continuance of any Event of Default of the type described in clause (d) of Section 8.1, all principal of all Bonds then Outstanding and the interest thereon shall, without notice, become immediately due and payable.

Any such declaration as a result of the occurrence of and Event of Default of the type described in clauses (a), (b) or, (e) of Section 8.1 **with respect to Senior Lien Bonds** is subject to the condition that if, at any time after such declaration and before any judgment or decree for the payment of the moneys due shall have been obtained or entered, the Agency shall deposit with the Trustee a sum sufficient to pay all the principal of and installments of interest on the Bonds the payment of which is overdue or the amount of the diverted Pledged Funds, as the case may be, with interest on such overdue principal at the rate borne by the respective Bonds (to the extent permitted by law), and the reasonable charges and expenses of the Trustee, and any and all other Events of Default known to the Trustee (other than in the payment of principal of and interest on the Bonds due and payable solely by reason of such declaration) shall have been made good or cured to the satisfaction of the Trustee or provision

deemed by the Trustee to be adequate shall have been made therefor, then, and in every such case, the Trustee shall on behalf of the Owners of all Bonds rescind and annul such declaration and its consequences and waive such Event of Default; but no such rescission and annulment shall extend to or affect any subsequent Event of Default or shall impair or exhaust any right or power consequent thereon.

Upon the occurrence and continuance of any Event of Default, the Trustee in its discretion may (but not in any manner contrary to the written direction of the Owners of not less than a majority of the Principal Obligation of the Bonds ~~then Outstanding~~ **with respect to which such Event of Default has occurred**), and upon the written direction of the Owners of ~~not less than~~ **at least** a majority of the Principal Obligation of the Bonds ~~then Outstanding~~ **Senior Lien Bonds then Outstanding (provided that, if said Event of Default pertains only to the Junior Lien Bonds, then the written direction of the Owners of at least a majority of the Principal Obligation of the Junior Lien Bonds shall be sufficient)** and receipt of indemnity to its satisfaction, shall, in its own name and as the trustee of an express trust (but subject to the limitations set forth in this Section):

(a) by mandamus, or other suit, action or proceeding at law or in equity, enforce all rights of the Owners of the Bonds with respect to which the Event of Default has occurred, and require the Agency to carry out any agreements with or for the benefit of said Owners and to perform its or their duties under the Act or any other law to which it is subject and this Indenture, provided that any such remedy may be taken only to the extent permitted under the applicable provisions of this Indenture;

(b) bring suit upon the Bonds with respect to which the Event of Default has occurred;

(c) commence an action or suit in equity to require the Agency to account as if it were the trustee of an express trust for the aforesaid Owners; or

(d) by action or suit in equity enjoin any acts or things which may be unlawful or in violation of the rights of the aforesaid Owners.

Notwithstanding the foregoing, neither the Trustee nor any Owner shall be entitled to establish or to compel the Agency to establish Tolls in excess of Tolls required to be established by the Agency pursuant to Section 5.2.

The Trustee shall be under no obligation to take any action with respect to any Event of Default unless the Trustee has actual knowledge of the occurrence of such Event of Default.

Upon the occurrence and continuation of any Event of Default of the type described in clause (a) or (b) of Section 8.1, in addition to the other remedies provided for in this Section, the Agency shall engage an independent firm of certified public accountants of recognized ability and standing to examine and report on the application of Revenues during each Fiscal Year in which such default remains uncured. Such report shall be required to be presented to the Agency, the Trustee and the Bond Insurer within 120 days following the conclusion of any such Fiscal Year and must include the opinion of such firm as to whether the Revenues received in such Fiscal Year were applied in accordance with the Indenture.

Section 8.3 ~~Section 8.3. Restoration to Former Position.~~ In the event that any proceeding taken by the Trustee to enforce any right under this Indenture shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee, then the Agency, the Trustee, and the Secured Owners of the Bonds with respect to which the Event of Default has occurred, shall be restored to their former positions and rights hereunder, respectively, and all rights, remedies and powers of the Trustee shall continue as though no such proceeding had been taken.

Section 8.4 ~~Section 8.4. Bond Owners' Right To Direct Proceedings.~~ Anything in this Indenture to the contrary notwithstanding, except to the extent limited by a Supplemental Indenture **relating to Senior Lien Bonds**, Owners of a majority in Principal Obligation of the **Senior Lien Bonds then Outstanding (or, if the Event of Default pertains only to Junior Lien Bonds, Owners of a majority in Principal Obligation of the Junior Lien Bonds)** with respect to which the Event of Default has occurred shall have the right, at any time, by an instrument in writing executed and delivered to the Trustee, to direct the time, method and place of conducting all remedial proceedings available to the Trustee under this Indenture to be taken in connection with the enforcement of the terms of this Indenture or exercising any trust or power conferred on the Trustee by this Indenture; provided that such direction shall not be otherwise than in accordance with the provisions of the law and this Indenture and that there shall have been provided to the Trustee security and indemnity satisfactory to the Trustee against the costs, expenses and liabilities to be incurred as a result thereof by the Trustee.

Section 8.5 ~~Section 8.5. Limitation on Bond Owners' Right To Institute Proceedings.~~ No Bond Owner shall have any right to institute any suit, action or proceeding in equity or at law for the execution of any trust or power hereunder, or any other remedy hereunder or on such Bonds, unless such Bond Owner or Bond Owners previously shall have given to the Trustee written notice of an Event of Default as hereinabove provided and unless also Owners of 25% or more of the Principal Obligation of the Bonds with respect to which the Event of Default has occurred then Outstanding **as provided in the third paragraph of Section 8.2** shall have made written request of the Trustee so to do, after the right to institute such suit, action or proceeding under Section 8.2 shall have accrued, and shall have afforded the Trustee a reasonable opportunity to proceed to institute the same in either its or their name, and unless there also shall have been offered to the Trustee security and indemnity satisfactory to it against the costs, expenses and liabilities to be incurred therein or thereby, and the Trustee shall not have complied with such request within a reasonable time; and such notification, request and offer of indemnity are hereby declared in every such case, at the option of the Trustee, to be conditions precedent to the institution of such suit, action or proceeding; it being understood and intended that no one or more of the Bond Owners shall have any right in any manner whatever by his or their action to affect, disturb or prejudice the security of this Indenture, or to enforce any right hereunder or under the Bonds, except in the manner herein provided, and that all suits, actions and proceedings at law or in equity shall be instituted, had and maintained in the manner herein provided and for the equal benefit of all Owners of the Bonds with respect to which the Event of Default has occurred.

Section 8.6 ~~Section 8.6. No Impairment of Right To Enforce Payment.~~ Notwithstanding any other provision in this Indenture, the right of any Bond Owner to receive payment of the principal of, premium, if any, and interest on such Bond, on or after the respective due dates expressed therein and to the extent of the Pledged Funds (but subject to the application of the Pledged Funds in the order of priority set forth herein), or to institute suit for the enforcement of any such payment on or after such respective date, shall not be impaired or affected without the consent of such Bond Owner.

Section 8.7 ~~Section 8.7. Proceedings by Trustee Without Possession of Bonds.~~ All rights of action under this Indenture or under any of the Bonds secured hereby which are enforceable by the Trustee may be enforced by it without the possession of any of the Bonds, or the production thereof at the trial or other proceedings relative thereto, and any such suit, action or proceeding instituted by the Trustee shall be brought in its name for the equal and ratable benefit of the Owners of the Bonds with respect to which the Event of Default has occurred, subject to the provisions of this Indenture.

Section 8.8 ~~Section 8.8. No Remedy Exclusive.~~ No remedy herein conferred upon or reserved to the Trustee or to Secured Owners is intended to be exclusive of any other remedy or remedies, and each and every such remedy shall be cumulative, and shall be in addition to every other remedy given hereunder, or now or hereafter existing at law or in equity or by statute; provided, however, that any conditions set forth herein to the taking of any remedy to enforce the provisions of this Indenture or the Bonds shall also be conditions to seeking any remedies under any of the foregoing pursuant to this Section.

Section 8.9 ~~Section 8.9. No Waiver of Remedies.~~ No delay or omission of the Trustee or of any Secured Owner to exercise any right or power accruing upon any default shall impair any such right or power or shall be construed to be a waiver of any such default, or an acquiescence therein: and every power and remedy given by this Article to the Trustee and to the Secured Owners, respectively, may be exercised from time to time and as often as may be deemed expedient.

Section 8.10 ~~Section 8.10. Application of Moneys.~~ Subject to the provisions of Section 8.13, any Pledged Funds held or received by the Trustee, by any receiver or by any Bond Owner pursuant to any right given or action taken under the provisions of this Article, after payment of the costs and expenses of the proceedings resulting in the collection of such moneys and of the fees, expenses and liabilities incurred by the Trustee in and about the performance of its powers and duties under this Indenture, shall be deposited and applied as follows (provided that moneys in the Senior Lien Bonds Debt Service Fund and the Senior Lien Bonds Reserve Fund shall not be applied to make payments with respect to the Junior Lien Bonds or Reimbursement Obligations or Parity Swap Agreements relating thereto, and provided further that moneys in the Junior Lien Bonds Debt Service Fund and the Junior Lien Bonds Reserve Fund shall not be applied to make payments with respect to Senior Lien Bonds or Reimbursement Obligations or Parity Swap Agreements relating thereto):

(a) If the principal of all the Bonds then Outstanding and the interest accrued thereon has been declared to be due and payable immediately pursuant to the first sentence of Section 8.2 (or, but for any legal prohibition on such declaration of acceleration, such principal and interest would have been declared to be due and payable immediately pursuant to the last sentence of Section 8.2 or the provisions of any applicable Reimbursement Agreement) and such declaration has not been rescinded and annulled, there shall be deposited:

(i) (a) If the principal of all the Bonds then Outstanding and the interest accrued thereon has been declared to be due and payable immediately pursuant to the last sentence of Section 8.2 (or, but for any legal prohibition on such declaration of acceleration, such principal and interest would have been declared to be due and payable immediately pursuant to the last sentence of Section 8.2 or the provisions of any applicable Reimbursement Agreement) and such declaration has not been rescinded and annulled, there shall be deposited into the Debt Service Fund moneys sufficient to pay the amounts described in clauses (i), (ii) and (iii) below, and all such moneys shall be applied, as

~~promptly as practicable (but subject to the provisions of the last paragraph of this Section), proportionately to (i) the payment~~**proportionately into (y) the Senior Lien Bonds Interest Account moneys sufficient to pay** to the persons entitled thereto ~~of all installments of interest then due on the Senior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Senior Lien Bonds as well as interest due with respect to all Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the weighted average rate per annum borne by the Senior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment, ~~and (ii) the payment~~**z) the Senior Lien Bonds Principal Account moneys sufficient to pay** to the persons entitled thereto of the unpaid principal of any of the Senior Lien Bonds which shall have become due (or which but for any legal prohibition on such declaration of acceleration would have become due) (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay principal of Senior Lien Bonds) ~~with interest on such Bonds (and any such Reimbursement Obligation) at their respective rates from the respective dates upon which they became due~~**and, for such purposes, interest on Senior Lien Capital Appreciation Bonds and, during the applicable Accretion Period, on Senior Lien Convertible Capital Appreciation Bonds shall continue to be compounded and the Accreted Amount of any such Bond shall be deemed to be principal;** and, if the amount available shall not be sufficient to pay in full the **principal of all Senior Lien** Bonds (and any such Reimbursement Obligation) due on any particular date, ~~together with such interest,~~ then to the payment ratably, according to the amount of principal ~~and interest~~ due on such date, in each case to the persons entitled thereto, without any discrimination or privilege ~~and (iii) the payment of any other Reimbursement Obligation and of any other amounts then owing pursuant to any Reimbursement Agreement pertaining to Bonds;~~ and, after said deposit into the Debt Service Fund, there shall be paid the subordinated obligations issued or incurred by the Agency pursuant to Section 5.16, including the amounts necessary to reimburse MBIA in accordance with a Supplemental Indenture for amounts paid by MBIA under a Municipal Bond Insurance Policy (to the extent such amounts have not been paid to MBIA on account of its subrogation rights);~~

(ii) ~~(b) If the principal of all the Bonds then Outstanding and the interest accrued thereon has not been declared to be due and payable immediately pursuant to the last sentence of Section 8.2 (or deemed to be due and payable as contemplated in paragraph (a) above) or if such a declaration has been rescinded and annulled, then there shall be deposited into the Debt Service Fund~~**proportionately into (y) the Junior Lien Bonds Interest Account** moneys sufficient to pay the amounts described in clauses (i), (ii) and (iii) below, and all such moneys shall be applied, as promptly as practicable (but subject to the provisions of the last paragraph of this Section), ~~(i) first, to the payment to the persons entitled thereto of all installments of interest then due on the Junior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Junior Lien Bonds as well as interest due with respect to all Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the weighted average rate per annum borne by the Junior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment;~~**and (iz) second, to the payment**~~the Junior Lien Bonds Principal Account moneys sufficient to pay to the persons entitled thereto of the unpaid principal of any of the Junior Lien Bonds which shall have become due (or which but for any legal prohibition on such declaration of acceleration would have become due) (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay~~

principal of Junior Lien Bonds) with interest on such Bonds, Junior Lien Bonds (and any such Reimbursement Obligation) at their respective rates from the respective dates upon which they became due and, if the amount available shall not be sufficient to pay in full the Bonds, Junior Lien Bonds (and any such Reimbursement Obligation) due on any particular date, together with such interest, then to the payment ratably, according to the amount of principal and interest due on such date, in each case to the persons entitled thereto, without any discrimination or privilege; and (iii) third, to the payment of any other Reimbursement Obligation and of any other amounts then owing pursuant to any Reimbursement Agreement pertaining to Bonds; and, after said deposit into the Debt Service Fund, there shall be paid the subordinated obligations issued or incurred by the Agency pursuant to Section 5.16, including the amounts necessary to reimburse MBIA in accordance with a Supplemental Indenture for amounts paid by MBIA under a Municipal Bond Insurance Policy (to the extent such amounts have not been paid to MBIA on account of its subrogation rights).

(iii) to the payment of any other Reimbursement Obligation and of any other amounts then owing pursuant to any Reimbursement Agreement pertaining to Bonds; and, after said deposit into the Debt Service Fund, there shall be paid the subordinated obligations issued or incurred by the Agency pursuant to Section 5.16, including the amounts necessary to reimburse the Bond Insurer in accordance with a Supplemental Indenture for amounts paid by the Bond Insurer under a Municipal Bond Insurance Policy or any related insurance agreement (to the extent such amounts have not been paid to the Bond Insurer on account of its subrogation rights).

(b) If the principal of all the Bonds then Outstanding and the interest accrued thereon has not been declared to be due and payable immediately pursuant to the first sentence of Section 8.2 (or deemed to be due and payable as contemplated in paragraph (a) above) or if such a declaration has been rescinded and annulled, then unless the Event of Default in question pertains only to Junior Lien Bonds, there shall first be deposited into the Senior Lien Bonds Debt Service Fund moneys sufficient to pay the amounts described in clauses (i), (ii) and (iii) below, and all such moneys shall be applied (i) first, to the payment to the persons entitled thereto of all installments of interest then due on the Senior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Senior Lien Bonds as well as interest due with respect to all Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the rate per annum borne by the Senior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment; and (ii) second, to the payment to the persons entitled thereto of the unpaid principal of any of the Senior Lien Bonds which shall have become due (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay principal of Senior Lien Bonds) and, for such purposes, interest on Senior Lien Capital Appreciation Bonds and, during the applicable Accretion Period, on Senior Lien Convertible Capital Appreciation Bonds shall continue to be compounded and the Accreted Amount of any such Bond shall be deemed to be principal; and, if the amount available shall not be sufficient to pay in full the principal of all Senior Lien Bonds (and any such Reimbursement Obligation) due on any particular date, then to the payment ratably, according to the amount of principal due on such date, in each case to the persons entitled thereto, without any discrimination or privilege. Moneys remaining after satisfying the foregoing requirements, to the extent such requirements are applicable, shall be deposited into the Junior Lien Bonds Debt Service Fund and applied (i) first, to the payment to the persons

entitled thereto of all installments of interest then due on the Junior Lien Bonds (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay interest on Junior Lien Bonds as well as interest due with respect to all Reimbursement Obligations and including also all amounts due under all Parity Swap Agreements, except as otherwise provided therein), with interest on overdue installments, if lawful, at the rate per annum borne by the Junior Lien Bonds, in the order of maturity of the installments of such interest and, if the amount available shall not be sufficient to pay in full any particular installment of interest, then to the payment ratably, according to the amounts due on such installment; (ii)second, to the payment to the persons entitled thereto of the unpaid principal of any of the Junior Lien Bonds which shall have become due (including any Reimbursement Obligation resulting from a drawing on a Credit Facility to pay principal of Junior Lien Bonds) and, for such purposes, interest on Junior Lien Capital Appreciation Bonds and, during the applicable Accretion Period, on Junior Lien Convertible Capital Appreciation Bonds shall continue to be compounded and the Accreted Amount of any such Bond shall be deemed to be principal; and, if the amount available shall not be sufficient to pay in full the principal of all Junior Lien Bonds (and any such Reimbursement Obligation) due on any particular date, then to the payment ratably, according to the amount of principal due on such date, in each case to the persons entitled thereto, without any discrimination or privilege; and (iii)third, to the payment of any other Reimbursement Obligation and of any other amounts then owing pursuant to any Reimbursement Agreement pertaining to Junior Lien Bonds. Whenever moneys are to be applied pursuant to the provisions of this Section, such moneys shall be applied at such times, and from time to time, as the Trustee shall determine, having due regard to the amount of such moneys available for application and the likelihood of additional moneys becoming available for such application in the future. Whenever the Trustee shall apply such funds, it shall fix the date (which shall be an Interest Payment Date unless it shall deem another date more suitable) upon which such application is to be made and upon such date interest on the amounts of principal and interest to be paid on such date shall cease to accrue. The Trustee shall give notice of the deposit with it of any such moneys and of the fixing of any such date by Mail to all Secured Owners of Bonds and related Parity Swap Agreements and Reimbursement Obligations with respect to which the Event of Default occurred and shall not be required to make payment to any Bond Owner until such Bonds shall be presented to the Trustee for appropriate endorsement or for cancellation if fully paid.;

Section 8.11 ~~Section 8.11.~~ **Severability of Remedies.** It is the purpose and intention of this Article to provide rights and remedies to the Trustee and the Secured Owners which may be lawfully granted under the provisions of the Act and other applicable law, but should any right or remedy herein granted be held to be unlawful, the Trustee and the Secured Owners shall be entitled, as above set forth, to every other right and remedy provided in this Indenture and by applicable law.

Section 8.12 ~~Section 8.12.~~ **Additional and Other Events of Default and Remedies.** So long as any particular Series of Bonds is Outstanding, the Events of Default and remedies as set forth in this Article may be supplemented with additional Events of Default and remedies as set forth in the Supplemental Indenture under which such Series of Bonds is issued. Additional Events of Default, not necessarily limited to the time any Series of Bonds are Outstanding, and other Events of Default intended to supersede, in whole or in part, the Events of Default set forth herein and remedies attendant thereon may likewise be added or provided for from time to time by Supplemental Indenture.

Section 8.13 **Subordination (Junior Lien Bonds Subordinate to Senior Lien Bonds).** Anything in this Indenture to the contrary notwithstanding, the indebtedness evidenced by the Junior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement related

thereto) (such indebtedness being hereinafter referred to as “Junior Indebtedness”) shall be subordinated and junior in right of payment, to the extent and in the manner hereinafter set forth, to all principal of, premium, if any, and interest on the Senior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement related thereto) and any refinancings, refundings, deferrals, renewals, modifications or extensions thereof (such indebtedness being hereinafter referred to as “Senior Indebtedness”).

The Agency will not, directly or indirectly, make or agree to make, and neither the Secured Owner of any Junior Indebtedness nor any assignee or successor thereof will demand, accept or receive, (a) any payment (in cash, property or securities by set-off or otherwise), direct or indirect, of or on account of any principal, premium, if any, or interest in respect of any Junior Indebtedness, or (b) any payment for the purpose of any redemption, purchase or other acquisition, direct or indirect, of any Junior Indebtedness, and no such payment shall be due, except as specifically set forth in this Indenture and any Supplemental Indenture governing such Junior Indebtedness.

In the event of (i) any insolvency, bankruptcy, receivership, liquidation, reorganization, readjustment, composition or other similar proceeding relating to the Agency or its property, (ii) any proceeding for the liquidation, dissolution or other winding-up of the Agency, voluntary or involuntary, and whether or not involving insolvency or bankruptcy proceedings, (iii) any assignment for the benefit of creditors, or (iv) any distribution, division, marshaling or application of any of the properties or assets of the Agency or the proceeds thereof to creditors, voluntary or involuntary, and whether or not involving legal proceedings, then and in any such event, except as otherwise provided in the preceding paragraph:

(a) all Senior Indebtedness shall first be paid in full (including all principal, premium, if any, and interest, including interest accruing after the commencement of any such proceeding) before any payment or distribution of any character, whether in cash, securities or other property shall be made in respect of any Junior Indebtedness;

(b) all principal or premium, if any, and interest on the Junior Indebtedness shall forthwith become due and payable, and any payment or distribution of any character, whether in cash, securities or other property, which would otherwise (but for the terms hereof) be payable or deliverable in respect of any Junior Indebtedness, shall be paid or delivered directly to the Secured Owners of the Senior Indebtedness, for application to the payment of the Senior Indebtedness, until all Senior Indebtedness shall have been paid in full, and the Secured Owners of the Junior Indebtedness at the time Outstanding irrevocably authorize, empower and direct all receivers, trustees, liquidators, conservators, fiscal agents and others having authority in the premises to effect all such payments and deliveries; and

(c) to the maximum extent permitted by law, each Secured Owner of the Junior Indebtedness at the time Outstanding irrevocably authorizes and empowers each Secured Owner of the Senior Indebtedness (without imposing any obligation on any Secured Owner of the Senior Indebtedness or such Secured Owner’s representative) to demand, sue for, collect and receive such Secured Owner’s ratable share of all such payments and distributions and to receipt therefor, and to file and prove all claims therefor and take all such other action (including the right to vote the Junior Indebtedness) in the name of such Secured Owner or otherwise, as such Secured Owner of the Senior Indebtedness or such Secured Owner’s

representative may determine to be necessary or appropriate for the enforcement of this paragraph.

For all purposes of this Indenture, Senior Indebtedness shall not be deemed to have been paid in full unless the Secured Owners thereof shall have received cash equal to the amount of principal, premium, if any, and interest in respect of all Senior Indebtedness at the time Outstanding.

If any payment or distribution of any character, whether in cash, securities or other property, shall be received by any Secured Owner of any of the Junior Indebtedness, or such Secured Owner's representative, in contravention of any of the terms of this Indenture, such payment or distribution or security shall be held in trust for the benefit of, and shall be paid over or delivered and transferred to, the Secured Owners of the Senior Indebtedness or such Secured Owners' representative or representatives for application to the payment of all Senior Indebtedness remaining unpaid, to the extent necessary to pay all such Senior Indebtedness in full. Notwithstanding the foregoing, a Secured Owner of Junior Indebtedness may assume that payments received hereunder are in compliance with the terms of this Indenture unless such Secured Owner has actual knowledge that such payments are in contravention of the terms of this Indenture.

In case cash, securities or other property otherwise payable or deliverable to the Secured Owners of the Junior Indebtedness shall have been applied pursuant to this Section to the payment of Senior Indebtedness in full, then and in each such case, the Secured Owners of the Junior Indebtedness shall be subrogated to any rights of any Secured Owners of Senior Indebtedness to receive any further payments or distributions in respect of or applicable to the Senior Indebtedness.

The terms of this Section shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any Senior Indebtedness is rescinded, annulled or must otherwise be returned by any Secured Owner of Senior Indebtedness or such Secured Owner's representative, upon the insolvency, bankruptcy or reorganization of the Agency or otherwise, all as though such payment has not been made.

~~Section 8.13.~~ **Section 8.14 Subordination (Subordinated Obligations Subordinated to Senior and Junior Lien Bonds).** Anything in this Indenture to the contrary notwithstanding, the indebtedness issued pursuant to Section 5.16 (including, without limitation, payments under ~~at the~~ Parity Swap Agreement which are ~~not secured on parity with the Bonds~~subordinated) (such indebtedness being hereinafter referred to as "Subordinated Indebtedness") shall be subordinated and junior in right of payment, to the extent and in the manner hereinafter set forth, to all principal of, premium, if any, and interest on the Senior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement (except as otherwise provided therein) related thereto) and to all principal of, premium, if any, and interest on the Junior Lien Bonds (and any Reimbursement Obligation or Parity Swap Agreement related thereto) and any refinancings, refundings, deferrals, renewals, modifications or extensions thereof (such indebtedness being hereinafter referred to as "Superior Indebtedness").

The Agency will not, directly or indirectly, make or agree to make, and neither the holder of any Subordinated Indebtedness nor any assignee or successor thereof will demand, accept or receive, (a) any payment (in cash, property or securities by set-off or otherwise), direct or indirect, of or on account of any principal, premium, if any, or interest in respect of any Subordinated Indebtedness, or

(b) any payment for the purpose of any redemption, purchase or other acquisition, direct or indirect, of any Subordinated Indebtedness, and no such payment shall be due, except as specifically set forth in this Indenture and any Supplemental Indenture governing such Subordinated Indebtedness, ~~provided that following an acceleration of the maturity of any Superior Indebtedness, and as long as such acceleration shall continue unrescinded and unannulled, such Superior Indebtedness shall first be paid in full in cash before any payment is made on account of or applied on the Subordinated Indebtedness.~~

In the event of (i) any insolvency, bankruptcy, receivership, liquidation, reorganization, readjustment, composition or other similar proceeding relating to the Agency or its property, (ii) any proceeding for the liquidation, dissolution or other winding-up of the Agency, voluntary or involuntary, and whether or not involving insolvency or bankruptcy proceedings, (iii) any assignment for the benefit of creditors, or (iv) any distribution, division, ~~marshaling~~marshaling or application of any of the properties or assets of the Agency or the proceeds thereof to creditors, voluntary or involuntary, and whether or not involving legal proceedings, then and in any such event, except as otherwise provided in the preceding paragraph:

(a) all Superior Indebtedness shall first be paid in full (including all principal, premium, if any, and interest, including interest accruing after the commencement of any such proceeding) before any payment or distribution of any character, whether in cash, securities or other property shall be made in respect of any Subordinated Indebtedness;

(b) all principal or premium, if any, and interest on the Subordinated Indebtedness shall forthwith become due and payable, and any payment or distribution of any character, whether in cash, securities or other property, which would otherwise (but for the terms hereof) be payable or deliverable in respect of any Subordinated Indebtedness, shall be paid or delivered directly to the holders of the Superior Indebtedness, for application to the payment of the Superior Indebtedness, until all Superior Indebtedness shall have been paid in full, and the holders of the Subordinated Indebtedness at the time Outstanding irrevocably authorize, empower and direct all receivers, trustees, liquidators, conservators, fiscal agents and others having authority in the premises to effect all such payments and deliveries; and

(c) to the maximum extent permitted by law, each holder of the Subordinated Indebtedness at the time Outstanding irrevocably authorizes and empowers each holder of the Superior Indebtedness (without imposing any obligation on any holder of the Superior Indebtedness or such holder's representative) to demand, sue for, collect and receive such holder's ratable share of all such payments and distributions and to receipt therefor, and to file and prove all claims therefor and take all such other action (including the right to vote the Subordinated Indebtedness) in the name of such holder or otherwise, as such holder of the Superior Indebtedness or such holder's representative may determine to be necessary or appropriate for the enforcement of this paragraph.

For all purposes of this Indenture, Superior Indebtedness shall not be deemed to have been paid in full unless the holders thereof shall have received cash equal to the amount of principal, premium, if any, and interest in respect of all Superior Indebtedness at the time Outstanding.

If any payment or distribution of any character, whether in cash, securities or other property, shall be received by any holder of any of the Subordinated Indebtedness, or such holder's representative, in contravention of any of the terms of this Indenture, such payment or distribution or security shall be held in trust for the benefit of, and shall be paid over or delivered and transferred to, the holders of the Superior Indebtedness or such holders' representative or representatives for

application to the payment of all Superior Indebtedness remaining unpaid, to the extent necessary to pay all such Superior Indebtedness in full. Notwithstanding the foregoing, a holder of Subordinated Indebtedness may assume that payments received hereunder are in compliance with the terms of this Indenture unless such holder has actual knowledge that such payments are in contravention of the terms of this Indenture.

In case cash, securities or other property otherwise payable or deliverable to the holders of the Subordinated Indebtedness shall have been applied pursuant to this Section to the payment of Superior Indebtedness in full, then and in each such case, the holders of the Subordinated Indebtedness shall be subrogated to any rights of any holders of Superior Indebtedness to receive any further payments or distributions in respect of or applicable to the Superior Indebtedness.

The terms of this Section shall continue to be effective or be reinstated, as the case may be, if at any time any payment of any Superior Indebtedness is rescinded, annulled or must otherwise be returned by any holder of Superior Indebtedness or such holder's representative, upon the insolvency, bankruptcy or reorganization of the Agency or otherwise, all as though such payment has not been made.

ARTICLE IX

TRUSTEE, PAYING AGENT AND CO PAYING AGENTS; REGISTRAR

Section 9.1 ~~Section 9.1.~~ **Acceptance of Trusts.** The Trustee hereby accepts and agrees to execute the trusts specifically imposed upon it by this Indenture, but only upon the additional terms set forth in this Article, to all of which the Agency agrees and the respective Secured Owners agree by their acceptance of delivery of any of the Bonds.

Section 9.2 ~~Section 9.2.~~ **Duties of Trustee.** If an Event of Default has occurred and is continuing, the Trustee shall exercise its rights and powers and use the same degree of care and skill in their exercise as a prudent person would exercise or use under the circumstances in the conduct of such person's own affairs. **Upon the occurrence and continuance of any Event of Default described in clauses (a) or (b) of Section 8.1 the Trustee shall, and upon the occurrence and continuance of any other Event of Default, the Trustee may (and upon the written direction of the Agency or the Owners of not less than 25% of the Principal Obligation of either the Senior Lien Bonds or the Junior Lien Bonds, shall) appoint a co-trustee to represent the interests of the owners of the Junior Lien Bonds.**

Except during the continuance of an Event of Default,

(i) ~~(i)~~—the Trustee need perform only those duties that are specifically set forth in this Indenture and no others, and

(ii) ~~(ii)~~—in the absence of bad faith on its part, the Trustee may conclusively rely, as to the truth of the statements and the correctness of the opinions expressed, upon certificates or opinions furnished to the Trustee and conforming to the requirements of this Indenture. However, the Trustee shall examine the certificates and opinions to determine whether they conform to the requirements of this Indenture.

The Trustee may not be relieved from liability for its own negligent action, its own negligent failure to act or its own willful misconduct, except that:

~~(i)-(ii)~~ this paragraph does not limit the effect of the preceding paragraph of this Section;

~~(ii)-(iii)~~ the Trustee shall not be liable for any error of judgment made in good faith by a Responsible Officer unless it is proved that the Trustee was negligent in ascertaining the pertinent facts;

~~(iii)-(iv)~~ the Trustee shall not be liable with respect to any action it takes or omits to take in good faith in accordance with a direction received by it from Secured Owners or the Agency in the manner provided in this Indenture; and

~~(iv)-(v)~~ no provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

Every provision of this Indenture that in any way relates to the Trustee is subject to all the paragraphs of this Section. The Trustee may, unless such right is restricted by Supplemental Indenture, refuse to perform any duty or exercise any right or power unless it receives indemnity satisfactory to it against any loss, liability or expense. The Trustee shall not be liable for interest on any cash held by it except as the Trustee may agree with the Agency.

Section 9.3 ~~**Section 9.3. Rights of Trustee.**~~ Subject to the foregoing Section the Trustee may rely on any document believed by it to be genuine and to have been signed or presented by the proper person. The Trustee need not investigate any fact or matter stated in the document. Before the Trustee acts or refrains from acting, it may require a certificate of an Authorized Agency Representative or a written opinion of counsel (who may be counsel of or to the Agency). The Trustee shall not be liable for any action it takes or omits to take in good faith in reliance on the certificate or the opinion of counsel. The Trustee may act through agents or co trustees and shall not be responsible for the misconduct or negligence of any agent or co-trustee which has been appointed with due care and approved by the Agency.

The Trustee shall not be liable to the parties hereto or deemed in breach or default hereunder if and to the extent its performance hereunder is prevented by reason of force majeure. The term “force majeure” means an occurrence that is beyond the control of the Trustee and could not have been avoided by exercising due care. Force majeure shall include but not be limited to acts of God, terrorism, war, riots, strikes, fire, floods, earthquakes, epidemics or other similar occurrences.

The permissive right of the Trustee to do things enumerated in this Indenture shall not be construed as a duty, and it shall not be answerable for other than its negligence or willful misconduct.

The Trustee shall not be responsible for or accountable to anyone for the subsequent use or application of any moneys which shall be released or withdrawn in accordance with the provisions hereof.

The Trustee shall not be liable in connection with the performance of its duties hereunder except for its own negligence or willful misconduct.

The Trustee may consult with counsel, who may be counsel to the Agency, with regard to legal questions; and the opinion of such counsel shall be full and complete authorization and protection in respect of any action taken or suffered by it hereunder in good faith and in accordance therewith.

The Trustee's rights to immunities and protection from liability hereunder and its rights to payment of its fees and expenses shall survive its resignation or removal and final payment or defeasance of the Bonds. All indemnifications and releases from liability granted herein to the Trustee shall extend to the directors, officers, employees and agents of the Trustee.

The Trustee shall not be deemed to have knowledge of any Event of Default of the type described in Section 8.1(c), (d), (e) or (f) unless and until it shall have actual knowledge thereof by receipt of written notice thereof at its Principal Office.

Whenever in the administration of the trusts imposed upon it by this Indenture the Trustee shall deem it necessary or desirable that a matter be proved or established prior to taking or suffering any action hereunder, such matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a certificate of the Agency, and such certificate shall be full warrant to the Trustee for any action taken or suffered in good faith under the provisions of the Indenture in reliance upon such certificate, but in its discretion the Trustee may, in lieu thereof, accept other evidence of such matter or may require such additional evidence as it may deem reasonable.

Section 9.4 ~~Section 9.4.~~ **Individual Rights of Trustee.** The Trustee in its individual or any other capacity may become the owner or pledgee of Bonds and may otherwise deal with the Agency with the same rights it would have if it were not Trustee. Any paying agent or other agent may do the same with like rights.

Section 9.5 ~~Section 9.5.~~ **Trustee's Disclaimer.** The Trustee makes no representation as to the validity or adequacy of this Indenture or the Bonds, it shall not be accountable for the Agency's use of the proceeds from the Bonds paid to the Agency and it shall not be responsible for any statement in the Bonds other than its certificate of authentication. The Trustee shall have no responsibility or liability with respect to any information, statements or recitals in any official statement, offering memorandum or other disclosure material prepared or distributed in connection with the issuance of Bonds.

Section 9.6 ~~Section 9.6.~~ **Notice of Defaults.** If an event occurs which with the giving of notice or lapse of time or both would be an Event of Default, and if the event is continuing and if it is actually known to the Trustee, the Trustee shall mail to each Secured Owner with respect to which such Event of Default pertains notice of the event within 90 days after it occurs. Except in the case of a default in payment or purchase on any Bonds, the Trustee may withhold the notice if and so long as a

committee of its Responsible Officers in good faith determines that withholding the notice is in the interests of the affected Secured Owners.

Section 9.7 ~~**Section 9.7. Compensation of Trustee.**~~ For acting under this Indenture, the Trustee shall be entitled to payment of fees for its services and reimbursement of advances, counsel fees and other expenses reasonably and necessarily made or incurred by the Trustee in connection with its services under this Indenture, in accordance with a letter proposal approved by the Agency from time to time. **If the Trustee renders any service not provided for in this Indenture, or the Trustee is made a party to or intervenes in any litigation pertaining to this Indenture, or institutes interpleader proceedings relative hereto or thereto, or if the Trustee has to render services hereunder in connection with an Event of Default, the Trustee shall be compensated reasonably by the Agency for such extraordinary services and reimbursed for any and all claims, liabilities, losses, damages, fines, penalties, and expenses, including out-of-pocket and incidental expenses and legal fees occasioned thereby.**

Section 9.8 ~~**Section 9.8. Eligibility of Trustee.**~~ This Indenture shall always have a Trustee that is a trust company, **a national banking association** or a bank having the powers of a trust company and is organized and doing business under the laws of the United States or any state or the District of Columbia, is subject to supervision or examination by United States, state or District of Columbia authority and has a combined capital and surplus of at least \$100,000,000 as set forth in its most recent published annual report of condition.

Section 9.9 ~~**Section 9.9. Replacement of Trustee.**~~ The Trustee may resign by notifying the Agency in writing at least 60 days prior to the proposed effective date of the resignation. The Owners of a majority in Principal Obligation of the Bonds may remove the Trustee upon 30 days' prior written notice to the Trustee and the Agency and may appoint a successor Trustee with the Agency's consent. The Agency may remove the Trustee at any time and with or without cause by notice in writing delivered to the Trustee 60 days prior to the proposed removal date; provided, however, that the Agency shall have no right to remove the Trustee during any time when an Event of Default has occurred and is continuing. Notwithstanding the foregoing, the Trustee shall not be substituted without a written confirmation from each Rating Agency ~~maintaining a rating on the Bonds at the request of the Agency~~ to the effect that such substitution will not cause the withdrawal or reduction of such rating.

No resignation or removal of the Trustee under this Section shall be effective until a new Trustee has taken office.

If the Trustee resigns or is removed or for any reason is unable or unwilling to perform its duties under this Indenture, the Agency shall promptly appoint a successor Trustee.

A successor Trustee shall deliver a written acceptance of its appointment to the retiring Trustee and to the Agency. Immediately thereafter, the retiring Trustee shall transfer, in strict compliance with the terms thereof, all property held by it as Trustee to the successor Trustee (including, but not limited to, any Credit Facility then in effect), and the resignation or removal of the retiring Trustee shall then (but only then) become effective and the successor Trustee shall have all the rights, powers and duties of the Trustee under this Indenture.

~~If a Trustee is not performing its duties hereunder and~~ a successor Trustee does not take office within 60 days after the retiring Trustee delivers notice of resignation or the Agency delivers notice of

removal, the retiring Trustee, the Agency or the holders of a majority in Principal Obligation of the Bonds may petition any court of competent jurisdiction for the appointment of a successor Trustee.

Section 9.10 ~~**Section 9.10. Successor Trustee or Agent by Merger.**~~ If the Trustee, any Paying Agent or Registrar consolidates with, merges or converts into, or transfers all or substantially all its assets (or, in the case of a bank or trust company, its corporate trust assets) to, another **national banking association, bank, or** corporation, the resulting, surviving or transferee **national banking association, bank, or** corporation without any further act shall be the successor Trustee, Paying Agent or Registrar.

Section 9.11 ~~**Section 9.11. Paying Agent.**~~ The Agency may at any time or from time to time appoint a Paying Agent or Paying Agents for the Bonds or for any Series of Bonds, and each Paying Agent, if other than the Trustee, shall designate to the Agency and the Trustee its Principal Office and signify its acceptance of the duties and obligations imposed upon it hereunder or under a Supplemental Indenture by a written instrument of acceptance delivered to the Agency under which each such Paying Agent will agree, particularly:

(a) to hold all sums held by it for the payment of the principal of, premium or interest on Bonds in trust for the benefit of the Bond Owners until such sums shall be paid to such Bond Owners or otherwise disposed of as herein provided;

(b) to keep such books and records as shall be consistent with prudent industry practice, to make such books and records available for inspection by the Agency and the Trustee at all reasonable times; and

(c) upon the request of the Trustee, to forthwith deliver to the Trustee all sums so held in trust by such Paying Agent.

Section 9.12 ~~**Section 9.12. Registrar.**~~ The Agency shall appoint the Registrar for the Bonds or a Registrar for any Series of Bonds and may from time to time remove a Registrar and name a replacement. Each Registrar, if other than the Trustee, shall designate to the Trustee, the Paying Agent, and the Agency its Principal Office and signify its acceptance of the duties imposed upon it hereunder or under a Supplemental Indenture by a written instrument of acceptance delivered to the Agency and the Trustee under which such Registrar will agree, particularly, to keep such books and records as shall be consistent with prudent industry practice and to make such books and records available for inspection by the Agency, the Trustee, and the Paying Agent at all reasonable times.

Section 9.13 ~~**Section 9.13. Other Agents.**~~ The Agency or the Trustee may from time to time appoint other agents to perform duties and obligations under this Indenture or under a Supplemental Indenture, which agents may include, but not be limited to, tender agents, remarketing agents, auction agents and authenticating agents all as provided by Supplemental Indenture or resolution of the Board.

Section 9.14 ~~**Section 9.14. Several Capacities.**~~ Anything in this Indenture to the contrary notwithstanding, the same entity may serve hereunder as the Trustee, Paying Agent, Registrar and any other agent as appointed to perform duties or obligations under this Indenture, under a Supplemental Indenture or an escrow agreement, or in any combination of such capacities, to the extent permitted by law.

Section 9.15 ~~**Section 9.15**~~ **Accounting Records and Reports of the Trustee.** The Trustee shall at all times keep, or cause to be kept, proper books of record and account in which complete and accurate entries shall be made of all transactions relating to the proceeds of the Bonds, the Revenues and all funds and accounts held by the Trustee pursuant to this Indenture. Such books of record and account shall be available for inspection by the Agency and any Secured Owner, or his agent or representative duly authorized in writing, at reasonable hours and under reasonable circumstances.

The Trustee shall provide to the Agency each month a monthly report of Revenues received, amounts deposited into each fund and account held by the Trustee under this Indenture, the investments made by the Trustee pursuant to this Indenture, the amount disbursed from such funds and accounts and the balance in each of such funds and accounts.

The Trustee shall annually file and furnish to the Agency and to each Secured Owner who shall have filed his name and address with the Trustee for such purpose (at such Secured Owner's cost) a complete financial statement (which need not be audited) covering receipts, disbursements, allocation and application of Revenues and any other moneys in any of the funds and accounts established pursuant to this Indenture for the preceding Fiscal Year.

ARTICLE X

MODIFICATION OF THIS INDENTURE

Section 10.1 ~~**Section 10.1**~~ **Limitations.** This Indenture shall not be modified or amended in any respect subsequent to the first delivery of fully executed and authenticated Bonds except as provided in and in accordance with and subject to the provisions of this Article.

Section 10.2 ~~**Section 10.2**~~ **Supplemental Indentures Not Requiring Consent of Bond Owners.** The Agency may, from time to time and at any time, without the consent of or notice to the Bond Owners execute and deliver Supplemental Indentures supplementing and/or amending this Indenture or any Supplemental Indenture as follows:

(a) to provide for the issuance of a Series or multiple Series of Bonds under the provisions of Section 2.9 ~~of this Indenture~~ and to set forth the terms of such Bonds and the special provisions which shall apply to such Bonds;

(b) to cure any formal defect, omission, inconsistency or ambiguity in this Indenture or any Supplemental Indenture;

(c) to add to the covenants and agreements of the Agency in this Indenture or any Supplemental Indenture other covenants and agreements, or to surrender any right or power reserved or conferred upon the Agency, and which shall not materially adversely affect the interests of the Bond Owners;

(d) to confirm, as further assurance, any interest of the Trustee in and to the Pledged Funds or in and to the funds and accounts held by the Trustee or in and to any other moneys, securities or funds of the Agency provided pursuant to this Indenture or to otherwise add additional security for the Bond Owners;

(e) to evidence any change made in the terms of any Series of Bonds if such changes are authorized by the Supplemental Indenture at the time the Series of Bonds is issued and such change is made in accordance with the terms of such Supplemental Indenture;

(f) to comply with the requirements of the Trust Indenture Act of 1939, as from time to time amended;

(g) to modify, alter, amend or supplement this Indenture or any Supplemental Indenture in connection with entering into a contract pursuant to Section 2.12 or a Reimbursement Agreement or in any other respect which, in the judgment of the Agency, as concurred in by the Trustee, is not materially adverse to the Bond Owners;

(h) to provide for uncertificated Bonds or for the issuance of coupons and bearer Bonds or Bonds registered only as to principal;

(i) to qualify the Bonds or a Series of Bonds for a rating or ratings by any Rating Agency; ~~and~~

(j) to comply with the requirements of the Code as are necessary, in the opinion of Bond Counsel, to prevent the inclusion of the interest on the Bonds or a Series of Bonds in gross income for purposes of federal income taxation; and

(k) once there are no 1993 Bonds remaining Outstanding, to delete all references to those Bonds, the 1993 Trustee and the 1993 Indenture.

No such Supplemental Indenture shall modify any of the rights or obligations of the Trustee without its prior written consent; and, as long as there is any Outstanding 1993 Bond, no such Supplemental Indenture shall amend the definition of the term “**Senior Lien Bonds Reserve Fund Requirement**” or any provision of this Indenture affecting in any way the amount of money required to be deposited in, or permitted to be withdrawn from, the Reserve Fund without the written consent of the owners of at least 60% of the Outstanding 1993 Bonds.

Before the Agency shall, pursuant to this Section, execute any Supplemental Indenture, the Agency shall cause notice of the proposed execution of the Supplemental Indenture to be given by mail to ~~MBIA~~ **the Bond Insurer**. A copy of the proposed Supplemental Indenture shall accompany such notice. Not less than one week after the date of the first mailing of such notice, the Agency may execute and deliver such Supplemental Indenture, but only after there shall have been delivered to the Agency an opinion of Bond Counsel stating that such Supplemental Indenture is authorized or permitted by this Indenture, the Act and other applicable law, complies with their respective terms, will, upon the execution and delivery thereof, be valid and binding upon the Agency in accordance with its terms and will not adversely affect the exclusion from gross income for federal income tax purposes of interest on Bonds which are then unpaid and for which there has been delivered an opinion of Bond Counsel to the effect that interest on such Bonds is excluded from gross income for federal income tax purposes.

Section 10.3 ~~Section 10.3~~—Supplemental Indentures Requiring Consent of Bond Owners.

(a) Except for **(i) any Supplemental Indenture that provides for the issuance of additional Bonds pursuant to and in compliance with the provisions of Article II hereof, (ii) any Supplemental Indenture entered into pursuant to Section 10.2 and (iii) any Supplemental Indenture entered into pursuant to Section 10.3(b) below, subject to the terms and provisions contained in this Section and not otherwise, the Owners of Bonds that comprise both not less than a majority of the aggregate Principal Obligation of the Senior Lien Bonds then Outstanding and not less than a majority of the aggregate Principal Obligation of all Bonds then Outstanding shall have the right from time to time to consent to and approve the execution by the Agency of any Supplemental Indenture deemed necessary or desirable by the Agency for the purposes of modifying, altering, amending, supplementing or rescinding, in any particular, any of the terms or provisions contained in this Indenture or in a Supplemental Indenture; provided, that any such Supplemental Indenture shall have been first approved in writing by MBI, the Bond Insurer, and provided further that, unless approved in writing by the Owners of all the Bonds then Outstanding or unless such change affects less than all Series of Bonds Outstanding and the following subsection (b) is applicable, nothing herein contained shall permit, or be construed as permitting, (i) a change in the times, amounts or currency of payment of the principal of or interest on any Outstanding Bonds or (ii) a reduction in the principal amount or redemption price of any Outstanding Bonds or the rate of interest thereon; and provided that nothing herein contained, including the provisions of Section 10.3(b) below, shall, unless approved in writing by the Owners of all the Bonds then Outstanding, permit or be construed as permitting (iii) the creation of a lien (except as expressly permitted by this Indenture as originally executed) upon or pledge of the Pledged Funds created by this Indenture, ranking prior to or on parity with the claim created by this Indenture, or (iv) except as provided herein and except with respect to additional security which may be provided for a particular Series of Bonds, a preference or priority of any Bond or Bonds over any other Bond or Bonds, or (v) a reduction in the aggregate Principal Obligation of Bonds the consent of the Bond Owners of which is required for any such Supplemental Indenture. Nothing herein contained, however, shall be construed as making necessary the approval by Bond Owners of the execution of any Supplemental Indenture as authorized in Section 10.2, including the granting, for the benefit of particular Series of Bonds, security in addition to the pledge of the Pledged Funds. As long as there is any Outstanding 1993 Bond, no such Supplemental Indenture shall amend the definition of the term “Reserve Fund Requirement” or any provision of this Indenture affecting in any way the amount of money required to be deposited in, or permitted to be withdrawn from, the Reserve Fund without the written consent of the owners of at least 60% of the Outstanding 1993 Bonds. **Nothing herein contained, however, shall be construed as making necessary the approval by Bond Owners of the execution of any Supplemental Indenture as authorized in Section 10.2, including the granting, for the benefit of particular Series of Bonds, security in addition to the pledge of the Pledged Funds; nor shall anything contained herein prevent an Owner from consenting to changes to any of the terms of such Owner’s Bonds.****

(b) The Agency may, from time to time and at ~~anytime~~**any time** execute a Supplemental Indenture which amends the provisions of an earlier Supplemental Indenture under which a Series or multiple Series of Bonds were issued. If such Supplemental Indenture is executed for one of the purposes set forth in Section 10.2, no notice to or consent of the Bond Owners shall be required. If such Supplemental Indenture contains provisions which affect the rights and interests of less than all Series of Bonds Outstanding and Section 10.2 is not applicable, then this subsection (b) rather than subsection (a) above shall control and, subject to the terms and provisions contained in this Section 10.3 and not otherwise, the Owners of not less than a majority of the aggregate Principal

Obligation of the Bonds of all Series which are affected by such changes shall have the right from time to time to consent to and approve the execution by the Agency of any Supplemental Indenture deemed necessary or desirable by the Agency for the purposes of modifying, altering, amending, supplementing or rescinding, in any particular, any of the terms or provisions contained in such Supplemental Indenture and affecting only the Bonds of such Series; provided, any such Supplemental Indenture shall have been first approved in writing by ~~MBIA~~the Bond Insurer, and provided further that, unless approved in writing by the Owners of all the Bonds of all the affected Series then Outstanding, nothing herein contained shall permit, or be construed as permitting, (i) a change in the times, amounts or currency of payment of the principal of or interest on any Outstanding Bonds of such Series or (ii) a reduction in the principal amount or redemption price of any Outstanding Bonds of such Series or the rate of interest thereon. As long as there is any Outstanding 1993 Bond, no such Supplemental Indenture shall amend the definition of the term "Reserve Fund Requirement" or any provision of this Indenture affecting in any way the amount of money required to be deposited in, or permitted to be withdrawn from, the Reserve Fund without the written consent of the owners of at least 60% of the Outstanding 1993 Bonds. Nothing herein contained, however, shall be construed as making necessary the approval by Bond Owners of the adoption of any Supplemental Indenture as authorized in Section 10.2, including the granting, for the benefit of particular Series of Bonds, security in addition to the pledge of the Pledged Funds; nor shall anything contained herein prevent an Owner from consenting to changes to any of the terms of such Owner's Bonds.

(c) If at any time the Agency shall desire to enter into any Supplemental Indenture for any of the purposes of this Section, the Agency shall cause notice of the proposed execution of the Supplemental Indenture to be given by Mail to ~~MBIA~~the Bond Insurer and all other Secured Owners or, under Section 10.3(b), all Secured Owners of the affected Series and, if applicable, the owners of the Outstanding 1993 Bonds. Such notice shall briefly set forth the nature of the proposed Supplemental Indenture and shall state that a copy thereof is on file at the office of the Agency for inspection by all Secured Owners.

(d) Not less than one week after the date of the first mailing of such notice, the Agency may execute and deliver such Supplemental Indenture in substantially the form described in such notice, but only if there shall have first been delivered to the Agency (i) the required consents, in writing, of ~~MBIA~~the Bond Insurer and Bond Owners and, if applicable, the owners of the Outstanding 1993 Bonds, and (ii) an opinion of Bond Counsel stating that such Supplemental Indenture is authorized or permitted by this Indenture and other applicable law, complies with their respective terms and, upon the execution and delivery thereof, will be valid and binding upon the Agency in accordance with its terms and will not adversely affect the exemption from federal income taxation of interest on the Bonds.

(e) If ~~MBIA~~the Bond Insurer and Bond Owners of not less than the percentage of Bonds required by this Section and, if applicable, the owners of the Outstanding 1993 Bonds, shall have consented to and approved the execution and delivery thereof as herein provided, no Bond Owners shall have any right to object to the adoption of such Supplemental Indenture, or to object to any of the terms and provisions contained therein or the operation thereof, or in any manner to question the propriety of the execution and delivery thereof, or to enjoin or restrain the Agency from executing the same or from taking any action pursuant to the provisions thereof.

Section 10.4 ~~Section 10.4~~ **Effect of Supplemental Indenture.** Upon execution and delivery of any Supplemental Indenture pursuant to the provisions of this Article, this Indenture or the Supplemental Indenture shall be, and shall be deemed to be, modified and amended in accordance

therewith, and the respective rights, duties and obligations under this Indenture and the Supplemental Indenture of the Agency, the Trustee, the Paying Agent and all Bond Owners shall thereafter be determined, exercised and enforced under this Indenture and the Supplemental Indenture, if applicable, subject in all respects to such modifications and amendments.

Section 10.5 ~~**Section 10.5. Supplemental Indentures To Be Part of This Indenture.**~~ Any Supplemental Indenture adopted in accordance with the provisions of this Article shall thereafter form a part of this Indenture or the Supplemental Indenture which they supplement or amend, and all of the terms and conditions contained in any such Supplemental Indenture as to any provision authorized to be contained therein shall be and shall be deemed to be part of the terms and conditions of this Indenture or the Supplemental Indenture which they supplement or amend for any and all purposes.

ARTICLE XI

MISCELLANEOUS PROVISIONS

Section 11.1 ~~**Section 11.1. Parties in Interest.**~~ Except as herein otherwise specifically provided (as, for example, in the case of the owners of the Outstanding 1993 Bonds, in Section 4.4, ~~Section 4.124.5~~ and Article X), nothing in this Indenture expressed or implied is intended or shall be construed to confer upon any person, firm or corporation other than the Agency, the Paying Agent, the Trustee and the Secured Owners any right, remedy or claim under or by reason of this Indenture, this Indenture being intended to be for the sole and exclusive benefit of the Agency, the Paying Agent, the Trustee and the Secured Owners.

Section 11.2 ~~**Section 11.2. Severability.**~~ In case any one or more of the provisions of this Indenture, or of any Bonds issued hereunder shall, for any reason, be held to be illegal or invalid, such illegality or invalidity shall not affect any other provisions of this Indenture or of Bonds, and this Indenture and any Bonds issued hereunder shall be construed and enforced as if such illegal or invalid provisions had not been contained herein or therein.

Section 11.3 ~~**Section 11.3. No Personal Liability of Agency Officials; Limited Liability of Bond Owners.**~~ No covenant or agreement contained in the Bonds or in this Indenture shall be deemed to be the covenant or agreement of any present or future official, officer, agent or employee of the Agency in his individual capacity, and neither the members of the Agency nor any person executing the Bonds shall be liable personally on the Bonds or be subject to any personal liability or accountability by reason of the issuance thereof.

Except for the payment from the Pledged Funds when due of the payments and the observance and performance of the other agreements, conditions, covenants and terms required to be performed by it contained in this Indenture, the Agency shall not have any obligation or liability to the Bond Owners with respect to this Indenture or the preparation, execution, delivery, transfer, exchange or cancellation of the Bonds or the receipt, deposit or disbursement of the payments by the Trustee, or with respect to the performance by the Trustee of any obligation required to be performed by it contained in this Indenture.

Section 11.4 ~~**Section 11.4. Execution of Instruments; Proof of Ownership.**~~ Any request, direction, consent or other instrument in writing required or permitted by this Indenture to be signed or executed by Bond Owners or on their behalf by an attorney in fact may be in any number of concurrent instruments of similar tenor and may be signed or executed by such Bond Owners in person or by an

agent or attorney in fact appointed by an instrument in writing or as provided in the Bonds. Proof of the execution of any such instrument and of the ownership of Bonds shall be sufficient for any purpose of this Indenture and shall be conclusive in favor of the Trustee with regard to any action taken by it under such instrument if made in the following manner:

(a) The fact and date of the execution by any person of any such instrument may be proved by the certificate of any officer in any jurisdiction who, by the laws thereof, has power to take acknowledgments within such jurisdiction, to the effect that the person signing such instrument acknowledged before him the execution thereof, or by an affidavit of a witness to such execution.

(b) The ownership of Bonds shall be proved by the registration books kept under the provisions hereof.

Nothing contained in this Section shall be construed as limiting the Trustee to such proof. The Trustee may accept any other evidence of matters herein stated which it may deem sufficient. Any request, consent of, or assignment by any Bond Owner shall bind every future Bond Owner of the same Bonds or any Bonds issued in lieu thereof in respect of anything done by the Trustee or the Agency in pursuance of such request or consent.

Section 11.5 ~~Section 11.5.~~ **Governing Law.** The Act and other laws of the State shall govern the construction and enforcement of this Indenture and of all Bonds issued hereunder; provided, however, that the administration of the trusts imposed upon the Trustee by this Indenture and the rights and duties of the Trustee hereunder shall be governed by, and construed in accordance with, the laws of the jurisdiction in which the Trustee has its Principal Office.

Section 11.6 ~~Section 11.6.~~ **Notices.** Except as otherwise provided in this Indenture, all notices, certificates, requests, requisitions or other communications by the Agency, the Trustee, the Paying Agent, or the Registrar, pursuant to this Indenture shall be in writing and shall be sufficiently given and shall be deemed given when mailed by registered mail, postage prepaid, addressed as follows: if the Agency, to the San Joaquin Hills Transportation Corridor Agency, ~~201 East Sandpointe,~~ Suite 200, Santa Ana **125 Pacifica, Irvine,** California ~~92799-8870,~~ **92618,** Attention: Chief Executive Officer; if to the Trustee, to ~~BNY Western~~ **The Bank Of New York Mellon** Trust Company, ~~700 N.A.,~~ **400** South ~~Flower~~ **Hope** Street, Suite ~~500,~~ **400,** Los Angeles, California ~~90017,~~ **90071,** Attention: Corporate Trust Division; if to the Registrar or a Paying Agent, to such address as is designated in writing by it to the Trustee and the Agency. During any period in which an Outstanding Bond is insured by ~~MBIA~~ **the Bond Insurer,** any notices required to be given by any of the parties mentioned above to any other such party shall also be given to ~~MBIA~~ **the Bond Insurer** at the following address: 113 King Street, Armonk, New York 10504 Attention: Insured Portfolio Management. Any of the foregoing may, by notice given hereunder to each of the others, designate any further or different addresses to which subsequent notices, certificates, requests or other communications shall be sent hereunder. **Notwithstanding the foregoing, any such notices, certificates, requests, requisitions or other communications may be in electronic form and shall be sufficiently given and shall be deemed given when sent by facsimile transmission or when mailed electronically to such telephone numbers or such email addresses as the parties may from time to time provide to one another.**

Section 11.7 ~~Section 11.7.~~ **Holidays.** If the date for making any payment or the last date for performance of any act or the exercising of any right, as provided in this Indenture, shall not be a Business Day, such payment may, unless otherwise provided in this Indenture or, with respect to any

Series of Bonds or portion of Series of Bonds, provided in the Supplemental Indenture under which such Bonds are issued, be made or act performed or right exercised on the next succeeding Business Day with the same force and effect as if done on the nominal date provided in this Indenture, and no interest shall accrue for the period after such nominal date.

Section 11.8 ~~**Section 11.8.**~~ **Validity of Bonds Not Affected by Acts of Agency.** The validity of the authorization and issuance of the Bonds by the Agency shall not be dependent upon or affected in any way by:

(a) Proceedings taken by the Agency for the acquisition, construction or completion of the ~~Pledged~~ Facilities or any part thereof;

(b) Any contracts made in connection with the acquisition, construction or completion of the ~~Pledged~~ Facilities; or

(c) The failure to complete the ~~Pledged~~ Facilities or any portion thereof for which the Bonds are authorized to be issued.

Section 11.9 ~~**Section 11.9.**~~ **Payment on Municipal Bond Insurance Policy.** The Insurance Trustee (as hereinafter defined) shall hold the Municipal Bond Insurance Policy which shall be applied for the benefit of the Owners of the Initial Insured Bonds and shall take such actions at such times pursuant to such Municipal Bond Insurance Policy to assure timely payment of principal and interest (but not premium) on the Initial Insured Bonds in accordance with the terms of the Municipal Bond Insurance Policy.

Section 11.10 ~~**Section 11.10.**~~ **Payment Procedure Pursuant to Municipal Bond Insurance Policy.** As long as the Municipal Bond Insurance Policy shall be in full force and effect, the Agency and the Trustee agree to comply with the following provisions with respect to the Initial Insured Bonds:

(a) In the event that on the second Business Day, and again on the Business Day, prior to the payment date on the Initial Insured Bonds, the Trustee has not received sufficient moneys to pay all principal of and interest on the Initial Insured Bonds due on the second following or following, as the case may be, Business Day, the Trustee shall immediately notify ~~MBIA~~ **the Bond Insurer** or its designee on the same Business Day by telephone or telegraph, confirmed in writing by registered or certified mail, of the amount of the deficiency.

(b) If the deficiency is made up in whole or in part prior to or on the payment date, the Trustee shall so notify ~~MBIA~~ **the Bond Insurer** or its designee.

(c) In addition, if the Trustee has notice that any Owner of an Initial Insured Bond has been required to disgorge payments of principal or interest on such Bond to a trustee in bankruptcy or creditors or others pursuant to a final judgment by a court of competent jurisdiction that such payment constitutes an avoidable preference to such Bondowner within the meaning of any applicable bankruptcy laws, then the Trustee shall notify ~~MBIA~~ **the Bond Insurer** or its designee of such fact by telephone or telegraphic notice, confirmed in writing by registered or certified mail.

(d) The Trustee is hereby irrevocably designated, appointed, directed and authorized to act as attorney in fact for Owners of the Initial Insured Bonds as follows:

(i) If and to the extent there is a deficiency in amounts required to pay interest on the Initial Insured Bonds, the Trustee shall (a) execute and deliver to State Street Bank and Trust Company, N.A., or its successors under the Policy (the “Insurance Paying Agent”), in form satisfactory to the Insurance Paying Agent, an instrument appointing ~~MBIA~~the Bond Insurer as agent for such Owners in any legal proceeding related to the payment of such interest and an assignment to ~~MBIA~~the Bond Insurer of the claims for interest to which such deficiency relates and which are paid by ~~MBIA~~the Bond Insurer, (b) receive as designee of the respective Owners of the Initial Insured Bonds (and not as Trustee) in accordance with the tenor of the Policy payment from the Insurance Paying Agent with respect to the claims for interest so assigned, and (c) disburse the same to such respective Owners; and

(ii) If and to the extent of a deficiency in amounts required to pay principal of the Initial Insured Bonds, the Trustee shall (a) execute and deliver to the Insurance Paying Agent in form satisfactory to the Insurance Paying Agent an instrument appointing ~~MBIA~~the Bond Insurer as agent for such Owner in any legal proceeding relating to the payment of such principal and an assignment to ~~MBIA~~the Bond Insurer of any of the Initial Insured Bonds surrendered to the Insurance Paying agent of so much of the principal amount thereof as has not previously been paid or for which moneys are not held by the Trustee and available for such payment (but such assignment shall be delivered only if payment from the Insurance Paying Agent is received), (b) receive as designee of the respective Owners (and not as Trustee) in accordance with the tenor of the Policy payment therefor from the Insurance Paying Agent, and (c) disburse the same of such Owners.

(e) Payments with respect to claims for interest on and principal of Initial Insured Bonds disbursed by the Trustee from proceeds of the Policy shall not be considered to discharge the obligation of the Agency with respect to such obligations, and ~~MBIA~~the Bond Insurer shall become the owner of such unpaid Initial Insured Bonds and claims for the interest in accordance with the tenor of the assignment made to it under the provisions of this subsection or otherwise.

(f) Irrespective of whether any such assignment is executed and delivered, the Agency and the Trustee hereby agree for the benefit of ~~MBIA~~the Bond Insurer that:

(i) They recognize that to the extent ~~MBIA~~the Bond Insurer makes payments, directly or indirectly (as by paying through the Trustee), on account of principal of or interest on the Initial Insured Bonds, ~~MBIA~~the Bond Insurer will be subrogated to the rights of the Owners of such Initial Insured Bonds to receive the amount of such principal and interest from the Agency, with interest thereon as provided and solely from the sources stated in this Indenture and the Bonds; and

(ii) They will accordingly pay to ~~MBIA~~the Bond Insurer the amount of such principal and interest (including principal and interest recovered under subparagraph (ii) of the first paragraph of the Policy, which principal and interest shall be deemed past due and not to have been paid), with interest thereon as provided in this Indenture and the Bonds, but only from the sources and in the manner provided herein for the payment of principal of and interest on the Initial Insured Bonds to Owners, and will otherwise treat ~~MBIA~~the Bond Insurer as the owner of such rights to the amount of such principal and interest.

(g) In connection with the issuance of additional Bonds, the Agency shall deliver to ~~MBIA~~the Bond Insurer a copy of the disclosure document, if any, circulated with respect to such additional Bonds.

(h) Copies of any amendments made to the documents executed in connection with the issuance of the Bonds which are consented to by ~~MBIA~~the Bond Insurer shall be sent to S&P.

(i) ~~MBIA~~The Bond Insurer shall receive notice of the resignation or removal of the Trustee and the appointment of a successor thereto.

(j) ~~MBIA~~The Bond Insurer shall receive copies of all notices required to be delivered to Bondowners or to any other person under this Indenture and, on an annual basis, copies of the Agency's audited financial statements and Annual Budget.

Section 11.11 ~~Section 11.11~~-**Municipal Bond Insurance.** Any provision of this Indenture expressly recognizing or granting rights in or to ~~MBIA~~the Bond Insurer may not be amended in any manner which affects the rights of ~~MBIA~~the Bond Insurer hereunder without the prior written consent of ~~MBIA~~the Bond Insurer.

Unless otherwise provided in this Section, ~~MBIA~~the Bond Insurer's consent shall be required in addition to Bondowner consent, when required, for the following purposes: ~~(i) execution and delivery of any Supplemental Indenture;~~ ~~(ii) removal of the Trustee and selection and appointment of any successor trustee;~~ and ~~(iii)~~ initiation or approval of any action not described in ~~(i) or (ii)~~ above which requires Bondowner consent.

Anything in this Indenture to the contrary notwithstanding, ~~MBIA~~the Bond Insurer shall be deemed to be the Owner of 100% of the Initial Insured Bonds for purposes of exercising the rights and remedies granted to the Bondowners or to the Trustee for the benefit of the Bondowners under Article VIII; and anything in this Indenture to the contrary notwithstanding, ~~MBIA~~the Bond Insurer shall be deemed to be the Owner of the Initial Insured Bonds for purposes of exercising the rights granted to the Bondowners with respect to the removal of the Trustee pursuant to Section 9.9.

Notwithstanding anything herein to the contrary, in the event that the principal and/or interest due on Initial Insured Bonds shall be paid by ~~MBIA~~the Bond Insurer pursuant to the Municipal Bond Insurance Policy, such Bonds shall remain Outstanding for all purposes, not be defeased or otherwise satisfied and not be considered paid by the Agency, and the assignment and pledge of the Pledged Funds and all of the moneys in the Funds and Accounts held hereunder by the Trustee and all covenants, agreements and other obligations of the Agency to the registered Owners of such Initial Insured Bonds shall continue to exist and shall run to the benefit of ~~MBIA~~the Bond Insurer, and ~~MBIA~~the Bond Insurer shall be subrogated to the rights of such registered Owners until such time as all amounts payable to ~~MBIA~~the Bond Insurer have been paid in full.

Notwithstanding any other provision of this Indenture, in determining whether the rights of the Bondowners will be adversely affected by any action taken pursuant to the terms and provisions of this Indenture, the Trustee shall consider the effect on the Bondowners as if there were no Municipal Bond Insurance Policy.

Notwithstanding any other provision of this Indenture, no removal, resignation or termination of the Trustee shall take effect until a successor, acceptable to ~~MBIA~~the Bond Insurer, shall be appointed.

To the extent that this Indenture confers upon or gives or grants to ~~MBIA~~the Bond Insurer any right, remedy or claim under or by reason of this Indenture, ~~MBIA~~the Bond Insurer is hereby expressly recognized as being a third party beneficiary hereunder and may enforce any such right, remedy or claim conferred, given or granted hereunder in the same manner as if ~~MBIA~~the Bond Insurer were a party to this Indenture.

Section 11.12 ~~Section 11.12.~~ **Rights of ~~MBIA~~the Bond Insurer Limited.** Notwithstanding any other provision of this Indenture, no consent or approval shall be required to be obtained from ~~MBIA~~the Bond Insurer, no notice shall be required to be delivered to ~~MBIA~~the Bond Insurer, and no action shall be required to be taken at the request of ~~MBIA~~the Bond Insurer if (i) no Initial Insured Bond is then Outstanding (or deemed outstanding) and no amount is due and payable to ~~MBIA~~the Bond Insurer under this Indenture or (ii) if ~~MBIA~~the Bond Insurer is in default under the Municipal Bond Insurance Policy.

Section 11.13 **Incorporation of Future Covenants.** **In the event the Agency shall, directly or indirectly, enter into or otherwise consent to any credit agreement, bond purchase agreement, liquidity agreement, bond insurance policy or related insurance agreement or other agreement or instrument (or any amendment, supplement or modification thereto) (an “Other Credit Facility”) under which or in connection with which, directly or indirectly, any person or persons undertakes to make loans or extend credit or liquidity to the Agency that constitute Senior Indebtedness, which such agreement (or amendment thereto) provides such person with different covenants and/or different rights and remedies than are provided to the Bond Insurer under this Indenture, substantially contemporaneously therewith the Agency shall provide the Bond Insurer and the Trustee with a copy of each such agreement (or amendment thereto) which provides such different covenants and/or different rights and remedies. If requested in writing by the Bond Insurer (with a copy of such request to the Trustee), the Agency and the Trustee shall promptly enter into an amendment to this Indenture to include such different covenants and/or different rights or remedies (provided that the Bond Insurer shall have and maintain the benefit of such different covenants and/or different rights and remedies as if specifically set forth in this Indenture even if the Agency and the Trustee fail to provide such amendment after having been requested to do so by the Bond Insurer). The incorporation of such different covenants and/or different rights and remedies shall continue regardless of whether there is a termination of the applicable Other Credit Facility.**

IN WITNESS WHEREOF, the parties hereto have caused this Indenture to be duly executed all as of the date first above written.

SAN JOAQUIN HILLS TRANSPORTATION
CORRIDOR AGENCY

By: _____
Its: ~~Chairman~~ **Chair**

ATTEST:

Assistant Secretary

~~BNY WESTERN~~ **THE BANK OF NEW YORK**
MELLON TRUST COMPANY, **N.A.**, as Trustee

By:
Its: Authorized Officer

EXHIBIT A

Document comparison by Workshare Compare on Thursday, October 02, 2014
9:54:22 AM

Input:	
Document 1 ID	PowerDocs://DOCSOC/1673568/2
Description	DOCSOC-#1673568-v2-SJHTCA_Master_Indenture_with_all_amendments_included_but_not_highlighted
Document 2 ID	PowerDocs://DOCSOC/1679238/7
Description	DOCSOC-#1679238-v7-SJHTCA_First_Amended_and_Restated_Master_Indenture
Rendering set	SYCR 1

Legend:	
<u>Insertion</u>	
Deletion	
Moved from	
<u>Moved to</u>	
Style change	
Format change	
Moved deletion	
Inserted cell	
Deleted cell	
Moved cell	
Split/Merged cell	
Padding cell	

Statistics:	
	Count
Insertions	953
Deletions	880
Moved from	45
Moved to	45
Style change	0
Format changed	0
Total changes	1923

APPENDIX B
TRAFFIC AND REVENUE STUDY

**San Joaquin Hills
Transportation Corridor
Traffic and Revenue Study**



Prepared for:
San Joaquin Hills
Transportation Corridor Agency

Prepared by:
Stantec Consulting Services Inc.

Assisted by:

Parsons Brinckerhoff Inc.

August 22, 2014

Sign-off Sheet

This document entitled San Joaquin Hills Transportation Corridor Traffic and Revenue Study was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Transportation Corridor Agencies (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____
(signature)

Steve Abendschein, PE

Reviewed by _____
(signature)

Table of Contents

EXECUTIVE SUMMARY	I
1.0 INTRODUCTION	1.1
1.1 PURPOSE AND FOCUS OF THE STUDY	1.1
1.2 THE CONSULTANT TEAM	1.1
1.3 OVERVIEW OF THE REPORT	1.1
2.0 PROJECT DESCRIPTION AND SETTING	2.1
2.1 ROADWAY ALIGNMENT	2.1
2.2 INTERCHANGES	2.1
2.3 TOLL RATE STRUCTURE	2.3
2.3.1 All-Electronic Tolling (AET)	2.3
2.3.2 Fiscal Year 2015 Toll Rate Structure	2.4
2.4 REGIONAL HIGHWAYS	2.7
3.0 EXISTING CONDITIONS	3.1
3.1 DATA COLLECTION	3.1
3.1.1 Wavetronix Traffic Counts	3.1
3.1.2 Travel Time and Speed Runs	3.16
3.1.3 Screenline Summary	3.19
3.2 SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRENDS	3.20
3.2.1 Historic Average Weekday Transaction Data	3.20
3.2.2 Transactions by Paypoint	3.25
3.2.3 Historic Responses to Toll Increases	3.27
3.2.4 Seasonal Variation	3.35
3.2.5 Day of the Week Variations	3.36
3.2.6 Time of Day and Directional Variation	3.37
3.2.7 FasTrak Trends	3.39
3.2.8 All-Electronic Tolling	3.39
3.2.9 Commercial Vehicles	3.41
3.2.10 Historic Revenue Trends	3.41
4.0 SOCIO-ECONOMIC VARIABLES AND LAND USE	4.1
4.1 SUMMARY CONCLUSIONS	4.1
4.1.1 Study Area Employment Summary	4.2
4.1.2 Study Area Household Summary	4.6
4.2 FORECAST METHODOLOGY	4.9
4.3 HISTORICAL DATA AND TRENDS IN THE STUDY AREA	4.15
4.3.1 Historical Study Area Employment Trends	4.15
4.3.2 Historical Study Area Household Trends	4.22
4.4 BASE YEAR 2012 ESTIMATES	4.25
4.5 EMPLOYMENT FORECASTS	4.26
4.5.1 Comparative Third Party Forecasts: Long-Term	4.27



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.5.2 Comparative Forecasts: Short-Term4.28

4.5.3 Study Area Employment Forecast4.29

4.6 HOUSEHOLD FORECAST.....4.31

4.6.1 Study Area Comparative Forecasts4.31

4.6.2 Study Area Household Forecasts4.34

4.6.3 Study Area Median Household Income Forecasts4.36

4.7 KEY DEVELOPMENTS IN THE STUDY AREA4.37

5.0 TRAVEL DEMAND MODEL5.1

5.1 MODEL EVALUATION5.1

5.2 MODEL STRUCTURE AND DEVELOPMENT5.2

5.2.1 Conversion to Cube Voyager and Time-of-Day Model5.3

5.2.2 SubArea Extraction5.4

5.2.3 Model Integration5.5

5.2.4 Toll Diversion Highway Assignment5.6

5.3 CALIBRATION OF THE INTEGRATED REGIONAL MODEL5.10

5.3.1 Speed Calibration5.11

5.3.2 Screenline Calibration.....5.13

5.4 PREPARATION OF HIGHWAY NETWORKS5.15

5.4.1 Base Year Network Changes (2012)5.16

5.4.2 Future Year Network Changes (2020 / 2035)5.16

6.0 TRAFFIC AND REVENUE PROJECTIONS6.1

6.1 MODEL POST-PROCESSING6.1

6.2 ASSUMED TOLL SCHEDULE6.1

6.3 TOLL ELASTICITY6.4

6.4 SCREENLINE ANALYSIS.....6.8

6.5 FUTURE YEAR TRAFFIC FORECASTS6.17

6.6 FUTURE YEAR REVENUE FORECASTS6.17

7.0 SENSITIVITY ANALYSES.....7.1

LIST OF TABLES

Table ES-1: Fiscal Year 2015 Toll Rates – Catalina View Mainline Plaza iii

Table ES-2: Fiscal Year 2015 Toll Rates – SJHTC Ramp Plazas iii

Table ES-3: SJHTC Traffic and Revenue Projections vii

Table ES-4: Sensitivity Analyses viii

Table 2-1: Fiscal Year 2015 Passenger Car Toll Rates – Catalina View Mainline Plaza2.4

Table 2-2: Fiscal Year 2015 Passenger Car Toll Rates – SJHTC Ramp Plazas2.4

Table 2-3: Fiscal Year 2015 Toll Rates by Vehicle Axles2.6

Table 3-1: Toll Increase Impacts – July 20013.29

Table 3-2: Toll Increase Impacts – February 2002.....3.30

Table 3-3: Toll Increase Impacts – October 20033.30

Table 3-4: Toll Increase Impacts – July 2004.....3.31

Table 3-5: Toll Increase Impacts – July 2005.....3.31



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

Table 3-6: Toll Increase Impacts – July 2006.....3.32

Table 3-7: Toll Increase Impacts – July 20073.32

Table 3-8: Toll Increase Impacts – July 2008.....3.33

Table 3-9: Toll Increase Impacts – July 20093.33

Table 3-10: Toll Increase Impacts – July 20113.34

Table 3-11: Toll Increase Impacts – July 2012.....3.34

Table 3-12: Toll Increase Impacts – July 2013.....3.35

Table 3-13: Monthly Variation in Average Weekday Transactions (FY 2012 vs. 2014)3.35

Table 3-14: Average Weekday Commercial Vehicle Percentage3.41

Table 3-15: Monthly Average Weekday Transactions3.43

Table 3-16: Monthly Total Revenue3.44

Table 3-17: Historic Toll Rate Schedule.....3.45

Table 4-1: Base Case Study Area Employment and Household Forecast (000s)4.2

Table 4-2: Jobs per Household by County4.7

Table 4-3: RivTAM Forecast Variable Methodology4.13

Table 4-4: SANDAG Forecast Variable Methodology4.14

Table 4-5: Total Employment Growth by County, 1990 to 20054.16

Table 4-6: Orange County Job Growth/Loss by Industry, 1990 to 20054.18

Table 4-7: Orange County Job Growth/Loss by Industry, 2007 to 20104.20

Table 4-8: Orange County Job Growth/Loss by Industry, 2010 to 20144.21

Table 4-9: Growth of Total Residential Building Permits in the Study Area4.23

Table 4-10: Annual Building Permits Issued in the Five-County Area, 2005 to 2014.....4.25

Table 4-11: 2010 to 2012 Derivation of Base Year Total Jobs (000s).....4.26

Table 4-12: 2010 to 2012 Derivation of Base Year Total Households (000s)4.26

Table 4-13: Comparisons of Long-Term Employment Projections (000s)4.28

Table 4-14: Base Case Employment Forecast by County (000s).....4.30

Table 4-15: Comparison of Long-Term Household Projections (000s)4.32

Table 4-16: Historical Study Area Median Home Prices4.34

Table 4-17: Base Case Household Forecast by County (000s)4.35

Table 4-18: Base Case Median Household Income Forecast (Real 2010 \$)4.37

Table 5-1: 2012 Control Total Traffic Volumes5.6

Table 5-2: Toll Diversion Coefficients5.7

Table 5-3: Travel Time Runs – TCA Facilities5.12

Table 5-4: Travel Time Runs – Major Freeways5.12

Table 5-5: Screenline Calibration Results.....5.15

Table 5-6: Key Network Changes: 2013-20205.17

Table 5-7: Key Network Changes: 2021-20355.18

Table 6-1: Assumed Toll Rate Schedule (FY 2015 – FY 2050).....6.3

Table 6-2: Traffic and Revenue Projections by Paypoint6.20

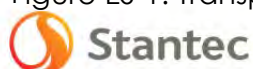
Table 6-3: SJHTC Traffic and Revenue Projections.....6.21

Table 7-1: Sensitivity Analyses7.1

Table 7-2: Orange County Inflation versus Household Income.....7.2

LIST OF FIGURES

Figure ES-1: Transportation Corridor Agencies Toll Systemii



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

Figure 2-1: Transportation Corridor Agencies Toll System2.2

Figure 2-2: FY 2015 FasTrak Toll Rates.....2.5

Figure 3-1: Wavetrax Count Locations.....3.2

Figure 3-2: Hourly Traffic Volume – Average Weekday3.4

Figure 3-3: Hourly Traffic Volume – Friday, Saturday, Sunday3.5

Figure 3-4: Hourly Traffic Volume – Average Weekday3.6

Figure 3-5: Hourly Traffic Volume – Friday, Saturday, Sunday3.7

Figure 3-6: Hourly Traffic Volume – Average Weekday3.8

Figure 3-7: Hourly Traffic Volume – Friday, Saturday, Sunday3.9

Figure 3-8: Hourly Traffic Volume – Average Weekday3.10

Figure 3-9: Hourly Traffic Volume – Friday, Saturday, Sunday3.11

Figure 3-10: Hourly Traffic Volume – Average Weekday3.12

Figure 3-11: Hourly Traffic Volume – Friday, Saturday, Sunday3.13

Figure 3-16: Hourly Traffic Volume – Average Weekday3.14

Figure 3-17: Hourly Traffic Volume – Friday, Saturday, Sunday3.15

Figure 3-22: Study Area Speeds – AM Peak Hour.....3.17

Figure 3-23: Study Area Speeds – PM Peak Hour3.18

Figure 3-24: Screenline Locations3.19

Figure 3-25: Historic Average Weekday Traffic and Toll Rates3.20

Figure 3-26: Regional Employment.....3.22

Figure 3-27: Gasoline Prices (LA County).....3.23

Figure 3-28: Recent Traffic and Revenue Performance3.24

Figure 3-29: Average Weekday Volume by Paypoint (2007 vs. 2010 vs. 2012 vs. 2014) 3.26

Figure 3-30: Average Weekday Transactions by Month.....3.27

Figure 3-31: Day of the Week Variation – Catalina View (FY 2012)3.36

Figure 3-32: San Joaquin Hills Typical Hourly Transaction Distribution.....3.37

Figure 3-33: Catalina View Hourly Transaction Distribution – Weekday and Weekend.3.38

Figure 3-34: Catalina View Transactions by Time of Day.....3.38

Figure 3-35: SJHTC Historic Transactions and Revenue3.42

Figure 4-1: Historical and Forecast Study Area Employment Gains and Total Employment4.3

Figure 4-2: Historical and Base Case Study Area Employment Forecasts4.4

Figure 4-3: Historical and Forecast Study Area Household Gains and Forecast4.6

Figure 4-4: Historical and Base Case Household Forecasts.....4.8

Figure 4-5: Map of the Study Area4.10

Figure 4-6: Illustration of the PB Land Use Forecast Model Methodology4.12

Figure 4-7: Orange County Job Growth/Loss by Industry, 1990 to 20054.17

Figure 4-8: Orange County Job Growth/Loss by Industry, 2007 to 20104.19

Figure 4-9: Orange County Job Growth/Loss by Industry, 2010 to 20144.21

Figure 4-10: Study Area Residential Building Permit Issuance, 2005 to 20134.24

Figure 4-11: Comparison of Short-Term Employment Forecasts (CAGR)4.29

Figure 4-12: Comparison of Long-Term Household Growth Rates, 2010 to 2030.....4.33

Figure 4-13: Focus Areas in the San Joaquin Hills Corridor4.39

Figure 4-14: Focus Areas in the F/ETC – North SR 241 and SR 2614.42

Figure 4-15: Focus Areas in the F/ETC – South SR 241 and SR 1334.44



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

Figure 5-1: Model Structure with Toll Diversion Assignment Model5.3
Figure 5-2: SubArea Model Extents5.5
Figure 5-3: Common Border Locations5.6
Figure 5-4: Toll Diversion for Home-Based Work Auto Trips5.8
Figure 5-5: Toll Diversion for Home-Based Other Auto Trips5.9
Figure 5-6: Toll Diversion for Non-Home Based Auto and Light Truck Trips.....5.9
Figure 5-7: Toll Diversion for Heavy Truck Trips.....5.10
Figure 5-8: Screenline Locations5.14
Figure 6-1: Traffic's Response to Toll Increases6.4
Figure 6-2: Typical Traffic vs. Revenue Curves6.5
Figure 6-3: Typical Traffic vs. Revenue Curves6.5
Figure 6-4: Typical Traffic vs. Revenue Curves6.6
Figure 6-5: Typical Traffic vs. Revenue Curves6.6
Figure 6-6: Typical Traffic vs. Revenue Curves6.7
Figure 6-7: Typical Traffic vs. Revenue Curves6.7
Figure 6-8: Toll Elasticity at Catalina View Mainline Plaza6.8
Figure 6-9: Screenline Locations6.9
Figure 6-10: Screenline A Volumes6.11
Figure 6-11: Screenline B Volumes6.12
Figure 6-12: Screenline D Volumes6.13
Figure 6-13: Screenline E Volumes6.14
Figure 6-14: Screenline F Volumes6.15
Figure 6-15: Screenline G Volumes6.16
Figure 6-16: 2012 Average Weekday Volumes6.18
Figure 6-17: 2020 Average Weekday Volumes6.18
Figure 6-18: 2035 Average Weekday Volumes6.19



Executive Summary

The primary focus of this study was to conduct an investment grade traffic and revenue study for the re-financing of the San Joaquin Hills Transportation Corridor (SJHTC). Our efforts incorporated elements of the 2003 Traffic and Revenue Study and the 2008 Update as appropriate, but was largely based on a newly configured and calibrated traffic model. Forecasts were not made for the Foothill/Eastern Transportation Corridor as part of this study.

Stantec Consulting Services Inc. ("Stantec") had the overall lead for the Traffic and Revenue Investment Grade Study and was responsible for project management and coordination, calibrating and validating the regional travel demand model and forecasting the future gross toll revenues through 2050.

Parsons Brinckerhoff Inc. ("PB") provided the socioeconomic and land use review of employment and household projections used in the traffic model.

ES.1 PROJECT DESCRIPTION

The San Joaquin Hills Transportation Corridor ("SJHTC") is a 15-mile segment of the 18-mile State Route 73 ("SR 73"). It extends southeastward from its junction with SR 73 near Jamboree Boulevard in Newport Beach to its junction with I-5 near San Juan Capistrano. It passes through or borders the cities of Newport Beach, Irvine, Laguna Beach, Aliso Viejo, Laguna Hills, and Laguna Niguel. It serves the local residential and commercial markets and provides for a bypass for through trips on the congested I-5 and I-405 freeways and the "El Toro Y."

The SR 73 serves as an alternative to the heavily congested I-5 and I-405 freeways in South Orange County. The SR 73 exhibits a strong northbound peak during the AM peak period and a strong southbound peak during the PM peak period, suggesting the roadway is utilized by commuters.

Travel time runs completed in March 2012, and detailed further in Chapter 3, reveal that during the AM peak hour, travel time savings on the northbound SR 73 from I-5 to SR 55 versus the toll-free alternative route along I-5 and I-405 can be almost 25 minutes. The same route in the southbound direction offers approximately 8-10 minutes of travel time savings. During the PM peak hour, travel time runs reveal a time savings of approximately 8-10 minutes in both the northbound and southbound directions. As congestion continues to worsen on the toll-free freeway network, the travel time savings offered by the SR 73 will increase, attracting additional users to the corridor.

In fact, a strengthening economy in Orange County has already resulted in ridership exceeding expectations. Despite a toll increase of almost ten percent on July 1, 2013, transactions for fiscal year 2014 increased by almost six percent versus fiscal year 2013 with revenues increasing by almost 17 percent year-over-year.



Figure ES-1: Transportation Corridor Agencies Toll System



ES.2 TOLL RATES

On July 1, 2014 a change was introduced to the SJHTC toll rate structure. The peak period toll rate at the Catalina View mainline plaza was split into “peak”, “pre-peak”, and “post-peak” toll rates. The peak hour rates are in effect from 8-9am in the northbound direction and 5-6pm in the southbound direction. The pre-peak and post-peak hours are from 7-8am and 9-10am in the northbound direction from 3-5pm and 6-7pm in the southbound direction. The introduction of these “pre-peak” and “post-peak” toll rates coincided with an expansion of the overall peak period from two to three hours in the AM peak period and from three to four hours in the PM peak period. **Table ES-1** below shows toll rates for the Catalina View Mainline Plaza:

Table ES-1: Fiscal Year 2015 Toll Rates – Catalina View Mainline Plaza

Catalina View	FasTrak	ExpressAccount	One-Time-Toll
Peak Hour	\$ 6.65	\$ 7.65	\$ 7.35
Pre- & Post-Peak	\$ 6.35	\$ 7.35	\$ 7.35
Non-Peak	\$ 5.15	\$ 6.15	\$ 7.35
Weekend	\$ 4.90	\$ 5.90	\$ 7.35

The differential between FasTrak toll rates and the ExpressAccount rates is \$1.00.

In addition to other interchanges, there are five interchanges that have ramp toll plazas. **Table ES-2** shows toll rates for each ramp for all time periods:

Table ES-2: Fiscal Year 2015 Toll Rates – SJHTC Ramp Plazas

Interchange	FasTrak	Non-FasTrak
Bonita Canyon Drive	\$ 1.00	\$ 2.00
Newport Coast Drive	\$ 2.26	\$ 3.26
El Toro/Laguna Canyon	\$ 2.52	\$ 3.52
Aliso Creek Road	\$ 1.91	\$ 2.91
La Paz Road/Moulton Parkway	\$ 1.34	\$ 2.34

In May 2014, the SJHTC agency replaced cash collection with four new payment options:

- Prepaid ExpressAccount
- Charge ExpressAccount
- Invoice ExpressAccount
- One-Time-Toll™

These payment options are in addition to the FasTrak payment option, which is used by over 80% of SJHTC customers. With a Prepaid ExpressAccount, you can prepay and replenish tolls using credit card, cash or check. All tolls will be calculated and charged based on a reading of your license plate at tolling locations. Statements can be emailed monthly or mailed quarterly and



account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

With a Charge ExpressAccount, the appropriate toll(s) are charged to your account and, then, to your credit card based on photos of your vehicle's license plates taken at a tolling location(s). Depending on image processing and the credit card company, it may take two to five business days for the tolls to appear on your ExpressAccount and credit card statement. ExpressAccount statements can be emailed monthly or postal mailed quarterly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

With an Invoice ExpressAccount users will be sent a monthly invoice itemizing accumulated tolls. All tolls will be calculated and charged based on a reading of your license plate at tolling locations. Invoices can be paid via credit card, cash or check. Statements will be emailed monthly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

For users that drive the SJHTC and do not have a FasTrak or ExpressAccount, the option to pay via One-Time-Toll™ also exists. The One-Time-Toll payment option must be used within 48 hours of driving The Toll Roads and may be used as often as needed.

More detail about the impacts to transactions and revenue from the conversion to all-electronic tolling (AET) is discussed in Chapter 3.

ES.3 HISTORIC TRAFFIC AND TRENDS

The San Joaquin Hills Toll Road opened in phases between July and November 1996. Average weekday SJHTC transactions grew sharply soon after the road was completed. There were 45,000 transactions in January of 1997, increasing to 58,000 by July of 1997 and 77,000 by July of 1998. By the spring of 2000 the traffic had increased to 85,000 transactions per average weekday.

By July 2003, transactions exceeded 90,000 on an average weekday. Over the four year period from FY 2003 to FY 2007, transactions increased by more than 15 percent, in spite of annual toll increases, which raised the average toll rate by more than 25 percent.

The economic downturn which began in late 2007 had a negative impact on use of the San Joaquin Hills Toll Corridor. While the economic downturn had a negative impact on toll transactions and revenue on the SJHTC, regional travel patterns over the past few years show a reason for optimism.



Since July 2010, revenues have shown positive growth while transactions are similarly, though at a slower pace, increasing. While some of the positive revenue growth can be attributed to toll increases in four of the past five years, the recent growth in transactions and revenue is consistent with the gradual recovery of the economy discussed later in this report. In fact, recent performance on the SJHTC has been outstanding. Even though a ten percent increase in toll rates was implemented on July 1, 2013, transactions for FY 2014 still increased by over five percent. This success, combined with the recovering economy, help highlight the growth potential for the facility. As congestion continues to increase on the toll-free competitors, I-5 and I-405, the attractiveness of the time savings offered by the SJHTC will also increase.

Around 70% of the transactions on the SJHTC occur at the Catalina View mainline toll plaza. The number of transactions at each paypoint during the average weekday in FY 2012 varied from a high of 28,300 transactions per day at the northbound Catalina View mainline toll plaza to a low of 750 transactions per day at the southbound La Paz/Moulton Parkway entrance ramp toll plaza.

ES.4 ECONOMIC DEVELOPMENT AND LAND USE

Employment in the Study Area is forecast to grow by 2.4 million jobs, from 7.5 to 9.9 million during the Forecast Period, a compound annual growth rate of 1.1%. Households in the Study Area will grow by close to 1.45 million over the Forecast Period from 6.6 to 8.1 million, a 0.9% compound annual growth rate. Housing growth will closely track job growth region-wide, although housing production will vary by market due to overbuilding in some submarkets, such as the Inland Empire, and very wide differences in values due to location. Dual-income households will become more common throughout the Study Area, and preferences for smaller home sizes near transit that accesses job centers have spread from Los Angeles to formerly less dense areas including central Orange County.

In higher cost areas, including southern and coastal parts of Orange County served by the SJHTC, localized jobs/housing imbalances will continue. The relatively high cost of living in Orange County has caused many people with jobs there to seek lower cost housing options in places such as the Inland Empire, and to a lesser extent, San Diego County. The resulting commutation pattern into Orange County from external areas has created strong traffic demand on SR 91, which feeds traffic to the Orange County roadway network from the east and I-5, which feeds the network from the south (more directly impacting traffic on the SJHTC).

ES.5 TRAFFIC AND REVENUE PROJECTIONS

The traffic models provide traffic projections for each of the two future analysis years for which land use information and highway networks were developed: 2020 and 2035. As it is impossible to match the model-assigned traffic exactly with the existing traffic, necessary post-processing adjustments were made. After the forecast models were run, the assigned volumes on each toll link were compared to actual average weekday transaction data for FY 2012. Transactions were summarized by payment type (AVI and cash) and time-of-day (for plazas with peak period



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

toll rates). Revenue estimates for unadjusted model results were compared to actual FY 2012 revenues to determine the percentage of revenue attributable to truck traffic. These plaza-by-plaza adjustment factors were then applied to future year model volumes to more accurately reflect toll transactional patterns.

Socio-economic forecasts were reviewed in five year periods to determine the magnitude of short-term versus long-term growth. This analysis helped to guide the tailoring of the traffic and revenue forecast between FY 2015 and FY 2020 and between FY 2020 and FY 2035. Traffic volumes after 2035 were assumed to grow gradually at 0.5 percent per year.

The toll schedules for future fiscal years presented in this study have not been approved by the Board of the Agency. We have assumed for the purposes of the study that the aggregate percentage toll rate increases during the forecast period will approximate the toll increases used in prior forecasts for the same period. However, we have modified the assumed rate structures from prior forecasts to reflect the actual tolls in place and Board toll policy (such as FasTrak/non-FasTrak differentials and peak/off peak differentials.) The toll schedules further reflect future modifications based on model results of "optimal" toll rates. Toll rate increases during the forecast period average 2.5 percent over time, roughly mirroring the value of inflation.

We believe that the revenue projections contained in this study are reasonable, assuming that the projected toll rate increases and toll rate structure assumed in the study are in fact implemented by the Agency. Because the Agency has not approved any future toll rates assumed in this study, the actual revenues may be different from the projections in this study, based upon what future toll rates are approved by the Agency.

The revenue calculation was the product of average weekday traffic on the tolled links and the toll for each link, totaled for all toll links. Model results were differentiated by payment type and time-of-day (for the Catalina View mainline plaza with peak and off-peak toll rates). Annual traffic and toll revenues were calculated at 320 times the average weekday traffic and revenue for all future years. This factor of 320 was calculated based on FY 2012 average weekday versus total annual transactions on the San Joaquin Hills Transportation Corridors. Vehicles with greater than two axles are charged a higher toll than passenger cars, therefore an adjustment factor was calculated to convert the projected revenues based on all passenger car tolls to the true revenues reflecting a mix of vehicle types. From recent traffic data, this factor was calculated to be 1.006 on the SJHTC.

Table ES-3 presents the average annual weekday toll transactions and annual revenue forecasted from fiscal years 2015 through 2050. Total SJHTC average weekday transactions of 84,100 with revenues of \$145.3 million in FY 2020 and 94,200 average weekday transaction with revenues of \$232.8 million in FY 2035 are forecasted.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

Table ES-3: SJHTC Traffic and Revenue Projections

Fiscal Year	Average Weekday Transactions	Growth Over Previous Year	Average Toll Rate	Growth Over Previous Year	Annual Revenue (000s)	Growth Over Previous Year
1998	64,420		\$ 1.63		\$ 33,928	
1999	76,883	19.3%	\$ 1.72	5.4%	\$ 42,646	25.7%
2000	82,745	7.6%	\$ 1.76	2.3%	\$ 46,819	9.8%
2001	81,740	-1.2%	\$ 1.95	11.2%	\$ 50,901	8.7%
2002	81,469	-0.3%	\$ 2.18	11.7%	\$ 56,865	11.7%
2003	84,348	3.5%	\$ 2.26	3.7%	\$ 61,148	7.5%
2004	91,550	8.5%	\$ 2.28	0.7%	\$ 67,031	9.6%
2005	92,506	1.0%	\$ 2.56	12.2%	\$ 75,645	12.9%
2006	96,013	3.8%	\$ 2.68	4.6%	\$ 81,928	8.3%
2007	97,377	1.4%	\$ 2.86	7.0%	\$ 89,059	8.7%
2008	93,633	-3.8%	\$ 3.04	6.2%	\$ 91,529	2.8%
2009	83,106	-11.2%	\$ 3.22	6.0%	\$ 86,420	-5.6%
2010	77,907	-6.3%	\$ 3.44	6.8%	\$ 87,096	0.8%
2011	78,791	1.1%	\$ 3.46	0.6%	\$ 88,104	1.2%
2012	78,629	-0.2%	\$ 3.66	5.6%	\$ 92,972	5.5%
2013	78,044	-0.7%	\$ 4.02	10.0%	\$ 100,528	8.1%
2014	82,046	5.1%	\$ 4.43	10.0%	\$ 117,138	16.5%
2015	80,100	-2.4%	\$ 4.77	7.7%	\$ 122,200	4.3%
2016	80,900	1.0%	\$ 4.89	2.5%	\$ 126,500	3.5%
2017	81,700	1.0%	\$ 5.01	2.5%	\$ 131,000	3.6%
2018	82,500	1.0%	\$ 5.14	2.5%	\$ 135,600	3.5%
2019	83,300	1.0%	\$ 5.27	2.5%	\$ 140,400	3.5%
2020	84,100	1.0%	\$ 5.40	2.5%	\$ 145,300	3.5%
2021	84,900	1.0%	\$ 5.54	2.5%	\$ 150,400	3.5%
2022	85,700	0.9%	\$ 5.68	2.6%	\$ 155,700	3.5%
2023	82,300	-4.0%	\$ 5.76	1.4%	\$ 151,600	-2.6%
2024	83,100	1.0%	\$ 5.90	2.6%	\$ 157,000	3.6%
2025	84,300	1.4%	\$ 6.05	2.5%	\$ 163,300	4.0%
2026	85,600	1.5%	\$ 6.21	2.5%	\$ 170,000	4.1%
2027	86,900	1.5%	\$ 6.37	2.6%	\$ 177,000	4.1%
2028	88,200	1.5%	\$ 6.53	2.5%	\$ 184,200	4.1%
2029	89,300	1.2%	\$ 6.69	2.5%	\$ 191,200	3.8%
2030	90,200	1.0%	\$ 6.86	2.6%	\$ 198,100	3.6%
2031	91,100	1.0%	\$ 7.04	2.6%	\$ 205,200	3.6%
2032	92,000	1.0%	\$ 7.22	2.5%	\$ 212,500	3.6%
2033	92,900	1.0%	\$ 7.40	2.5%	\$ 220,000	3.5%
2034	93,600	0.8%	\$ 7.59	2.6%	\$ 227,400	3.4%
2035	94,200	0.6%	\$ 7.72	1.7%	\$ 232,800	2.4%
2036	94,700	0.5%	\$ 7.91	2.4%	\$ 239,700	3.0%
2037	95,200	0.5%	\$ 8.10	2.5%	\$ 246,900	3.0%
2038	95,700	0.5%	\$ 8.30	2.5%	\$ 254,300	3.0%
2039	96,200	0.5%	\$ 8.51	2.5%	\$ 261,900	3.0%
2040	96,700	0.5%	\$ 8.72	2.4%	\$ 269,700	3.0%
2041	97,200	0.5%	\$ 8.93	2.5%	\$ 277,800	3.0%
2042	97,700	0.5%	\$ 9.15	2.5%	\$ 286,100	3.0%
2043	98,200	0.5%	\$ 9.38	2.4%	\$ 294,600	3.0%
2044	98,700	0.5%	\$ 9.61	2.5%	\$ 303,400	3.0%
2045	99,200	0.5%	\$ 9.84	2.4%	\$ 312,400	3.0%
2046	99,700	0.5%	\$ 10.08	2.5%	\$ 321,700	3.0%
2047	100,200	0.5%	\$ 10.33	2.5%	\$ 331,300	3.0%
2048	100,700	0.5%	\$ 10.59	2.4%	\$ 341,100	3.0%
2049	101,200	0.5%	\$ 10.85	2.5%	\$ 351,300	3.0%
2050	101,700	0.5%	\$ 11.11	2.5%	\$ 361,700	3.0%

(1) Toll rate increases after FY 2015 have been assumed for modeling purposes and have not been approved by the agency.



ES.6 SENSITIVITY ANALYSES

As described throughout the report, the traffic and revenue projections have been developed using traditional transportation planning procedures. The results of this process take the form of projections of likely future conditions based on numerous assumptions and estimates. In reviewing the various inputs to the traffic forecasting model, several key inputs have been identified, which when varied from the base condition, result in changes to the revenue forecasts. **Table ES-4** presents results of the sensitivity tests and compares them to the Base Case forecast (i.e., that which results from the base model, base land use and proposed toll schedule). Following is a discussion describing the variables tested and the effects on the revenue forecasts.

Table ES-4: Sensitivity Analyses

Fiscal Year	Average Weekday Transactions	% of Base Case	Annual Revenue (000s)	% of Base Case
2020 Base	84,100		\$ 145,300	
2020 with 2012 Land Use	70,600	-16.1%	\$ 119,700	-17.6%
2035 Base	94,200		\$ 232,800	
2035 VOT Escalation	102,700	9.0%	\$ 254,600	9.4%

ES.7 KEY ASSUMPTIONS

The development of the revenue forecasts for the San Joaquin Hills Transportation Corridor Traffic and Revenue Study required a series of assumptions pertaining to future conditions. These assumptions include, but are not limited to, the following list of conditions:

1. The toll rate schedule assumed in Chapter 6 of this report will be implemented as proposed.
2. Transponder market shares assumed for the SJHTC will occur as forecast.
3. The traffic mix for trucks will remain approximately as forecasted such that the percentage of heavy vehicles on the SJHTC will remain minimal (~0.5-1.0%).
4. The socioeconomic growth discussed in Chapter 4 of the report will occur as forecast.
5. The highway network improvements discussed in Chapter 5 will be constructed and enforced as planned. Improvements to the I-5 and I-405 corridors parallel to the SR 73, scheduled to open in 2023, have a significant impact on transaction and revenue growth on the toll road. If these improvements, currently funded and included as part of the M2020 program, are delayed or not constructed, the traffic and revenue potential on the SR 73 would increase.
6. Inflation will continue at 2.5 percent annually (compounded) during the forecast period through 2050.
7. The SJHTC Transportation Corridor will be efficiently maintained and operated.



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

8. Motor fuel will remain in adequate supply during the forecast period, and motor fuel prices (i.e., the average price for regular gasoline) in the foreseeable future will not be more than \$4.50 per gallon (in 2012 \$) for an extended period.
9. Federal and state fuel tax increases will not increase to the extent that, together with fuel price increases, pump prices exceed \$4.50 per gallon (in 2012 \$).
10. No radical change in travel modes, which would drastically curtail motor vehicle use, is expected during the forecast period.
11. Future growth in SJHTC traffic will affect peak hours as well as other hours of the day, and may be expected to increase peak hour congestion on the SJHTC. This can be mitigated by increasing appropriate toll rates which would have the effect of reducing peak period volumes. These increases were not examined as part of this study.

introduction
August 22, 2014

1.0 INTRODUCTION

Stantec Consulting Services Inc. ("Stantec") was retained by the San Joaquin Hills Transportation Corridor Agency to conduct a toll traffic and revenue study of the San Joaquin Hills Transportation Corridor (SJHTC) in Orange County, California. This study includes development of annual toll traffic and revenue forecasts, from the current fiscal year (July 2014-June 2015) through the fiscal year 2050 (July 2049 – June 2050).

1.1 PURPOSE AND FOCUS OF THE STUDY

The primary focus of this study was to complete an investment grade traffic and revenue forecast for the re-financing of the SJHTC. Our efforts incorporated elements of the 2003 Traffic and Revenue Study and the 2008 Update as appropriate, but was largely based on a newly configured and calibrated traffic model. Forecasts will not be made for the Foothill/Eastern Transportation Corridor as part of this study.

1.2 THE CONSULTANT TEAM

Stantec Consulting Services Inc. ("Stantec") had the overall lead for the Traffic and Revenue Investment Grade Study and was responsible for project management and coordination, calibrating and validating the regional travel demand model and forecasting the future gross toll revenues through 2050.

Parsons Brinckerhoff Inc. ("PB") provided the socioeconomic and land use review of employment and household projections used in the traffic model.

1.3 OVERVIEW OF THE REPORT

The following is a brief description of the contents of each chapter before the detailed presentation of the technical material:

- Chapter 2: Project Description and Setting - describes the San Joaquin Hills Transportation Corridor (SJHTC) in the context of its regional settings.
- Chapter 3: Existing Conditions – summarizes the data collected throughout the study area including both traffic volumes and speeds and also includes historical traffic and revenue data on the system.
- Chapter 4: SocioEconomic Variables and Land Use - describes the assessment of the regional area's economy and the study area forecast of future year occupied households and employment.
- Chapter 5: Travel Demand Model - explains the methodology used to forecast future toll traffic and revenue for the SJHTC based upon an integrated model created from the merging of the RivTAM traffic model and the San Diego Association of Governments



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

introduction

August 22, 2014

(SANDAG) regional model. Modifications to these models were made, most notably the inclusion of toll diversion equations.

- Chapter 6: Traffic and Revenue Estimates: presents the methodology behind the toll policies analyzed and the resulting traffic and revenue forecasts.
- Chapter 7: Sensitivity Analyses: presents the impacts to the base traffic and revenue forecast by varying key inputs to the forecast. These include land use adjustments and toll policy changes.

2.0 PROJECT DESCRIPTION AND SETTING

The focus of the study area is the Orange County regional highway network, as depicted in **Figure 2-1**. The greater study area for this San Joaquin Hills Transportation Corridor Study also included Los Angeles and Ventura Counties and parts of Riverside, San Bernardino and San Diego Counties.

The SR 73 serves as an alternative to the heavily congested I-5 and I-405 freeways in South Orange County. The SR 73 exhibits a strong northbound peak during the AM peak period and a strong southbound peak during the PM peak period, suggesting the roadway is utilized by commuters.

Travel time runs completed in March 2012, and detailed further in Chapter 3, reveal that during the AM peak hour, travel time savings on the northbound SR 73 from I-5 to SR 55 versus the toll-free alternative route along I-5 and I-405 can be almost 25 minutes. The same route in the southbound direction offers approximately 10 minutes of travel time savings. During the PM peak hour, travel time runs reveal a time savings of approximately 10 minutes in both the northbound and southbound directions. As congestion continues to worsen on the toll-free freeway network, the travel time savings offered by the SR 73 will increase, attracting additional users to the corridor.

In fact, a strengthening economy in Orange County has already resulted in ridership exceeding expectations. Despite a toll increase of almost ten percent on July 1, 2013, transactions for fiscal year 2014 increased by almost six percent versus fiscal year 2013 with revenues increasing by almost 17 percent year-over-year.

2.1 ROADWAY ALIGNMENT

The San Joaquin Hills Transportation Corridor ("SJHTC") is a 15-mile segment of the 18-mile State Route 73 ("SR 73"). It extends southeastward from its junction with SR 73 near Jamboree Boulevard in Newport Beach to its junction with I-5 near San Juan Capistrano. It passes through or borders the cities of Newport Beach, Irvine, Laguna Beach, Aliso Viejo, Laguna Hills, and Laguna Niguel. It serves the local residential and commercial markets and provides for a bypass for through trips on the congested I-5 and I-405 freeways and the "El Toro Y."

2.2 INTERCHANGES

The SJHTC has a number of intermediate interchanges along its route in addition to the Catalina View Mainline Toll Plaza. From north to south, the SJHTC interchanges are located at Jamboree Road, MacArthur Boulevard, Bison Avenue, Bonita Canyon Drive, Newport Coast Drive, the Laguna Canyon Road/El Toro Road combination, Glenwood/Pacific Park Drive, Aliso Creek Road, the La Paz Road/Moulton Parkway combination, and Greenfield Drive.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

2.0 project description and setting
 August 22, 2014

Figure 2-1: Transportation Corridor Agencies Toll System



2.3 TOLL RATE STRUCTURE

The location of the existing toll plazas and associated passenger car toll rates are shown in **Figure 2-2**. The SJHTC is a closed barrier toll system consisting of one (1) mainline toll plaza and ten (10) ramp toll plazas. The mainline toll plaza - Catalina View - is located between the interchanges of Newport Coast Drive and Laguna Canyon Road.

2.3.1 All-Electronic Tolling (AET)

In May 2014, the SJHTC agency replaced cash collection with four new payment options:

- Prepaid ExpressAccount
- Charge ExpressAccount
- Invoice ExpressAccount
- One-Time-Toll™

These payment options are in addition to the FasTrak payment option, which is used by over 80% of SJHTC customers. With a Prepaid ExpressAccount, you can prepay and replenish tolls using credit card, cash or check. All tolls will be calculated and charged based on a reading of your license plate at tolling locations. Statements can be emailed monthly or mailed quarterly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

With a Charge ExpressAccount, the appropriate toll(s) are charged to your account and, then, to your credit card based on photos of your vehicle's license plates taken at a tolling location(s). Depending on image processing and the credit card company, it may take two to five business days for the tolls to appear on your ExpressAccount and credit card statement. ExpressAccount statements can be emailed monthly or postal mailed quarterly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

With an Invoice ExpressAccount users will be sent a monthly invoice itemizing accumulated tolls. All tolls will be calculated and charged based on a reading of your license plate at tolling locations. Invoices can be paid via credit card, cash or check. Statements will be emailed monthly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

For users that drive the SJHTC and do not have a FasTrak or ExpressAccount, the option to pay via One-Time-Toll™ also exists. The One-Time-Toll payment option must be used within 48 hours of driving The Toll Roads and may be used as often as needed.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

2.0 project description and setting
August 22, 2014

The differential between FasTrak toll rates and the ExpressAccount rates is \$1.00. More detail about the impacts to transactions and revenue from the conversion to AET is discussed in Chapter 3.

2.3.2 Fiscal Year 2015 Toll Rate Structure

In addition to going cashless, one other change was introduced to the SJHTC toll rate structure. Beginning July 1, 2014, the peak period toll rate at the Catalina View mainline plaza was split into "peak", "pre-peak", and "post-peak" toll rates. The peak hour rates are in effect from 8-9am in the northbound direction and from 5-6pm in the southbound direction. The pre-peak and post-peak hours are from 7-8am and 9-10am in the northbound direction and 3-5pm and 6-7pm in the southbound direction. **Table 2-1** shows the toll rates for the Catalina View mainline plaza:

Table 2-1: Fiscal Year 2015 Passenger Car Toll Rates – Catalina View Mainline Plaza

Catalina View	FasTrak	ExpressAccount	One-Time-Toll
Peak Hour	\$ 6.65	\$ 7.65	\$ 7.35
Pre- & Post-Peak	\$ 6.35	\$ 7.35	\$ 7.35
Non-Peak	\$ 5.15	\$ 6.15	\$ 7.35
Weekend	\$ 4.90	\$ 5.90	\$ 7.35

There are five interchanges that have ramp toll plazas. **Table 2-2** shows toll rates for each ramp for all time periods:

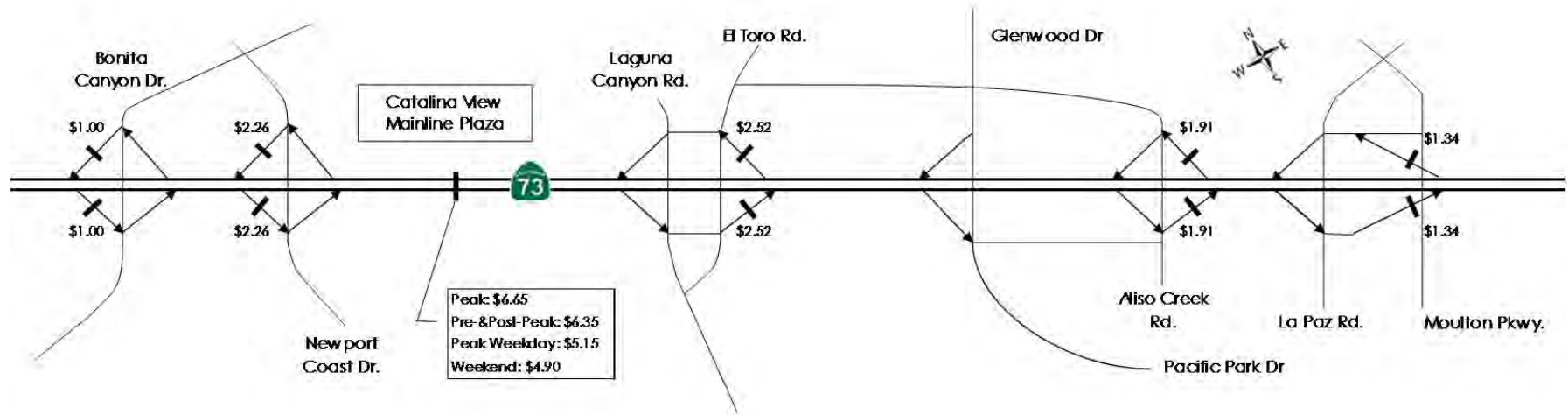
Table 2-2: Fiscal Year 2015 Passenger Car Toll Rates – SJHTC Ramp Plazas

Interchange	FasTrak	Non-FasTrak
Bonita Canyon Drive	\$ 1.00	\$ 2.00
Newport Coast Drive	\$ 2.26	\$ 3.26
El Toro/Laguna Canyon	\$ 2.52	\$ 3.52
Aliso Creek Road	\$ 1.91	\$ 2.91
La Paz Road/Moulton Parkway	\$ 1.34	\$ 2.34

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

2.0 project description and setting
 August 22, 2014

Figure 2-2: FY 2015 FasTrak Toll Rates



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

2.0 project description and setting
August 22, 2014

Table 2-3 below provides the toll rates by plaza by payment type by vehicle type.

Table 2-3: Fiscal Year 2015 Toll Rates by Vehicle Axles

Location	Number of Vehicle Axles		
	2	3-4	5 or More
Bonita Canyon Drive			
FasTrak:	\$ 1.00	\$ 1.00	\$ 1.00
Non-FasTrak:	\$ 2.00	\$ 2.00	\$ 2.00
Newport Coast Drive			
FasTrak:	\$ 2.26	\$ 2.26	\$ 2.26
Non-FasTrak:	\$ 3.26	\$ 3.26	\$ 3.26
Catalina View Mainline			
FasTrak: Peak	\$ 6.65	\$ 13.30	\$ 26.60
FasTrak: Pre-&Post-Peak	\$ 6.35	\$ 12.70	\$ 25.40
FasTrak: Non-Peak Weekday	\$ 5.15	\$ 10.30	\$ 20.60
FasTrak: Weekend	\$ 4.90	\$ 9.80	\$ 19.60
ExpressAccount: Peak	\$ 7.65	\$ 15.30	\$ 30.60
ExpressAccount: Pre-&Post-Peak	\$ 7.35	\$ 14.70	\$ 29.40
ExpressAccount: Non-Peak Weekday	\$ 6.15	\$ 12.30	\$ 24.60
ExpressAccount: Weekend	\$ 5.90	\$ 11.80	\$ 23.60
One-Time-Toll: Peak	\$ 7.35	\$ 14.70	\$ 29.40
One-Time-Toll: Pre-&Post-Peak	\$ 7.35	\$ 14.70	\$ 29.40
One-Time-Toll: Non-Peak Weekday	\$ 7.35	\$ 14.70	\$ 29.40
One-Time-Toll: Weekend	\$ 7.35	\$ 14.70	\$ 29.40
El Toro/Laguna Canyon			
FasTrak:	\$ 2.52	\$ 2.52	\$ 2.52
Non-FasTrak:	\$ 3.52	\$ 3.52	\$ 3.52
Aliso Creek Road			
FasTrak:	\$ 1.91	\$ 1.91	\$ 1.91
Non-FasTrak:	\$ 2.91	\$ 2.91	\$ 2.91
La Paz Road/Moulton Parkway			
FasTrak:	\$ 1.34	\$ 1.34	\$ 1.34
Non-FasTrak:	\$ 2.34	\$ 2.34	\$ 2.34

2.0 project description and setting
August 22, 2014

2.4 REGIONAL HIGHWAYS

Two major interstate highways serve the Orange County area: I-5, the Santa Ana Freeway, and I-405, the San Diego Freeway. I-5 is a major freeway serving the entire West Coast of the United States, located between the border with Mexico near San Diego and the border with Canada near Seattle. Within Orange County, I-5 extends from the San Diego County line near San Clemente to the Los Angeles County line at Buena Park.

The San Diego Freeway, I-405, is a major highway connecting Orange County with western Los Angeles, Long Beach, and Los Angeles International Airport (LAX). I-405 may be used as an I-5 bypass for longer trips. Within Orange County, I-405 extends from the confluence with I-5 south of the Laguna Freeway (SR 133) to the San Gabriel River and the Los Angeles County line.

Other major highways within the region include SR 91, SR 55, SR 57 and SR 22. SR 91, the Riverside Freeway, is a major freeway connecting Orange County with Los Angeles, Riverside, and San Bernardino Counties. SR 91 also includes a section of variable-priced toll express lanes (the 91 Express Lanes) between SR 55 and the Riverside County line. SR 55, the Costa Mesa Freeway, connects Newport Beach, Costa Mesa, and Santa Ana with SR 91. SR 57 runs from the SR 22/I-5 connection in the City of Orange northward to Los Angeles County. SR 22, the Garden Grove Freeway, connects the Costa Mesa Freeway in Santa Ana with northern Orange and southern Los Angeles Counties.

Major arterials within the region include Jamboree Road, Irvine Boulevard/ Trabuco Road, Culver Drive, Jeffrey Road, Barranca Parkway, and Irvine Center Drive. Jamboree Road parallels the Eastern Transportation Corridor (SR 261) West Leg and connects Newport Beach with Tustin and Irvine. Irvine Boulevard/Trabuco Road connects the central section of Mission Viejo and Lake Forest with the eastern section of Irvine and Tustin. Barranca Parkway and Irvine Center Drive run parallel to and provide local alternatives to I-5 and I-405.

Other major regional arterials include Laguna Canyon Road, MacArthur Boulevard, and Pacific Coast Highway (State Route 1). Laguna Canyon Road connects Pacific Coast Highway (in Laguna Beach) directly into the East Leg of the Eastern Transportation Corridor (in eastern Irvine), passing by and connecting to the SJHTC near its midpoint. MacArthur Boulevard connects Pacific Coast Highway (in Newport Beach) with the I-405 and SR 55, passing by and connecting to the SJHTC near its northern terminus. Pacific Coast Highway runs parallel to the SJHTC, 4 to 5 miles to its west.

3.0 EXISTING CONDITIONS

3.1 DATA COLLECTION

Traffic volumes in the SJHTC study area were determined from four main sources. First, Wavetronix radar counts were collected at 12 locations throughout the study area, most notable along major highways and arterials. Wavetronix radar counts provide vehicle volumes and average speeds for each lane of the highway in 15-minute increments. It was decided that radar counts should be collected along congested highways and arterials instead of using standard automatic traffic recorders (ATRs) since radar counts tend to gather more accurate traffic data during periods of intense traffic congestion, a concern in these corridors, particularly during the peak time periods. In addition, radar counts provide both traffic volumes and speeds. The radar counts were conducted between March 5, 2012 and March 19, 2012. Count data were reviewed for consistency and any discrepancies are discarded.

In addition to the Wavetronix locations, ATRs were placed on local feeder routes at 44 locations throughout the study area. Locations where congestion was expected to be minimal were counted with ATRs for the same time period as the above referenced Wavetronix counts.

Third, traffic count data were downloaded from the Caltrans Freeway Performance Measurement System (PeMS). PeMS is a database tool designed by the University of California at Berkeley that collects traffic data, including flows, speeds, and hours of congestion on California freeways. PeMS data was reviewed to analyze historic traffic growth on nearby freeways and arterials and to help verify the reasonableness of Wavetronix data collected.

Fourth, traffic volume data were provided by the Transportation Corridor Agencies (TCA) for all toll plazas on the F/ETC and SJHTC. These data were provided on a weekly basis and contain toll volumes for each plaza in hourly increments for both directions of the highway, segregated by payment type.

3.1.1 Wavetronix Traffic Counts

Figure 3-1 details the locations surveyed and the number of Wavetronix units installed at each location. Because Wavetronix counts provide more accurate volume and speed information, especially during periods of high congestion, these counters were used on the high volume freeways (I-5, I-405, and I-15), local state highways (SR 55 and SR 57), and the feeder routes to the toll facilities (SR 73, SR 241, SR 261 and SR 133).

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions

August 22, 2014

3.1.1.1 Freeways

I-5 is a major freeway serving the entire West Coast of the United States, located between the border with Mexico near San Diego and the border with Canada near Seattle. Within Orange County, I-5 extends from the San Diego County line near San Clemente to the Los Angeles County line at Buena Park.

Traffic volumes and speeds were collected at four locations along the I-5 corridor:

- I-5 between SR 73 and Avery Parkway
- I-5 between I-405 and Alton Parkway
- I-5 between Culver Road and SR 261
- I-5 at the border of Orange County and San Diego County

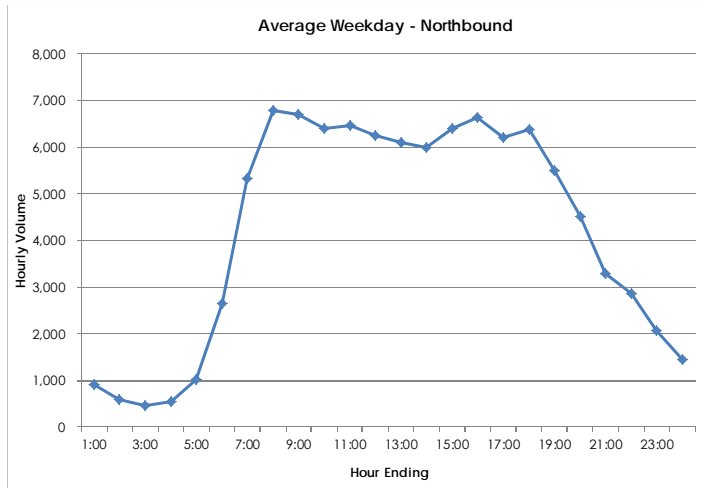
At the southern end of the study area, along I-5 just north of SR 73, average weekday traffic volumes approach 200,000 vehicles per day with northbound volumes exceeding southbound volumes. As **Figure 3-2** shows, in the northbound direction, vehicles peak in the AM peak period at almost 7,000 vehicles and remain above 6,000 vehicles per hour throughout the middle of the day. Afternoon peak period volumes peak around 6,600 vehicles per hour, slightly lower than the AM peak period. As discussed later in the chapter, congestion occurs during the AM peak period along this section of I-5.

In the southbound direction, a much lower AM peak period occurs, with traffic volumes peaking at about 5,400 vehicles per hour. Overall traffic volumes remain lower than the northbound direction throughout the middle of the day with a PM peak period volume approaching 6,600 vehicles per hour.

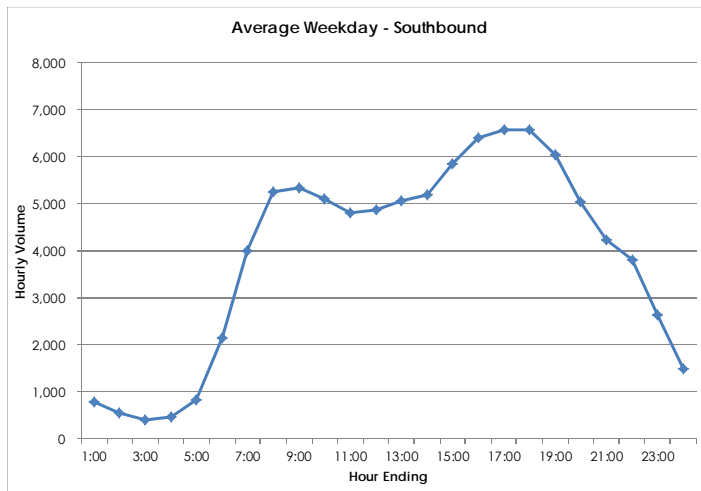
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

**Figure 3-2: Hourly Traffic Volume – Average Weekday
I-5 between SR 73 and Avery Parkway**



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	917	1,149	881	781	858
2:00	585	733	550	489	569
3:00	466	590	404	463	408
4:00	519	616	472	481	508
5:00	956	1,198	926	896	804
6:00	2,501	2,948	2,477	2,337	2,243
7:00	5,206	5,509	5,181	5,135	5,000
8:00	6,784	6,943	6,953	6,615	6,625
9:00	6,742	6,936	6,936	6,551	6,544
10:00	6,351	6,332	6,413	6,304	6,356
11:00	6,422	6,092	6,338	6,637	6,622
12:00	6,153	6,332	5,881	6,046	6,351
13:00	5,971	5,868	6,072	5,891	6,053
14:00	5,845	5,693	5,832	5,721	6,134
15:00	6,211	6,062	6,075	6,371	6,336
16:00	6,531	6,374	6,352	6,629	6,768
17:00	6,155	6,107	6,607	6,564	6,342
18:00	6,352	6,521	6,154	6,416	6,316
19:00	5,489	5,497	5,681	5,684	5,092
20:00	4,256	4,069	4,176	4,266	4,512
21:00	3,135	2,998	2,991	3,239	3,310
22:00	2,739	2,530	2,657	2,916	2,851
23:00	1,952	1,937	1,956	2,057	1,859
0:00	1,323	1,245	1,368	1,353	1,326
Total	99,560	100,279	99,333	99,842	98,787



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	872	1,069	764	857	797
2:00	577	625	559	507	618
3:00	424	479	354	402	461
4:00	484	492	478	468	499
5:00	885	1,018	860	798	864
6:00	2,238	2,485	2,180	2,082	2,205
7:00	4,093	4,383	4,057	3,992	3,941
8:00	5,327	5,536	5,365	5,181	5,224
9:00	5,364	5,422	5,426	5,290	5,318
10:00	4,990	4,652	4,936	5,129	5,244
11:00	4,826	4,826	4,634	4,884	4,959
12:00	4,894	4,948	4,810	4,871	4,947
13:00	5,040	4,928	4,976	5,075	5,180
14:00	5,139	4,942	5,047	5,195	5,371
15:00	5,803	5,609	5,706	5,931	5,966
16:00	6,339	6,098	6,400	6,393	6,464
17:00	5,899	6,376	6,636	6,520	4,064
18:00	6,566	6,543	6,566	6,628	6,526
19:00	5,977	5,768	5,867	6,151	6,123
20:00	4,969	4,702	4,742	5,044	5,389
21:00	4,097	3,668	3,926	4,273	4,520
22:00	3,679	3,276	3,428	3,759	4,253
23:00	2,615	2,526	2,392	2,557	2,984
0:00	1,462	1,343	1,305	1,559	1,642
Total	92,558	91,714	91,414	93,546	93,559

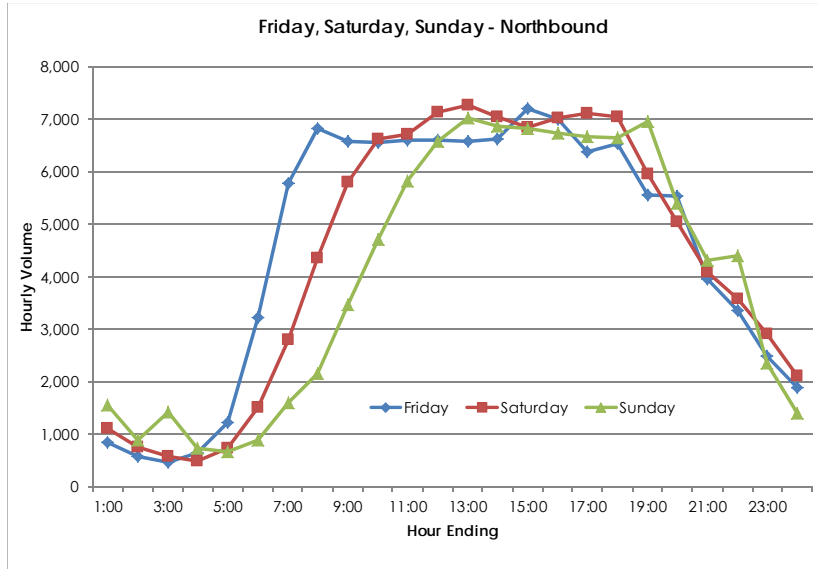
Traffic patterns on Friday, Saturday and Sunday on I-5 display slightly different peaking patterns from weekday traffic. Total daily traffic volumes peak on Friday at over 210,000 with Saturday volumes exceeding 200,000 and Sunday volumes approaching 180,000. As **Figure 3-3** shows, traffic is much steadier throughout the day, with little noticeable peaking.



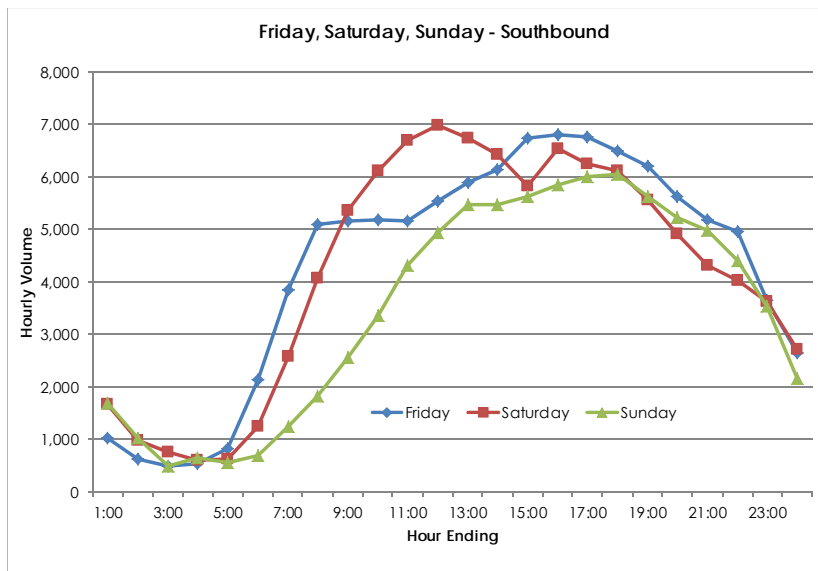
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Figure 3-3: Hourly Traffic Volume – Friday, Saturday, Sunday
I-5 between SR 73 and Avery Parkway



Hour Ending	Friday	Saturday	Sunday
1:00	852	1,120	1,565
2:00	592	760	889
3:00	462	585	1,433
4:00	640	491	726
5:00	1,232	742	659
6:00	3,218	1,517	899
7:00	5,775	2,799	1,604
8:00	6,833	4,355	2,162
9:00	6,582	5,805	3,464
10:00	6,551	6,636	4,713
11:00	6,603	6,713	5,837
12:00	6,601	7,141	6,589
13:00	6,582	7,282	7,027
14:00	6,619	7,039	6,861
15:00	7,202	6,840	6,826
16:00	7,010	7,031	6,737
17:00	6,374	7,112	6,672
18:00	6,532	7,046	6,660
19:00	5,571	5,951	6,956
20:00	5,538	5,051	5,413
21:00	3,959	4,098	4,315
22:00	3,367	3,578	4,409
23:00	2,500	2,918	2,355
0:00	1,892	2,123	1,394
Total	109,087	104,733	96,165



Hour Ending	Friday	Saturday	Sunday
1:00	1,027	1,663	1,695
2:00	633	981	1,027
3:00	502	758	488
4:00	538	602	658
5:00	830	633	548
6:00	2,133	1,247	695
7:00	3,847	2,579	1,253
8:00	5,092	4,071	1,820
9:00	5,165	5,359	2,564
10:00	5,193	6,113	3,360
11:00	5,150	6,689	4,321
12:00	5,538	6,981	4,937
13:00	5,887	6,734	5,481
14:00	6,141	6,429	5,469
15:00	6,746	5,836	5,626
16:00	6,798	6,537	5,853
17:00	6,750	6,250	6,012
18:00	6,493	6,119	6,046
19:00	6,203	5,566	5,632
20:00	5,626	4,924	5,231
21:00	5,178	4,319	4,978
22:00	4,950	4,037	4,411
23:00	3,642	3,619	3,539
0:00	2,651	2,718	2,163
Total	102,713	100,764	83,807

In the middle of the study area, along I-5 just north of I-405, average weekday traffic volumes continue to approach 200,000 vehicles per day; however, more defined AM and PM peak periods begin to materialize. As Figure 3-4 shows, in the northbound direction, vehicles peak in the AM peak period at over 7,300 vehicles per hour before dropping below 6,000 vehicles per hour throughout the middle of the day. As seen in the southern portion of the study area, afternoon peak period volumes continue to be lower than AM peak period volumes, peaking at just almost 63000 vehicles per hour.

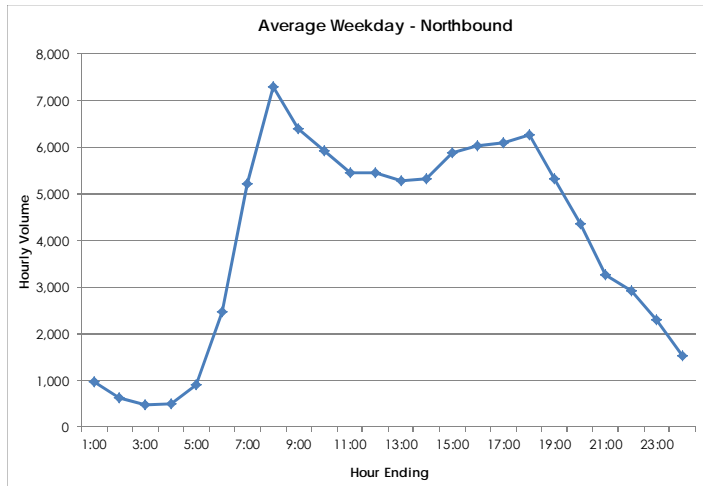


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

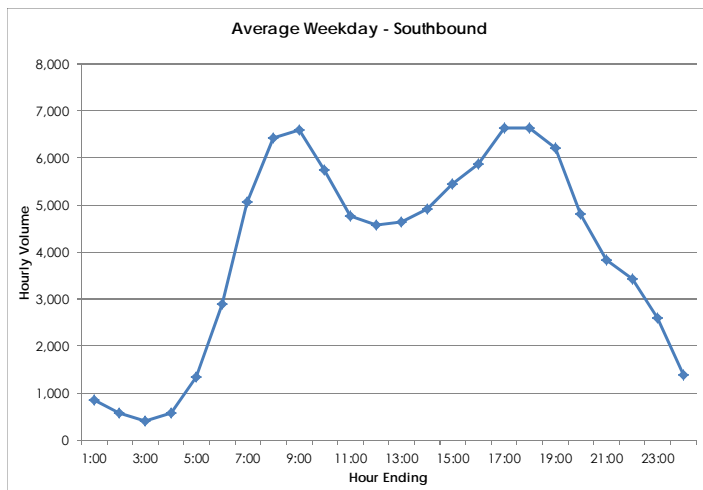
3.0 existing conditions
August 22, 2014

In the southbound direction, much more pronounced peaking occurs, with both AM and PM peak period volumes approaching 6,600 vehicles per hour. As discussed later in this chapter, this section of I-5 experiences congestion in both the northbound AM peak period and the southbound PM peak period.

**Figure 3-4: Hourly Traffic Volume – Average Weekday
I-5 between I-405 and Alton Parkway**



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	968	963	995	931	981
2:00	637	633	623	599	693
3:00	484	509	444	493	491
4:00	505	538	492	502	488
5:00	901	998	877	864	864
6:00	2,478	2,614	2,492	2,390	2,414
7:00	5,215	5,323	5,232	5,231	5,075
8:00	7,300	7,370	7,497	7,150	7,184
9:00	6,405	6,278	6,506	6,511	6,326
10:00	5,924	5,738	5,929	5,966	6,061
11:00	5,460	5,213	5,194	5,717	5,715
12:00	5,451	5,287	5,441	5,486	5,589
13:00	5,289	5,196	5,288	5,260	5,412
14:00	5,320	5,139	5,357	5,309	5,473
15:00	5,887	5,586	5,930	6,000	6,033
16:00	6,031	6,056	6,241	6,376	5,451
17:00	6,106	6,058	6,458	6,560	5,349
18:00	6,262	6,365	6,239	6,290	6,153
19:00	5,323	5,279	5,367	5,247	5,399
20:00	4,355	4,087	4,259	4,515	4,559
21:00	3,279	3,087	3,038	3,395	3,596
22:00	2,927	2,691	2,822	2,990	3,206
23:00	2,305	2,174	2,268	2,331	2,445
0:00	1,522	1,449	1,454	1,534	1,651
Total	96,332	94,631	96,443	97,647	96,608



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	864	1,014	746	851	850
2:00	573	608	562	514	607
3:00	423	444	353	394	502
4:00	584	582	597	566	592
5:00	1,344	1,421	1,318	1,305	1,330
6:00	2,906	3,002	2,909	2,910	2,802
7:00	5,076	5,119	5,022	5,148	5,014
8:00	6,438	6,616	6,407	6,348	6,379
9:00	6,592	6,549	6,686	6,535	6,599
10:00	5,760	5,642	5,627	5,837	5,932
11:00	4,778	4,763	4,654	4,870	4,826
12:00	4,578	4,371	4,803	4,466	4,671
13:00	4,652	4,549	4,552	4,609	4,899
14:00	4,932	4,689	4,994	5,097	4,946
15:00	5,445	5,226	5,445	5,583	5,527
16:00	5,875	5,737	6,127	6,045	5,590
17:00	6,654	6,314	6,962	6,598	6,743
18:00	6,639	6,811	6,785	6,725	6,236
19:00	6,227	6,102	6,238	6,209	6,359
20:00	4,814	4,587	4,672	4,928	5,067
21:00	3,830	3,364	3,697	3,896	4,362
22:00	3,425	3,134	3,116	3,600	3,848
23:00	2,603	2,653	2,230	2,619	2,908
0:00	1,398	1,235	1,319	1,394	1,645
Total	96,409	94,534	95,821	97,047	98,234

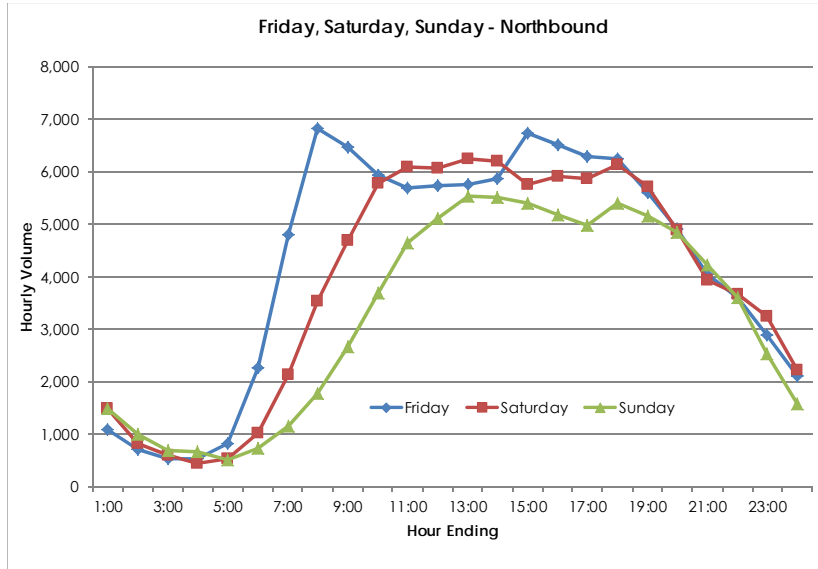
Traffic volumes reach their highest daily total on Friday, with a combined volume of over 207,000 vehicles. Saturday and Sunday volumes are much less pronounced, though Saturday volumes average over 6,000 vehicles in each direction throughout the afternoon. Sunday volumes are much lower, with about 155,000 daily vehicles. As **Figure 3-5** shows, traffic is much steadier throughout the day, with less noticeable peaking.



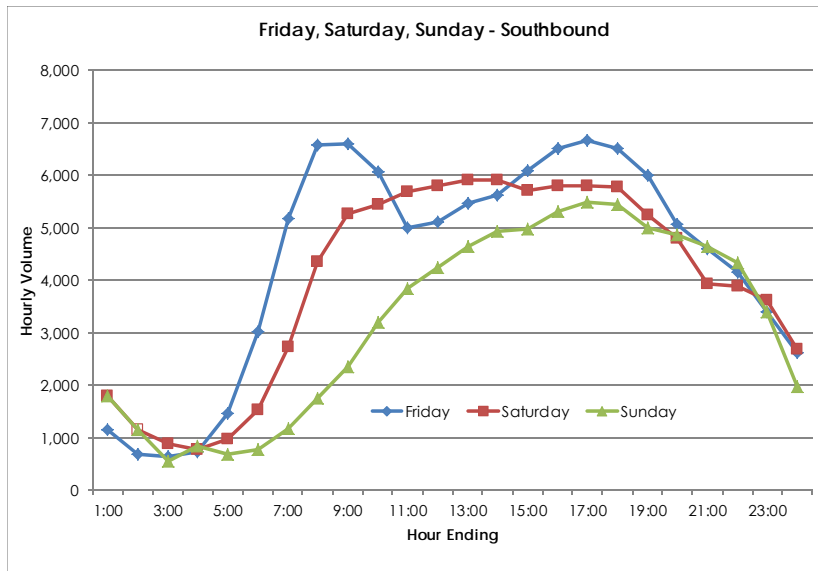
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Figure 3-5: Hourly Traffic Volume – Friday, Saturday, Sunday
I-5 between I-405 and Alton Parkway



Hour Ending	Friday	Saturday	Sunday
1:00	1,101	1,489	1,503
2:00	707	832	1,002
3:00	544	613	698
4:00	534	456	661
5:00	836	544	521
6:00	2,261	1,017	732
7:00	4,800	2,131	1,158
8:00	6,836	3,547	1,787
9:00	6,467	4,683	2,671
10:00	5,942	5,790	3,683
11:00	5,697	6,085	4,650
12:00	5,729	6,065	5,116
13:00	5,770	6,256	5,544
14:00	5,861	6,216	5,515
15:00	6,738	5,766	5,399
16:00	6,510	5,912	5,187
17:00	6,291	5,864	4,979
18:00	6,244	6,128	5,399
19:00	5,602	5,714	5,155
20:00	4,925	4,894	4,855
21:00	4,039	3,938	4,228
22:00	3,594	3,667	3,615
23:00	2,904	3,248	2,534
0:00	2,109	2,228	1,587
Total	102,041	93,083	78,179



Hour Ending	Friday	Saturday	Sunday
1:00	1,154	1,799	1,800
2:00	693	1,156	1,162
3:00	637	886	549
4:00	737	776	848
5:00	1,475	988	692
6:00	3,037	1,528	783
7:00	5,179	2,738	1,183
8:00	6,588	4,353	1,757
9:00	6,605	5,281	2,354
10:00	6,071	5,439	3,210
11:00	4,994	5,690	3,852
12:00	5,105	5,814	4,247
13:00	5,470	5,919	4,651
14:00	5,625	5,918	4,937
15:00	6,097	5,717	4,990
16:00	6,520	5,813	5,323
17:00	6,681	5,816	5,500
18:00	6,509	5,772	5,458
19:00	5,998	5,250	5,013
20:00	5,062	4,803	4,863
21:00	4,597	3,933	4,660
22:00	4,170	3,892	4,334
23:00	3,412	3,620	3,404
0:00	2,625	2,691	1,992
Total	105,041	95,592	77,562

Just south of the SR 261, average weekday traffic on I-5 exceeds 280,000 vehicles per day as the corridor widens to seven lanes in each direction. As Figure 3-6 shows, in the northbound direction, vehicles peak in the AM peak period at almost 10,000 vehicles per hour before dropping to around 8,000 vehicles per hour throughout the middle of the day. Afternoon peak period volumes continue to be lower than AM peak period volumes, peaking at 9,200 vehicles per hour.

In the southbound direction, much more pronounced peaking occurs, with the AM peak period approaching 9,500 vehicles per hour while the PM peak hour volumes exceed 10,600 vehicles

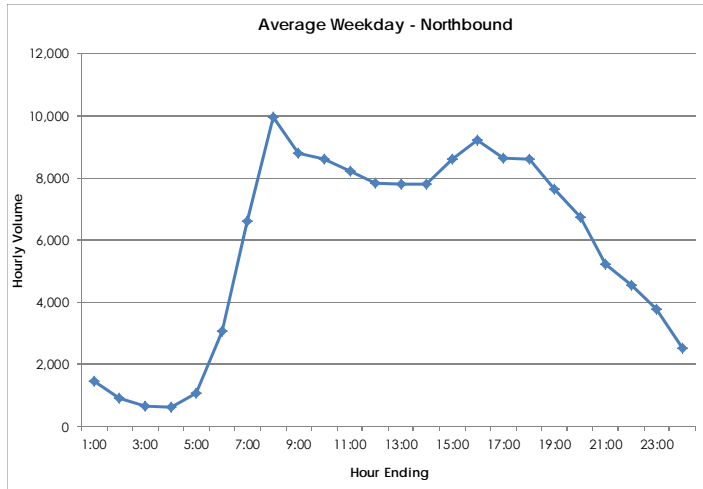


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

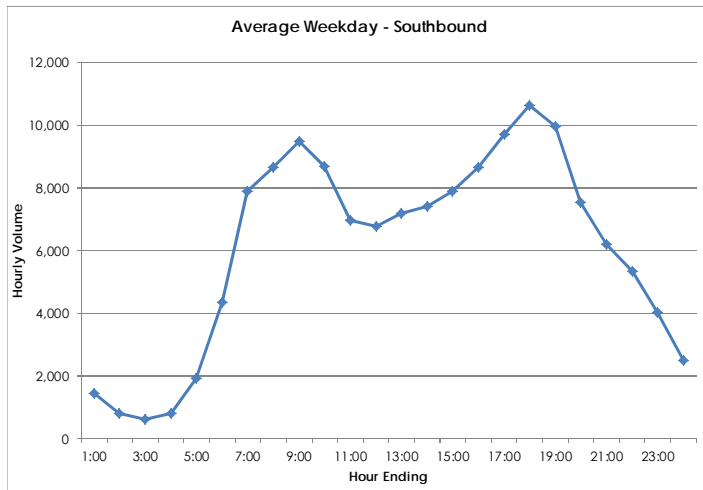
3.0 existing conditions
August 22, 2014

per hour. As discussed later in this chapter, this section of I-5 experiences congestion in both directions during both peak periods.

**Figure 3-6: Hourly Traffic Volume – Average Weekday
I-5 between Culver Road and SR 261**



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	1,461	1,314	1,459	1,515	1,557
2:00	928	827	873	994	1,017
3:00	669	585	670	717	703
4:00	636	572	690	609	674
5:00	1,069	1,092	1,064	1,085	1,034
6:00	3,082	3,140	3,090	3,016	3,082
7:00	6,598	6,556	6,598	6,662	6,576
8:00	9,966	9,801	9,659	10,102	10,302
9:00	8,796	8,556	8,583	9,168	8,876
10:00	8,604	8,093	8,867	8,725	8,732
11:00	8,203	7,624	8,187	8,311	8,689
12:00	7,820	7,600	7,634	7,941	8,106
13:00	7,792	7,579	7,761	7,864	7,964
14:00	7,808	7,276	7,873	8,018	8,066
15:00	8,600	8,236	8,714	8,808	8,640
16:00	9,211	9,180	9,338	9,444	8,882
17:00	8,636	9,132	8,658	8,495	8,257
18:00	8,603	8,891	8,864	8,014	8,641
19:00	7,641	7,620	7,694	7,399	7,849
20:00	6,745	6,270	6,571	6,973	7,144
21:00	5,240	4,928	5,079	5,262	5,689
22:00	4,563	4,294	4,530	4,633	4,794
23:00	3,779	3,400	3,743	3,750	4,222
0:00	2,522	2,383	2,430	2,521	2,754
Total	138,969	134,949	138,629	140,026	142,270



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	1,450	1,293	1,379	1,381	1,748
2:00	813	746	758	802	946
3:00	626	594	552	601	758
4:00	805	819	830	756	815
5:00	1,916	1,945	1,921	1,854	1,943
6:00	4,357	4,478	3,831	4,547	4,570
7:00	7,883	8,294	6,562	8,354	8,319
8:00	8,650	6,969	8,235	9,665	9,731
9:00	9,492	8,839	10,161	9,377	9,590
10:00	8,705	8,917	8,687	8,785	8,431
11:00	6,957	6,968	6,781	6,885	7,194
12:00	6,790	6,464	6,814	6,817	7,063
13:00	7,205	6,758	7,064	7,095	7,901
14:00	7,422	7,168	7,174	7,588	7,757
15:00	7,881	7,601	7,679	7,972	8,270
16:00	8,644	8,518	8,590	8,740	8,727
17:00	9,723	9,652	9,605	9,743	9,890
18:00	10,638	10,532	10,593	10,743	10,685
19:00	9,981	9,918	10,344	9,851	9,812
20:00	7,553	7,286	7,584	7,584	7,759
21:00	6,199	5,630	6,152	6,385	6,627
22:00	5,347	4,538	5,166	5,839	5,846
23:00	4,018	3,262	4,019	4,726	4,066
0:00	2,499	2,084	2,415	2,565	2,930
Total	145,551	139,275	142,896	148,655	151,378

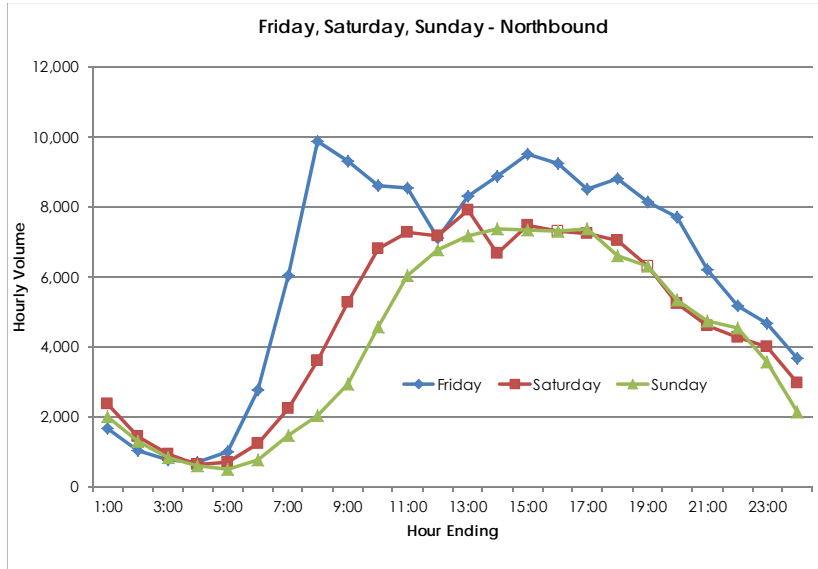
As **Figure 3-7** shows, Friday volumes exceed the average weekday volumes with daily volumes over 300,000 vehicles. Saturday and Sunday traffic is much lower, with Saturday volumes exceeding 220,000 and Sunday volumes just below 200,000. This suggests very high commuter traffic along this section of I-5.



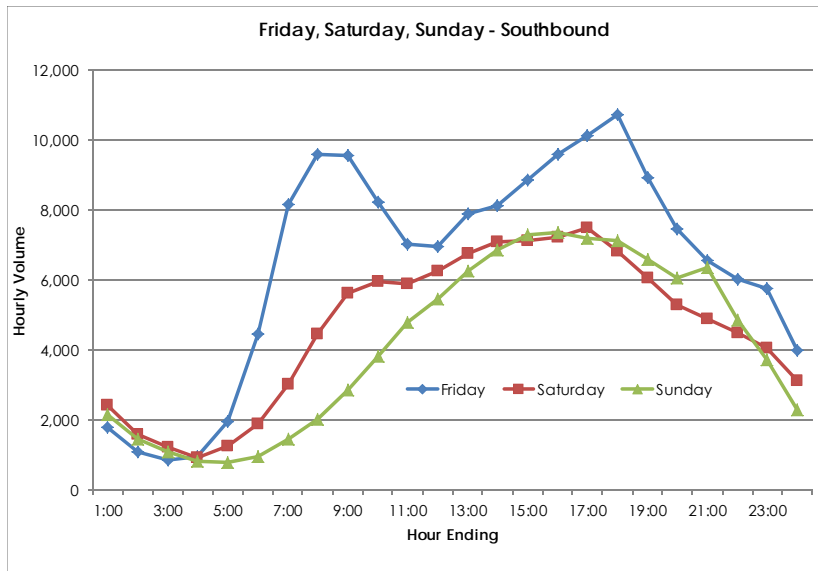
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Figure 3-7: Hourly Traffic Volume – Friday, Saturday, Sunday
I-5 between Culver Road and SR 261



Hour Ending	Friday	Saturday	Sunday
1:00	1,688	2,388	1,997
2:00	1,034	1,424	1,291
3:00	759	955	851
4:00	709	629	596
5:00	1,006	693	495
6:00	2,783	1,243	786
7:00	6,042	2,250	1,459
8:00	9,886	3,220	2,037
9:00	9,313	5,276	2,943
10:00	8,598	6,794	4,586
11:00	8,527	7,289	6,028
12:00	7,115	7,175	6,782
13:00	8,317	7,891	7,172
14:00	8,867	6,658	7,363
15:00	9,492	7,482	7,353
16:00	9,256	7,313	7,318
17:00	8,496	7,244	7,388
18:00	8,808	7,049	6,596
19:00	8,135	6,320	6,297
20:00	7,719	5,231	5,327
21:00	6,192	4,595	4,753
22:00	5,162	4,270	4,543
23:00	4,676	4,011	3,582
0:00	3,672	2,962	2,153
Total	146,252	110,762	99,696



Hour Ending	Friday	Saturday	Sunday
1:00	1,796	2,439	2,157
2:00	1,105	1,610	1,460
3:00	856	1,231	1,117
4:00	965	923	838
5:00	1,970	1,278	798
6:00	4,474	1,909	966
7:00	8,182	3,045	1,459
8:00	9,612	4,462	2,042
9:00	9,588	5,625	2,866
10:00	8,234	5,960	3,823
11:00	7,046	5,909	4,803
12:00	6,990	6,289	5,478
13:00	7,922	6,772	6,266
14:00	8,134	7,094	6,887
15:00	8,867	7,127	7,305
16:00	9,592	7,242	7,388
17:00	10,127	7,497	7,209
18:00	10,726	6,849	7,129
19:00	8,947	6,070	6,605
20:00	7,459	5,307	6,089
21:00	6,590	4,907	6,376
22:00	6,054	4,516	4,859
23:00	5,780	4,065	3,752
0:00	4,004	3,144	2,311
Total	155,020	111,270	99,983

I-405 is a major freeway that connects Los Angeles to Orange County, serving the Los Angeles airport, Long Beach, and downtown LA. Within Orange County, I-405 extends from the El Toro Y interchange with I-5 to the Los Angeles County line near Long Beach.

Traffic volumes and speeds were collected at two locations along the I-405 corridor:

- I-405 between I-5 and Irvine Center
- I-405 between Harvard and Jamboree



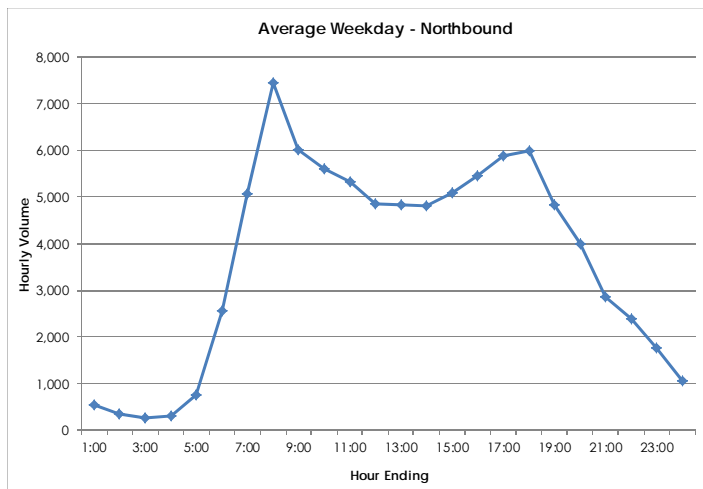
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

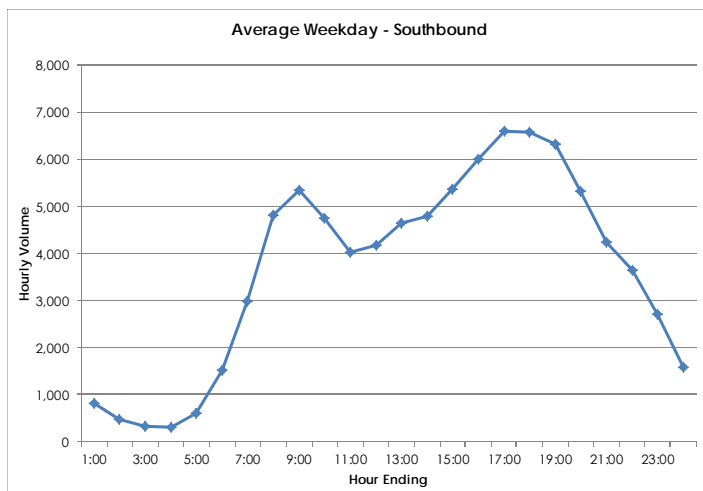
At the southern end of the I-405 corridor just north of the interchange with I-5, average weekday traffic volumes exceed 175,000 vehicles per day. As **Figure 3-8** shows, in the northbound direction, vehicles peak in the AM peak period at almost 7,500 vehicles and remain near 5,000 vehicles per hour throughout the middle of the day. Afternoon peak period volumes peak around 6,000 vehicles per hour, lower than the AM peak period. As discussed later in the chapter, significant congestion occurs during the AM peak period along this section of I-5.

In the southbound direction, a much lower AM peak period occurs, with traffic volumes peaking at about 5,400 vehicles per hour. Overall traffic volumes remain lower than the northbound direction throughout the middle of the day with a PM peak period volume approaching 6,600 vehicles per hour.

**Figure 3-8: Hourly Traffic Volume – Average Weekday
I-405 between I-5 and Irvine Center**



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	550	587	505	564	545
2:00	361	328	368	357	389
3:00	263	253	242	294	264
4:00	312	290	302	326	329
5:00	758	825	756	730	720
6:00	2,567	2,660	2,569	2,556	2,481
7:00	5,076	5,166	5,107	5,036	4,993
8:00	7,462	7,505	7,666	7,562	7,114
9:00	6,020	5,922	6,126	6,160	5,872
10:00	5,612	5,372	5,758	5,743	5,575
11:00	5,328	5,160	5,263	5,477	5,413
12:00	4,847	4,663	4,664	4,967	5,093
13:00	4,842	4,770	4,721	4,892	4,984
14:00	4,822	4,630	4,787	4,912	4,958
15:00	5,103	4,874	5,065	5,064	5,407
16:00	5,456	5,215	5,369	5,600	5,638
17:00	5,879	5,593	5,846	5,606	6,470
18:00	5,994	5,765	5,772	6,061	6,376
19:00	4,840	4,548	4,930	4,948	4,933
20:00	3,989	3,722	3,894	4,071	4,268
21:00	2,865	2,648	2,872	2,877	3,061
22:00	2,387	2,174	2,321	2,481	2,572
23:00	1,769	1,595	1,730	1,800	1,952
0:00	1,056	1,097	987	1,007	1,132
Total	88,153	85,362	87,620	89,091	90,539



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	826	704	766	878	957
2:00	474	398	479	496	521
3:00	319	254	318	357	346
4:00	300	289	299	309	301
5:00	610	589	580	623	648
6:00	1,511	1,542	1,492	1,500	1,511
7:00	2,995	2,882	3,086	3,036	2,977
8:00	4,808	4,801	4,834	4,720	4,877
9:00	5,343	5,227	5,501	5,275	5,367
10:00	4,755	4,792	4,503	4,840	4,883
11:00	4,020	3,896	3,923	4,130	4,129
12:00	4,175	3,981	4,103	4,276	4,341
13:00	4,639	4,479	4,598	4,749	4,729
14:00	4,803	4,648	4,721	4,853	4,988
15:00	5,361	5,074	5,274	5,394	5,700
16:00	6,008	5,992	6,036	5,715	6,290
17:00	6,598	6,699	6,673	6,464	6,556
18:00	6,587	6,681	6,607	6,384	6,677
19:00	6,321	6,446	6,266	6,295	6,278
20:00	5,331	5,144	5,116	5,641	5,421
21:00	4,243	3,855	4,263	4,173	4,679
22:00	3,644	3,007	3,651	3,769	4,150
23:00	2,720	2,207	2,689	2,861	3,124
0:00	1,582	1,232	1,566	1,657	1,872
Total	87,970	84,819	87,344	88,395	91,322

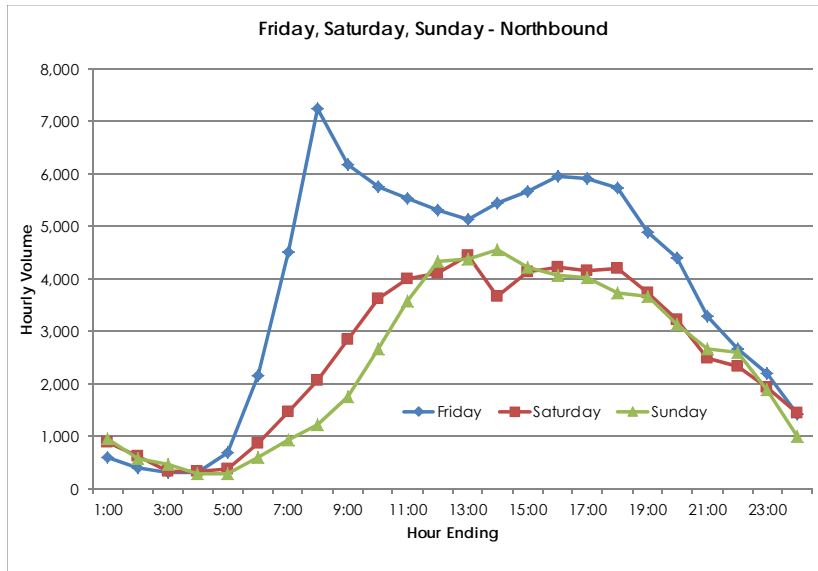


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

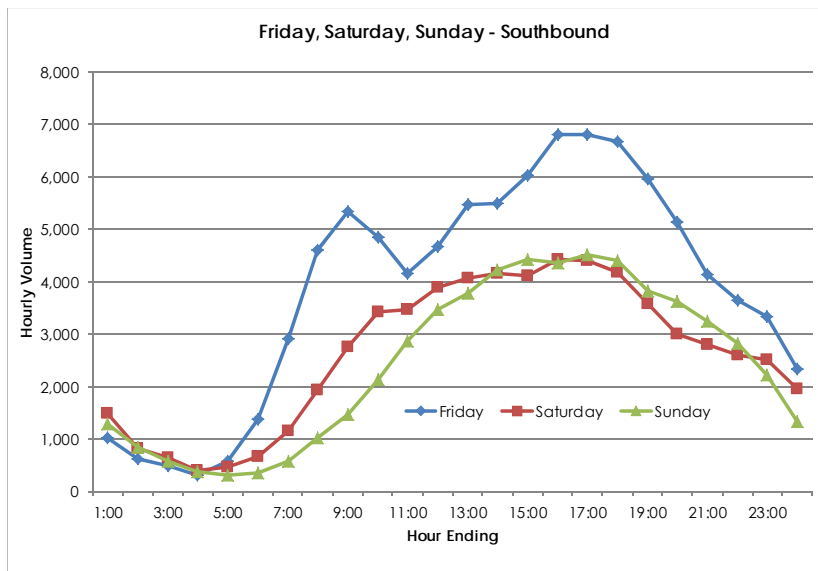
3.0 existing conditions
August 22, 2014

Weekend traffic on I-405 displays slightly different peaking patterns from weekday traffic. The total daily volume approaches 185,000 vehicles on Friday with much lower volumes on Saturday and Sunday. This suggests this section of the I-405 is heavily commuter-based. As **Figure 3-9** shows, traffic is much steadier throughout the day, with little noticeable peaking.

**Figure 3-9: Hourly Traffic Volume – Friday, Saturday, Sunday
I-405 between I-5 and Irvine Center**



Hour Ending	Friday	Saturday	Sunday
1:00	603	886	970
2:00	398	619	573
3:00	307	327	459
4:00	312	347	283
5:00	700	387	302
6:00	2,169	879	597
7:00	4,508	1,466	940
8:00	7,246	2,069	1,227
9:00	6,179	2,855	1,754
10:00	5,753	3,631	2,673
11:00	5,536	4,010	3,581
12:00	5,324	4,119	4,329
13:00	5,140	4,448	4,373
14:00	5,439	3,664	4,571
15:00	5,678	4,134	4,231
16:00	5,951	4,230	4,072
17:00	5,923	4,155	4,029
18:00	5,739	4,196	3,744
19:00	4,888	3,744	3,672
20:00	4,409	3,226	3,142
21:00	3,290	2,497	2,673
22:00	2,663	2,340	2,594
23:00	2,208	1,937	1,887
0:00	1,432	1,437	1,000
Total	91,795	61,603	57,676



Hour Ending	Friday	Saturday	Sunday
1:00	1,031	1,494	1,300
2:00	619	821	852
3:00	492	651	571
4:00	306	411	370
5:00	586	463	311
6:00	1,377	661	352
7:00	2,909	1,160	589
8:00	4,615	1,933	1,019
9:00	5,342	2,767	1,470
10:00	4,857	3,437	2,146
11:00	4,151	3,461	2,874
12:00	4,664	3,890	3,464
13:00	5,482	4,080	3,788
14:00	5,488	4,161	4,227
15:00	6,029	4,122	4,421
16:00	6,809	4,420	4,359
17:00	6,802	4,397	4,523
18:00	6,678	4,188	4,403
19:00	5,960	3,590	3,823
20:00	5,130	3,003	3,622
21:00	4,127	2,807	3,250
22:00	3,656	2,613	2,831
23:00	3,334	2,523	2,223
0:00	2,328	1,970	1,332
Total	92,772	63,023	58,120

Further north on the I-405 corridor, between Harvard Avenue and Jamboree Road, average weekday traffic volumes exceed 250,000 vehicles per day. As **Figure 3-10**Figure 3-8 shows, in the northbound direction, vehicles peak in the AM peak period at almost 10,500 vehicles and remain near 7,000 vehicles per hour throughout the middle of the day. Afternoon peak period



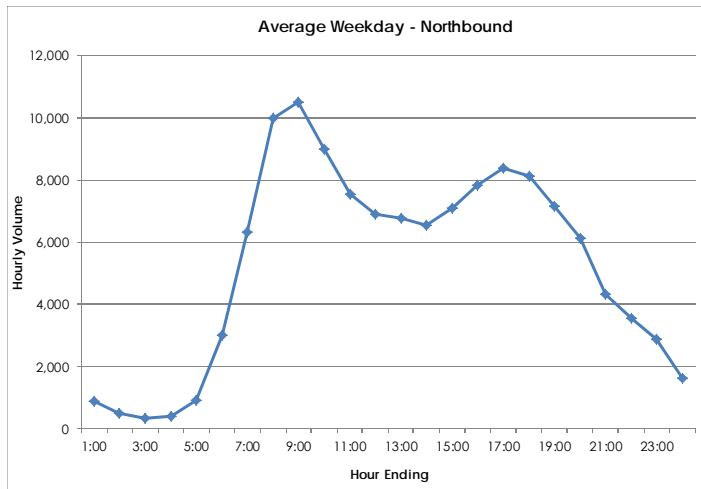
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

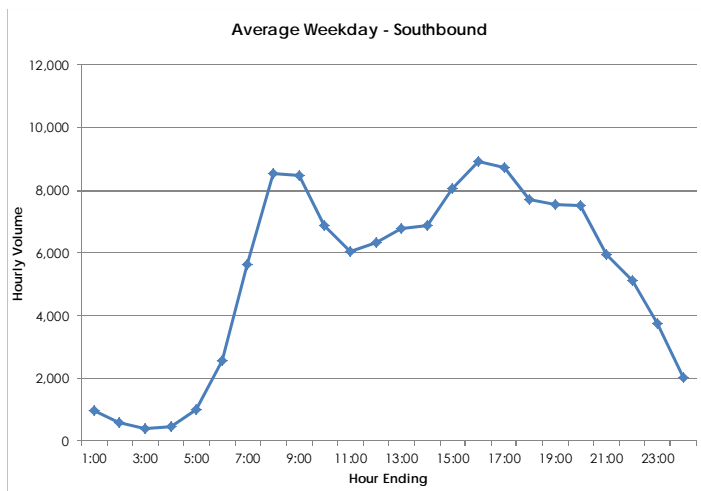
volumes peak around 8,400 vehicles per hour, lower than the AM peak period. As discussed later in the chapter, significant congestion occurs on this segment during both peak periods.

In the southbound direction, a much lower AM peak period occurs, with traffic volumes peaking at about 8,500 vehicles per hour. While hourly volumes in the middle of the day approach 7,000 vehicles, traffic volumes peak again during the PM peak period at almost 9,000 vehicles.

**Figure 3-10: Hourly Traffic Volume – Average Weekday
I-405 between Harvard and Jamboree**



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	890	823	819	869	1,050
2:00	505	508	462	463	586
3:00	344	348	306	350	370
4:00	385	362	351	446	382
5:00	903	1,055	946	929	681
6:00	2,990	3,431	3,166	3,131	2,233
7:00	6,333	6,671	6,504	6,598	5,560
8:00	9,992	10,522	10,417	9,666	9,361
9:00	10,493	10,990	10,824	10,119	10,040
10:00	8,987	8,183	9,039	9,208	9,517
11:00	7,547	7,495	7,251	7,452	7,989
12:00	6,887	6,574	6,860	6,969	7,145
13:00	6,758	6,577	6,740	6,727	6,986
14:00	6,550	6,541	6,824	6,639	6,195
15:00	7,082	6,668	7,119	7,277	7,265
16:00	7,842	7,614	7,974	7,863	7,918
17:00	8,372	8,030	8,442	8,498	8,517
18:00	8,116	8,223	8,434	7,396	8,409
19:00	7,164	6,977	7,394	6,872	7,413
20:00	6,122	5,485	5,944	6,904	6,156
21:00	4,311	3,916	4,051	4,598	4,678
22:00	3,559	3,111	3,487	3,701	3,938
23:00	2,874	2,518	2,735	3,126	3,116
0:00	1,638	1,378	1,479	1,866	1,828
Total	126,642	124,000	127,568	127,667	127,333



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	978	1,020	874	999	1,020
2:00	592	559	532	573	702
3:00	404	377	368	430	440
4:00	454	437	426	473	481
5:00	999	1,016	994	986	999
6:00	2,551	2,549	2,578	2,522	2,556
7:00	5,617	5,583	5,598	5,603	5,683
8:00	8,537	8,573	8,483	8,678	8,415
9:00	8,463	8,298	8,626	8,394	8,534
10:00	6,862	5,501	7,015	7,465	7,467
11:00	6,045	5,947	6,006	6,058	6,168
12:00	6,328	6,230	6,305	6,394	6,381
13:00	6,778	6,392	6,736	6,968	7,016
14:00	6,883	6,810	7,240	7,421	6,060
15:00	8,039	7,692	8,192	7,972	8,301
16:00	8,929	8,757	8,976	8,972	9,010
17:00	8,729	8,580	9,208	8,933	8,194
18:00	7,698	7,877	7,859	7,622	7,433
19:00	7,538	7,526	7,519	7,582	7,526
20:00	7,509	7,012	7,604	7,665	7,755
21:00	5,956	5,213	5,811	6,298	6,502
22:00	5,133	4,277	4,934	5,547	5,773
23:00	3,755	3,164	3,631	3,844	4,380
0:00	2,039	1,720	1,891	2,123	2,420
Total	126,814	121,110	127,406	129,522	129,216

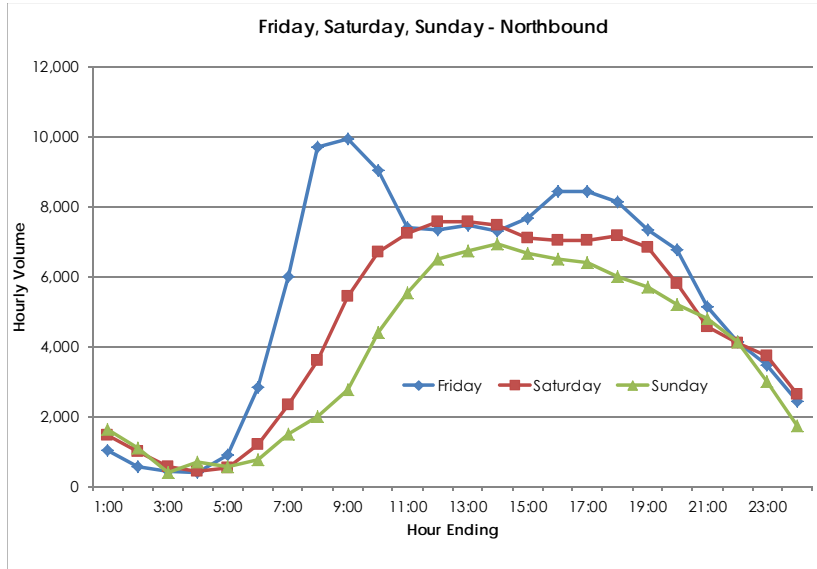
The total daily volume approaches 270,000 vehicles on Friday, higher than any other weekday. Saturday and Sunday volumes also remain high, though with different peaking patterns, at 225,000 and 187,000 vehicles per day, respectively. As **Figure 3-11** shows, traffic is much steadier throughout the day, with little noticeable peaking.



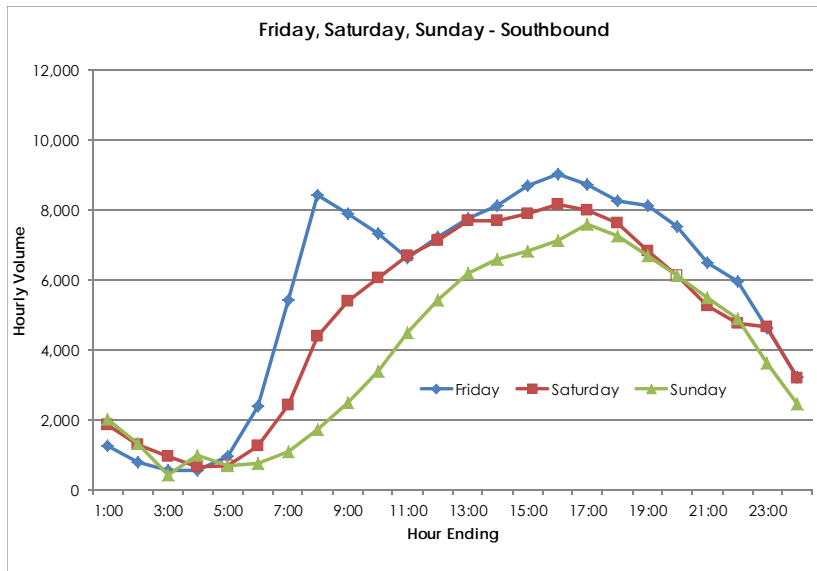
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Figure 3-11: Hourly Traffic Volume – Friday, Saturday, Sunday
I-405 between Harvard and Jamboree



Hour Ending	Friday	Saturday	Sunday
1:00	1,039	1,483	1,645
2:00	567	990	1,111
3:00	450	574	397
4:00	401	431	694
5:00	892	525	565
6:00	2,852	1,219	782
7:00	6,004	2,338	1,514
8:00	9,692	3,599	2,012
9:00	9,950	5,431	2,764
10:00	9,042	6,714	4,410
11:00	7,412	7,249	5,556
12:00	7,337	7,579	6,513
13:00	7,489	7,587	6,741
14:00	7,310	7,486	6,924
15:00	7,672	7,106	6,665
16:00	8,431	7,024	6,516
17:00	8,455	7,045	6,391
18:00	8,132	7,176	5,994
19:00	7,357	6,850	5,708
20:00	6,776	5,811	5,192
21:00	5,152	4,557	4,805
22:00	4,141	4,092	4,156
23:00	3,464	3,739	2,991
0:00	2,451	2,649	1,730
Total	132,468	109,254	91,776



Hour Ending	Friday	Saturday	Sunday
1:00	1,275	1,865	2,035
2:00	807	1,305	1,333
3:00	582	965	423
4:00	559	662	1,014
5:00	982	693	698
6:00	2,398	1,264	759
7:00	5,428	2,438	1,121
8:00	8,447	4,392	1,746
9:00	7,891	5,401	2,516
10:00	7,329	6,079	3,397
11:00	6,656	6,695	4,501
12:00	7,227	7,139	5,428
13:00	7,782	7,697	6,220
14:00	8,131	7,716	6,611
15:00	8,694	7,899	6,835
16:00	9,037	8,159	7,147
17:00	8,746	8,002	7,617
18:00	8,266	7,637	7,270
19:00	8,139	6,834	6,695
20:00	7,532	6,151	6,125
21:00	6,508	5,285	5,496
22:00	5,958	4,769	4,913
23:00	4,642	4,657	3,652
0:00	3,232	3,214	2,465
Total	136,248	116,918	96,017

3.1.1.2 Toll Road Feeder Routes

SR 73, the San Joaquin Hills Toll Corridor, extends southeastward from its junction with SR 73 near Jamboree Boulevard in Newport Beach to I-5 near San Juan Capistrano. It passes through or borders the cities of Newport Beach, Irvine, Laguna Beach, Aliso Viejo, Laguna Hills, and Laguna Niguel. It serves the local residential and commercial markets and provides for a bypass for through trips on the congested I-5 and I-405 freeways and the “El Toro Y.” North of MacArthur Boulevard SR 73 operates toll-free; south of MacArthur, tolls are collected at five ramp toll plazas and one mainline plaza, Catalina View. At the location where counts were collected, between



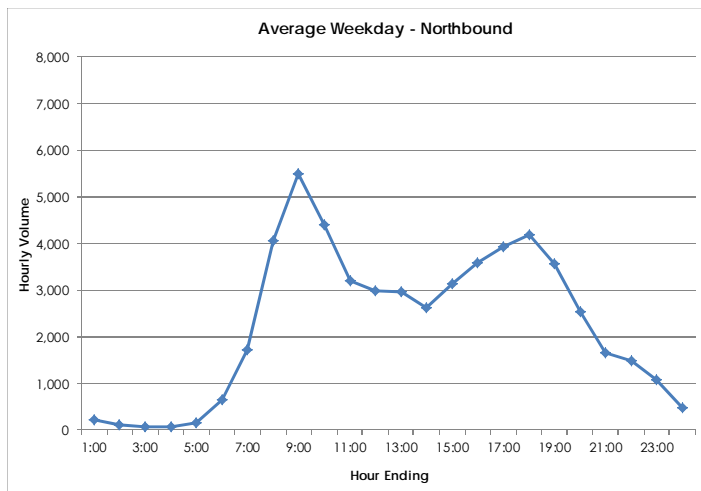
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

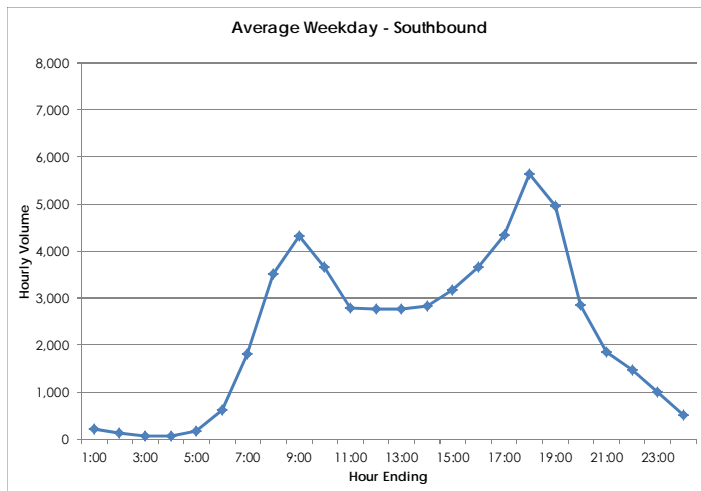
Jamboree Road and University Drive, SR 73 is three lanes in the northbound direction and four lanes in the southbound direction.

As **Figure 3-12** shows, travel on the SR 73 exhibits both an AM and PM peak period with higher northbound AM and southbound PM traffic volumes. During the AM peak, average weekday northbound traffic volumes approach 6,000 vehicles per hour, while the PM peak period also has average weekday northbound traffic volumes approaching 6,000 vehicles per hour. Little to no congestion occurs on the SR 73 during peak periods.

**Figure 3-12: Hourly Traffic Volume – Average Weekday
SR 73 between Jamboree Road and University Drive**



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	219	246	262	54	314
2:00	106	127	110	55	132
3:00	75	61	94	57	87
4:00	67	64	76	62	65
5:00	153	164	150	153	143
6:00	655	694	660	633	634
7:00	1,723	1,761	1,714	1,690	1,723
8:00	4,059	4,109	4,030	4,006	4,092
9:00	5,501	5,390	5,468	5,803	5,341
10:00	4,407	4,278	4,310	4,570	4,470
11:00	3,202	3,050	3,230	3,213	3,316
12:00	3,000	2,811	2,835	3,112	3,242
13:00	2,963	2,804	2,806	3,006	3,237
14:00	2,634	2,792	2,697	2,786	2,242
15:00	3,131	3,059	2,953	3,256	3,255
16:00	3,584	3,357	3,234	3,676	4,069
17:00	3,933	3,713	3,746	3,968	4,304
18:00	4,190	3,954	4,092	4,190	4,525
19:00	3,564	3,291	3,453	3,605	3,907
20:00	2,549	2,256	2,419	2,680	2,839
21:00	1,669	1,500	1,643	1,687	1,846
22:00	1,490	1,157	1,475	1,555	1,774
23:00	1,079	934	802	1,183	1,397
0:00	491	551	97	600	715
Total	54,443	52,123	52,358	55,600	57,689



Hour Ending	Average Weekday	Monday	Tuesday	Wednesday	Thursday
1:00	217	199	207	214	249
2:00	126	139	107	129	128
3:00	76	82	67	63	92
4:00	82	87	76	83	80
5:00	182	178	180	189	180
6:00	636	645	613	640	644
7:00	1,822	1,764	1,799	1,890	1,835
8:00	3,519	3,440	3,360	3,569	3,706
9:00	4,323	4,173	4,262	4,318	4,540
10:00	3,667	3,532	3,499	3,708	3,929
11:00	2,785	2,767	2,672	2,607	3,092
12:00	2,782	2,608	2,725	2,805	2,991
13:00	2,771	2,566	2,653	2,898	2,968
14:00	2,835	2,723	2,930	3,181	2,506
15:00	3,168	2,818	3,013	3,048	3,794
16:00	3,669	3,349	3,383	3,690	4,255
17:00	4,344	3,857	4,193	4,408	4,916
18:00	5,651	5,408	5,562	5,500	6,133
19:00	4,963	4,591	4,942	4,988	5,329
20:00	2,863	2,457	2,586	3,070	3,339
21:00	1,866	1,562	1,759	1,914	2,228
22:00	1,483	1,223	1,331	1,560	1,817
23:00	1,014	835	965	1,031	1,225
0:00	510	385	397	544	714
Total	55,352	51,388	53,281	56,047	60,690

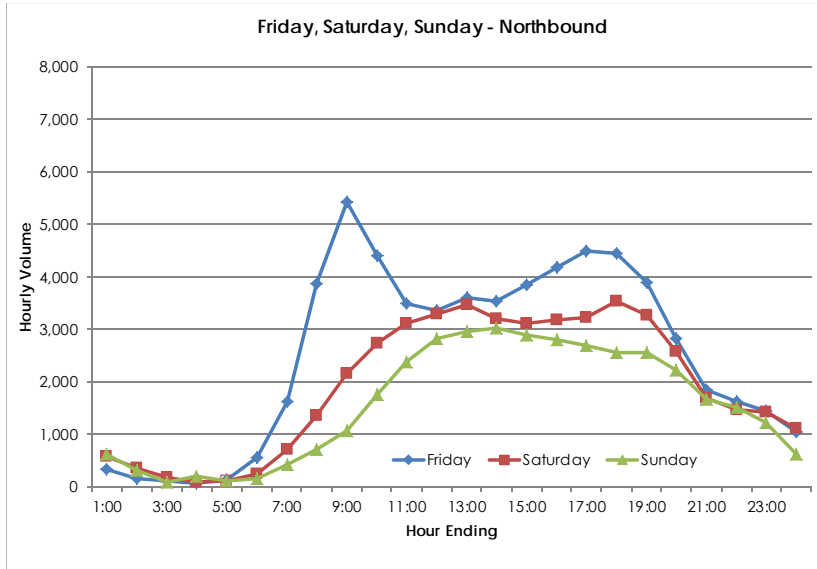
While Friday volumes reach similar levels to average weekday volumes, weekend volumes on the SR 73 are lower, with hourly volumes between 2,500 and 3,000 vehicles per hour for most of the weekend.



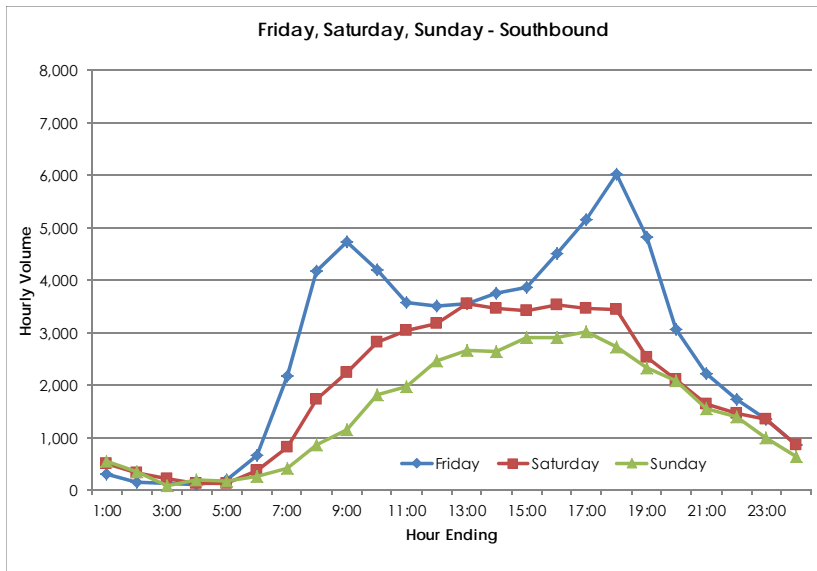
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Figure 3-13: Hourly Traffic Volume – Friday, Saturday, Sunday
SR 73 between Jamboree Road and University Drive



Hour Ending	Friday	Saturday	Sunday
1:00	343	583	635
2:00	163	350	312
3:00	113	191	101
4:00	80	84	196
5:00	132	109	124
6:00	570	244	151
7:00	1,619	717	423
8:00	3,876	1,364	723
9:00	5,431	2,149	1,080
10:00	4,404	2,727	1,765
11:00	3,496	3,122	2,386
12:00	3,351	3,297	2,820
13:00	3,594	3,460	2,965
14:00	3,539	3,206	3,037
15:00	3,857	3,115	2,891
16:00	4,181	3,191	2,797
17:00	4,487	3,234	2,690
18:00	4,451	3,540	2,562
19:00	3,893	3,274	2,557
20:00	2,834	2,578	2,237
21:00	1,847	1,693	1,664
22:00	1,628	1,476	1,516
23:00	1,458	1,421	1,223
0:00	1,044	1,112	623
Total	60,391	46,237	37,478



Hour Ending	Friday	Saturday	Sunday
1:00	314	504	565
2:00	161	334	366
3:00	138	227	86
4:00	112	127	203
5:00	193	132	177
6:00	674	391	259
7:00	2,192	836	430
8:00	4,172	1,737	874
9:00	4,730	2,250	1,148
10:00	4,214	2,833	1,819
11:00	3,575	3,050	1,991
12:00	3,519	3,181	2,476
13:00	3,565	3,549	2,674
14:00	3,767	3,464	2,657
15:00	3,882	3,420	2,911
16:00	4,507	3,534	2,914
17:00	5,156	3,476	3,017
18:00	6,018	3,441	2,738
19:00	4,830	2,547	2,329
20:00	3,062	2,104	2,089
21:00	2,235	1,648	1,551
22:00	1,731	1,473	1,404
23:00	1,358	1,360	997
0:00	875	863	646
Total	64,980	46,481	36,321



3.0 existing conditions
August 22, 2014

3.1.2 Travel Time and Speed Runs

Vehicle speeds in the study area were obtained using three methods. First, manual travel time and speed runs were conducted throughout the study area while data collection was ongoing. Second, at each Wavetronix location, speeds were collected at fifteen minute increments throughout the course of a week. Third, speed data were available from the Caltrans PeMS system.

As shown in **Figure 3-14**, congestion exists along the I-5 northbound in numerous locations, usually near approaches to other major routes. During the AM peak hour, the I-5 was congested in the northbound direction from south of the split with the SR 73 all the way to the El Toro "Y". The slowest segment in this area speeds were as low as 22 miles per hour (mph).

Congestion in the northbound direction continues through the El Toro "Y" on the I-405 with speeds below 20 mph for several miles. The southbound I-405 also exhibits congestion with speeds roughly around 40 mph. One segment of the southbound I-405 had speeds below 25 mph.

Figure 3-15 summarizes the travel time runs completed during the PM peak period. Similar to the AM peak period, the I-405 corridor parallel to the SR 73 experiences congestion in both directions with northbound I-405 speeds below 35 mph for the entire length between I-5 and SR 55. In addition, the southbound I-405 showed congestion between Jamboree Road and the El Toro "Y" with speeds averaging between 30 and 40 mph.

The southbound I-5 between the El Toro "Y" and the SR 73 also exhibits heavy congestion with average speeds around 45 mph.

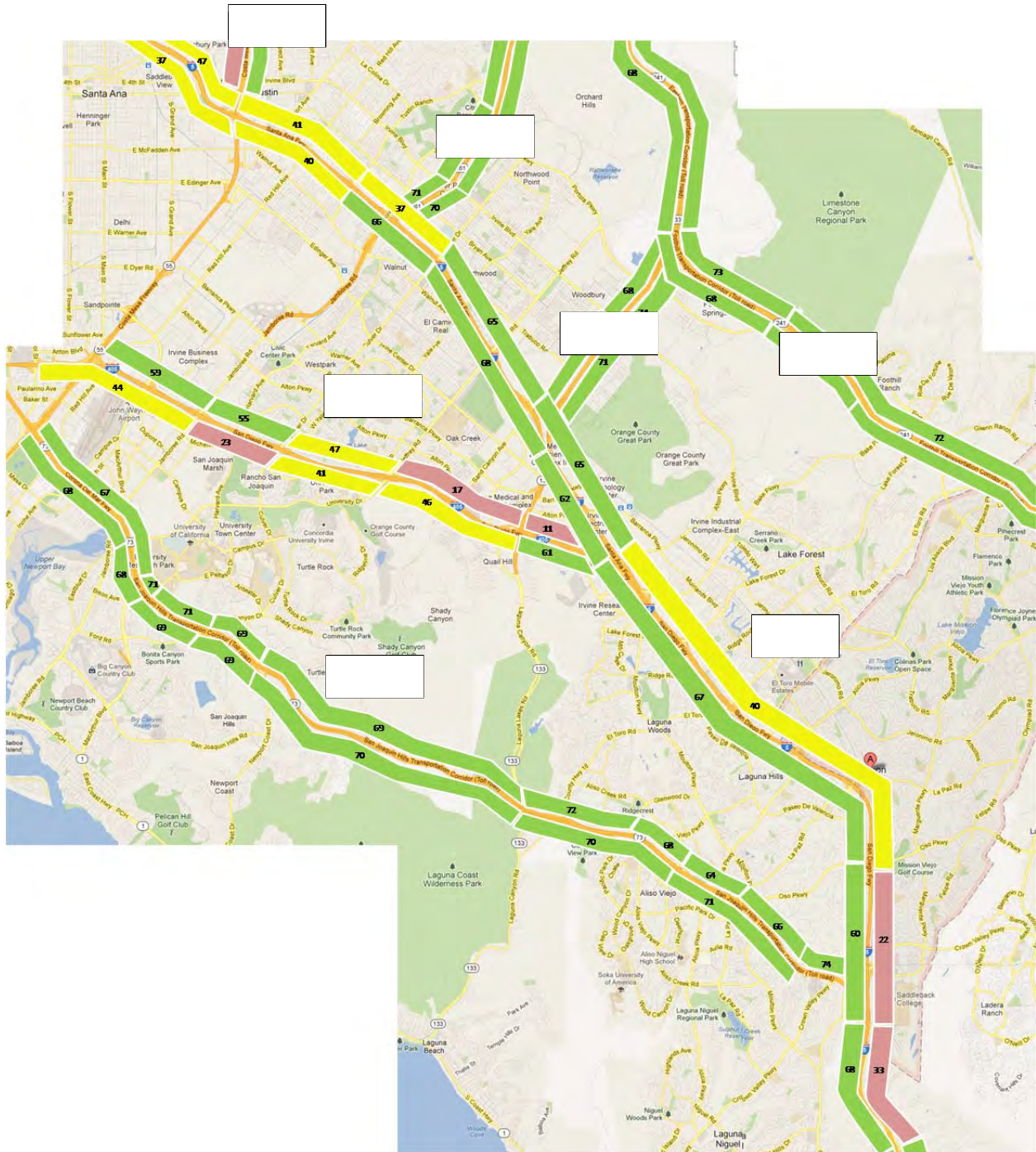
Travel time runs completed in March 2012 reveal that during the AM peak hour, travel time savings on the northbound SR 73 from I-5 to SR 55 versus the toll-free alternative route along I-5 and I-405 can be almost 25 minutes. The same route in the southbound direction offers approximately 8-10 minutes of travel time savings. During the PM peak hour, travel time runs reveal a time savings of approximately 8-10 minutes in both the northbound and southbound directions. As congestion continues to worsen on the toll-free freeway network, the travel time savings offered by the SR 73 will increase, attracting additional users to the corridor.

In addition to the travel time savings offered by the SR 73, the reliability of the travel time is also attractive to potential users as speeds along the toll-free I-5 and I-405 can be volatile from day-to-day.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

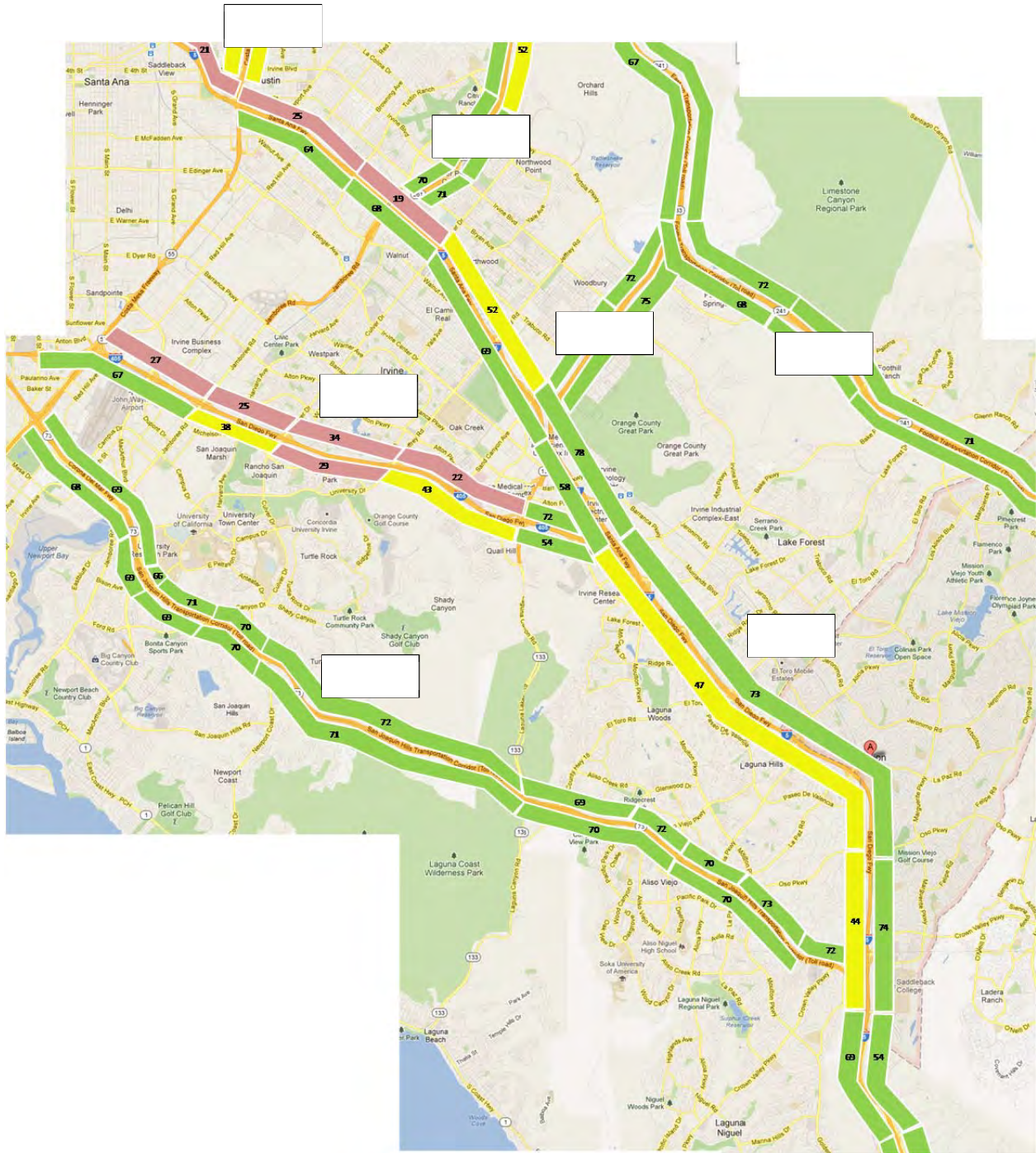
Figure 3-14: Study Area Speeds – AM Peak Hour



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Figure 3-15: Study Area Speeds – PM Peak Hour



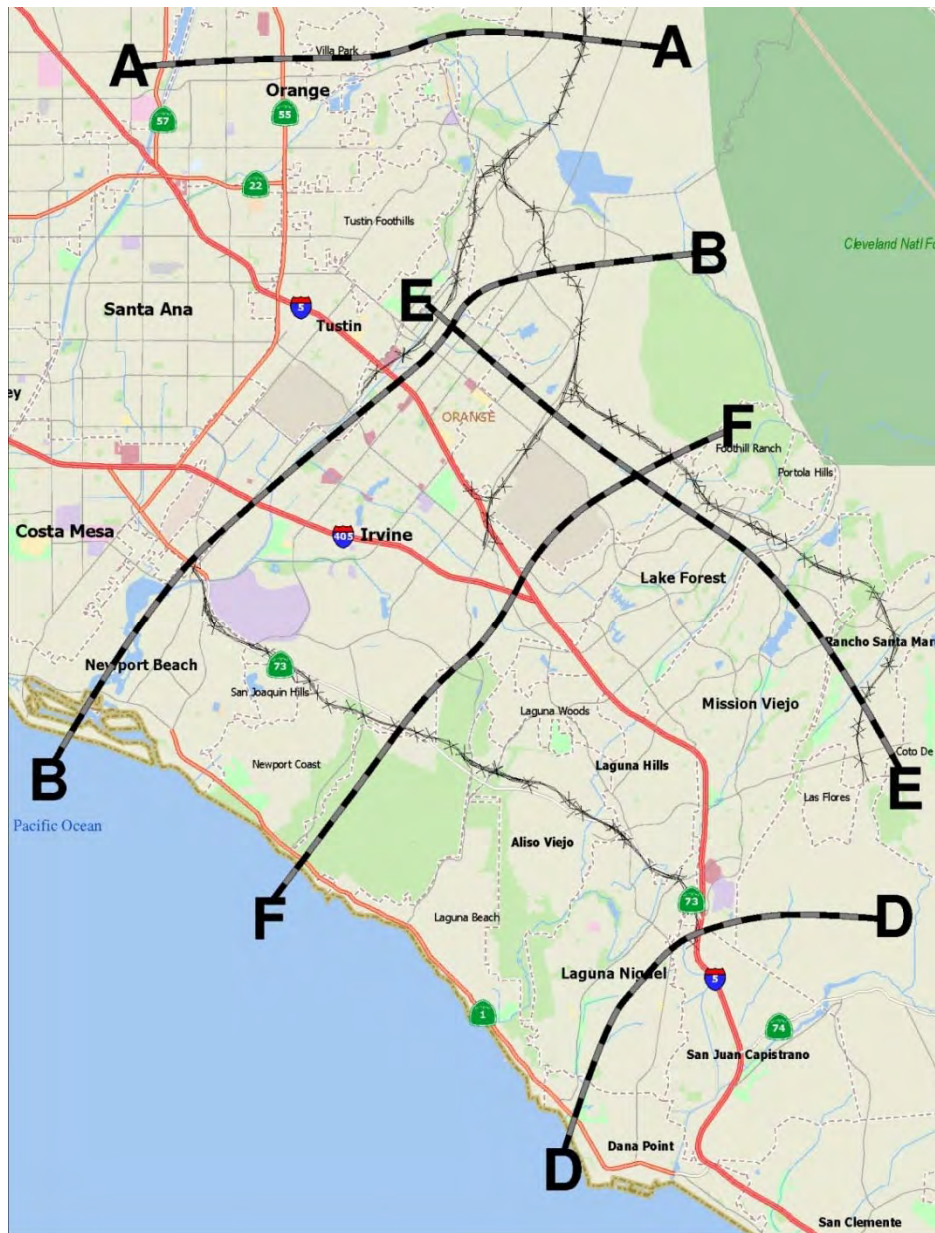
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

3.1.3 Screenline Summary

As part of the data collection efforts, five screenlines were identified to monitor how traffic volumes grow and shift under various tolling alternatives. **Figure 3-16** identifies the five screenlines analyzed as part of this study. A sixth screenline, Screenline G, across I-5 and I-15 in San Diego County was also counted and analyzed. More information about screenline calibration will be presented in Chapter 5. An analysis of growth along each screenline will be presented in Chapter 6.

Figure 3-16: Screenline Locations



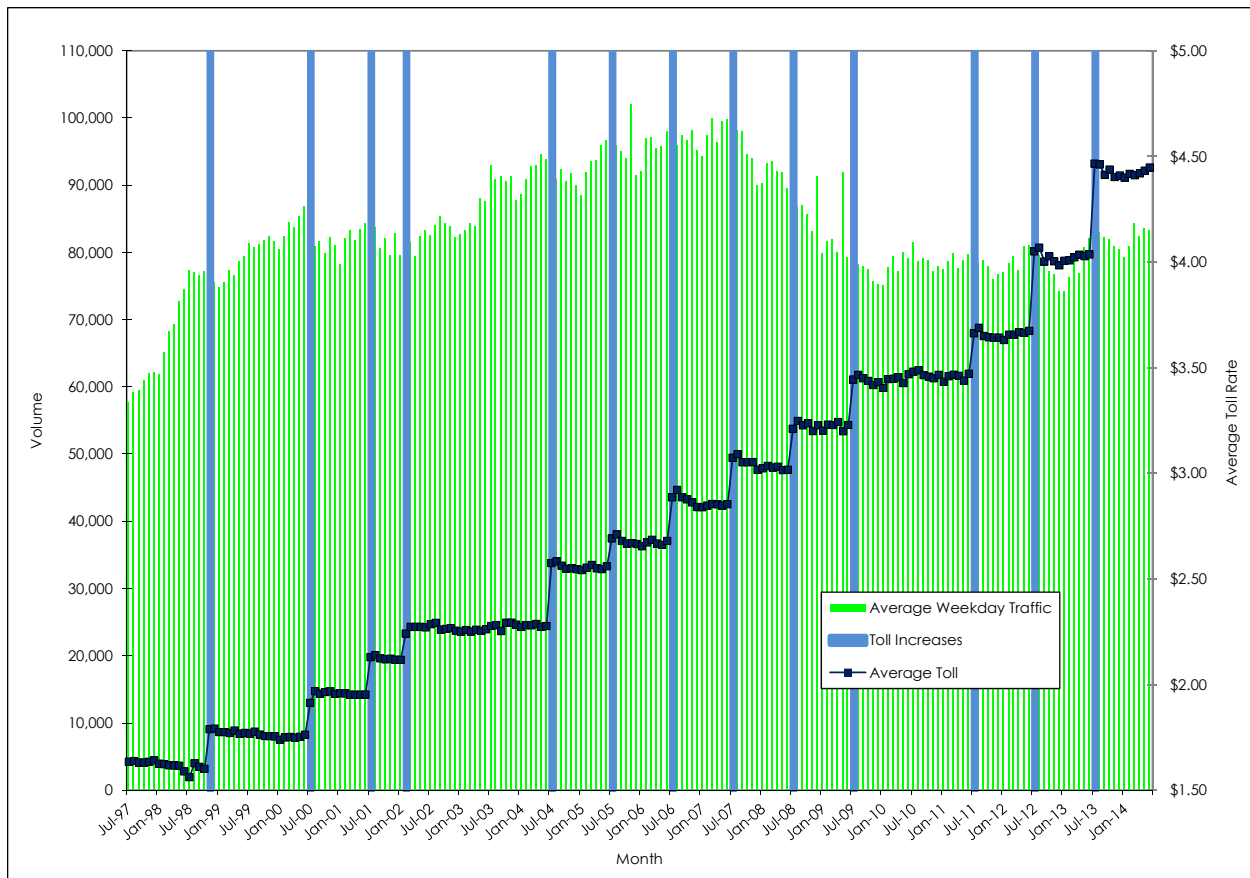
3.0 existing conditions
 August 22, 2014

3.2 SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRENDS

3.2.1 Historic Average Weekday Transaction Data

Figure 3-17 below summarizes the historic performance of the San Joaquin Hills Transportation Corridor.

Figure 3-17: Historic Average Weekday Traffic and Toll Rates



The discussion below focuses on two primary periods with different transaction growth: 1996 to 2007 and 2007 to 2014. During the first ten plus years of operation, transaction growth was steady on the SJHTC, peaking in early 2007. The “Great Recession”, combined with more frequent and larger toll increases, had a negative impact on transactions, with little to no growth occurring between 2007 and 2011.

Recent trends provide reason for optimism. A rapidly recovering economy in Orange County has fueled transaction growth of almost six percent in FY 2014 even though the average toll rate was increased by almost ten percent.



3.0 existing conditions

August 22, 2014

3.2.1.1 1996 to 2007

The San Joaquin Hills Toll Road opened in phases between July and November 1996. Overall, system-wide traffic at all toll plazas has increased since the opening, though the largest percentage increases occurred in the early years, primarily due to ramp-up.

Average weekday SJHTC transactions grew sharply soon after the road was completed. There were 45,000 transactions in January of 1997, increasing to 58,000 by July of 1997 and 77,000 by July of 1998. A toll increase in November of 1998 caused the loss of some traffic; however, by the spring of 2000 the traffic had increased to 85,000 transactions per average weekday.

A toll increase in July 2000 dropped the transactions back down to 82,000, although by the spring of the following year, traffic had grown back to 84,000. A July 2001 toll increase reduced average weekday transactions to 81,000. Despite another toll increase in February of 2002, average weekday transactions following that increase held steady at 81,000. Since that time, traffic grew slowly, to 83,000 in February of 2003. By July 2003, transactions exceeded 90,000 on an average weekday. Despite toll increases in October 2003 and July 2004, transactions remained level at 90,000 through 2004.

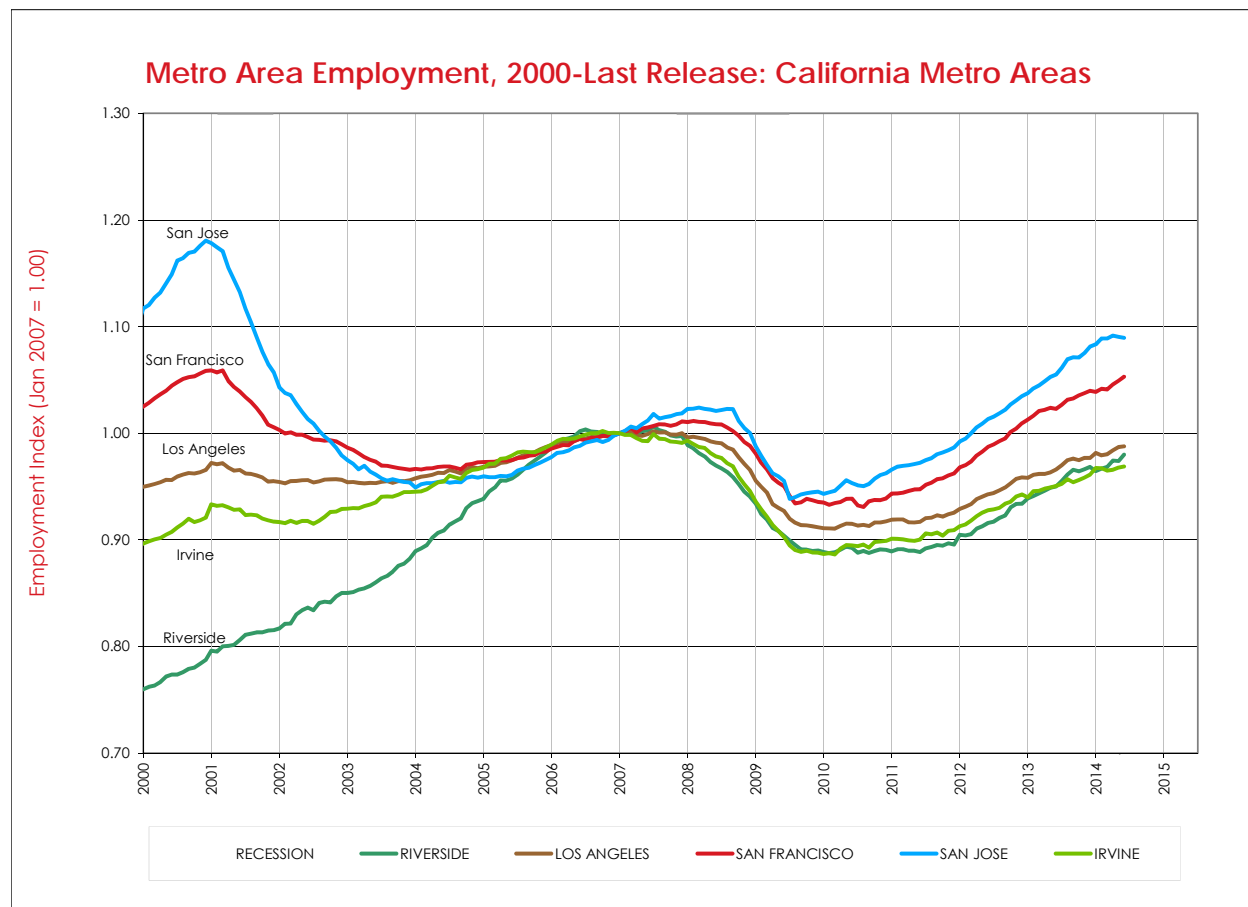
By May 2005, traffic had grown steadily, reaching 95,000 transactions. By spring 2006, traffic steadily grew to 97,000 per average weekday. A July 2006 toll increase caused the reduction of some traffic but by the spring of 2007, traffic reached 98,000 per average weekday. After a July 2007 toll increase, traffic along the SJHTC decreased to 95,000 in October 2007. The short recovery periods following toll increases and the steady growth despite toll increases are evidence of the relatively inelastic nature of SJHTC customers. Over the four year period from FY 2003 to FY 2007, transactions increased by more than 15 percent, in spite of annual toll increases, which raised the average toll rate by more than 25 percent.

3.2.1.2 2007 to 2014

Metro area employment in the Los Angeles, Irvine and Riverside areas suffered severe losses through the recession of 2008/2009, and through 2010/11 experienced a modest and uneven recovery. From late 2007, the beginning of the recession, to early 2010, the trough in employment, the combined MSA's suffered an 11.5 percent employment drop which is a loss of more than 320,000 jobs. From 2010 to 2012, total employment began to recover, albeit slowly, and is currently 76,000 jobs higher than it was during the 2010 bottom. Current employment levels have still only recovered to early 2009 levels (on the way down) and late 2003 levels (on the way up), eight percent below pre-recession levels. **Figure 3-18** provides a glimpse of regional employment levels since 2001.

3.0 existing conditions
 August 22, 2014

Figure 3-18: Regional Employment

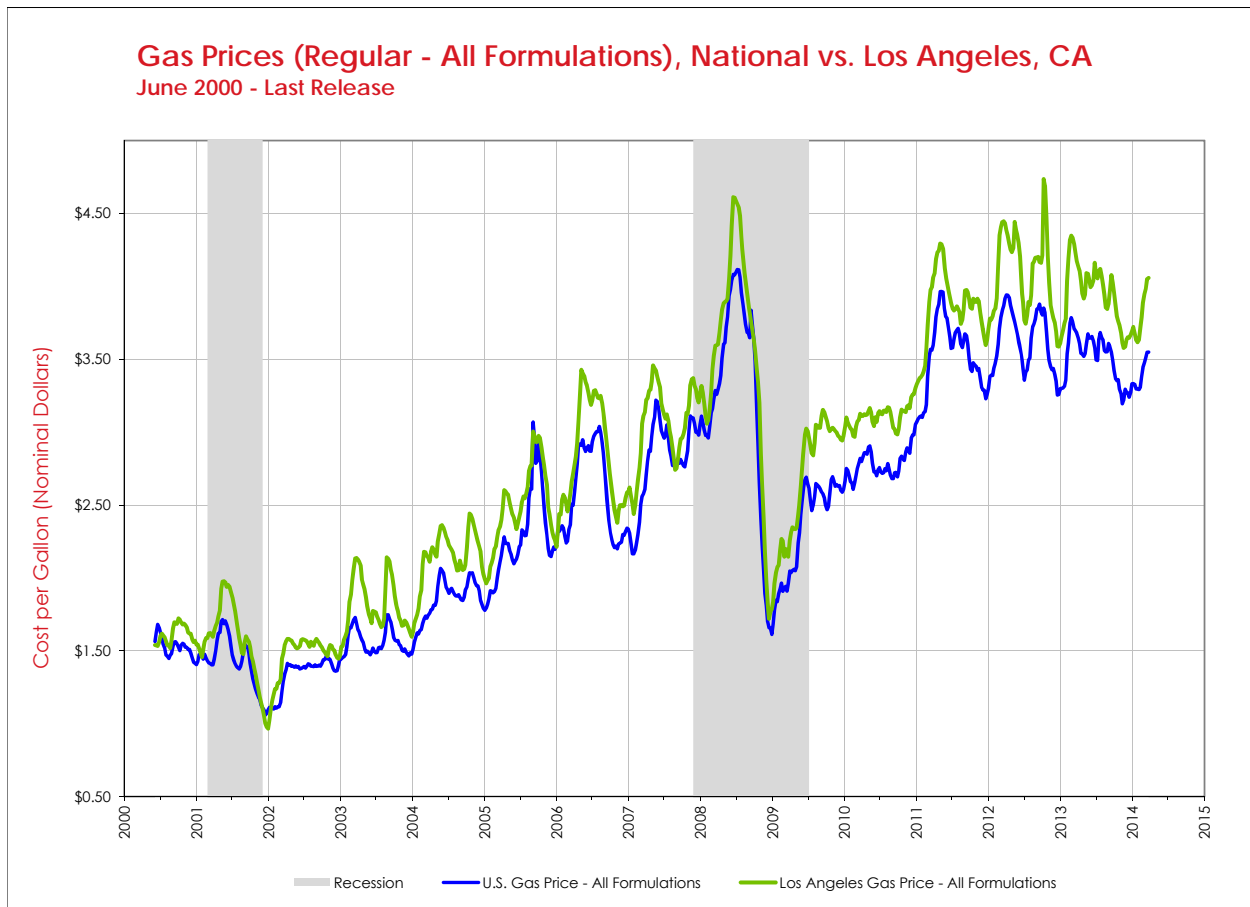


Instability in gasoline prices can also have an impact on overall traffic levels, particularly on toll road usage. As **Figure 3-19** demonstrates, gasoline prices, while usually on a long-term rise, have been particularly volatile since late 2007. While 2007 saw an average high per gallon of over \$3.50, a spike in early 2008 exceeded \$4.50 per gallon before a rapid decline in late 2008. This decline, however, was short-lived, as gasoline prices began rising again in the summer of 2009 and actually showed stable prices for over a full year. Starting in March 2011 sharp increases in gas prices began to occur again, rising from \$3.54 in February 2011 to \$3.98 in March 2011, to a max of \$4.22 in May 2011. These gas prices increases were preceded by events in the Middle East that saw the overthrow of governments in Tunisia, Egypt, and the start of a rebellion in oil rich Libya. These revolts are believed to have increased the risk and fear of oil supply disruptions, and induced increases in prices. Starting in June, gas prices began to moderate, dropping to an average of \$4.22 per gallon in May 2011 to \$3.95 in June 2011, \$3.85 in July, and \$3.81 in August, before rising again to \$3.96 in September. These pricing levels, around \$4.00 per gallon, have since been relatively stable in the LA county area.



3.0 existing conditions
 August 22, 2014

Figure 3-19: Gasoline Prices (LA County)



While it is difficult to pinpoint the exact impact of this gasoline price volatility on users of the San Joaquin Hills Transportation Corridor, combined with the recession, it has hindered growth from 2008-11 on the SJHTC.

The economic downturn which began in late 2007 had a negative impact on use of the San Joaquin Hills Toll Corridor. While the economic downturn had a negative impact on toll transactions and revenue on the SJHTC, regional travel patterns over the past few years show a reason for optimism. **Figure 3-20** is a plot of year-over-year transaction (blue line) and revenue growth (green line). Any time either line is over the 0% threshold, transactions and revenues are higher than the same month of the prior year. Compared to the F/ETC, the decline on the SJHTC was not as severe; however, an extended period of decline transaction and revenue still existed.

Since July 2010, revenues have shown positive growth while transactions are similarly, though at a slower pace, increasing. While some of the positive revenue growth can be attributed to toll increases four out of the past five years, the recent growth in transactions and revenue is consistent with the gradual recovery of the economy discussed earlier in the chapter. In fact,



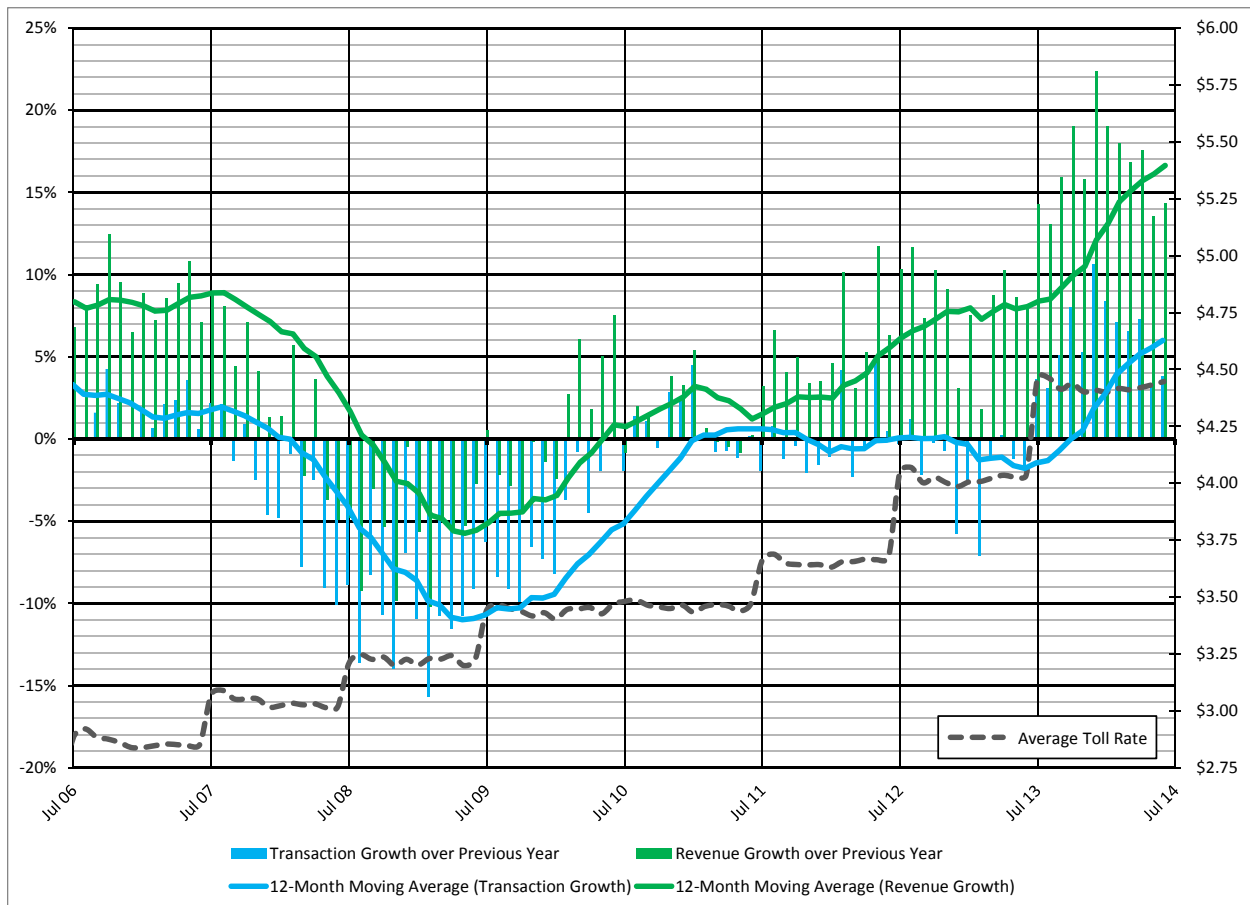
SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

recent performance on the SJHTC has been outstanding. Even though a ten percent increase in toll rates was implemented on July 1, 2013, transactions for FY 2014 still increased by almost six percent. This success, combined with the recovering economy, help highlight the growth potential for the facility. As congestion continues to increase on the toll-free competitors, I-5 and I-405, the attractiveness of the time savings offered by the SJHTC will also increase.

As the figure shows, overall corridor-wide toll transactions have decreased significantly since March 2007 when average weekday transactions exceed 100,000. As the economy worsened, as outlined above, toll transactions decreased, falling to 75,000 in late 2009. Average weekday transactions growth was slow between 2011 and 2013 with average weekday transactions in fiscal years around 78,000. Growth has increased for 2014 to 82,058, an increase of over five percent versus FY 2013.

Figure 3-20: Recent Traffic and Revenue Performance



3.0 existing conditions
August 22, 2014

3.2.2 Transactions by Paypoint

Around 70% of the transactions on the SJHTC occur at the Catalina View mainline toll plaza. The number of transactions at each paypoint during the average weekday in FY 2012 varied from a high of 27,800 transactions per day at the northbound Catalina View mainline toll plaza to a low of 720 transactions per day at the southbound La Paz/Moulton Parkway entrance ramp toll plaza. **Figure 3-21** compares average weekday traffic volumes at the SJHTC paypoints for March 2007, 2010, 2012, and 2014.

March 2007 represents a near high point for toll transactions on the SJHTC. A slowing of economic growth, eventually blossoming into a recession, began in the summer of 2007, negatively impacting toll road volumes. Though the recession officially ended in June of 2009, the recovery from that point has been slow, particularly in locations hit hardest by the downturn, such as southern California. Toll transaction volumes had begun recovering by March 2010 however as **Figure 3-21** shows, the Catalina View mainline plaza transactions had decreased by almost 25%, though some of that loss can be attributed to toll increases in July 2007, 2008 and 2009. While recovery continues to be slow, toll transaction between March 2010 and 2014 have shown positive growth at Catalina View with growth of 13 to 17 percent by direction.

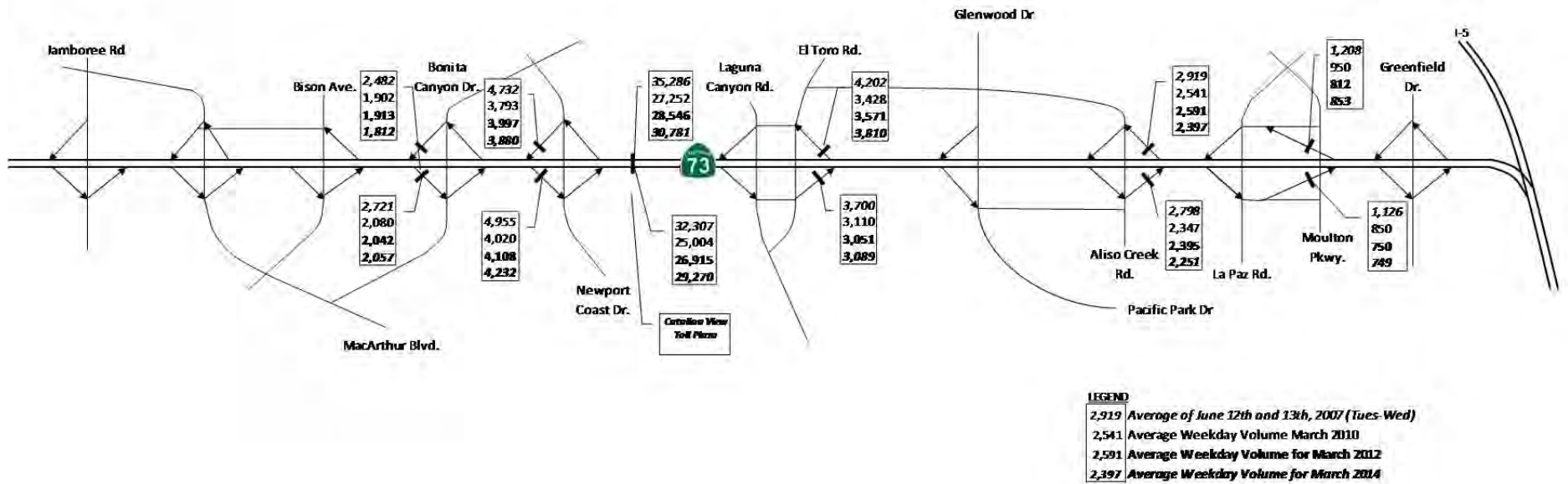
As can be seen in **Figure 3-22** average weekday transactions by month at the various collection points for fiscal year 2012 (June 2011 – July 2012) exhibited minor seasonal variation with Catalina View having approximately 52,000 to 56,000 transactions per weekday during each month.

The ramp toll plazas show similar transaction patterns. Newport Coast has had approximately 7,400 to 8,200 transactions per weekday during each month of FY 2012. El Toro has had approximately 6,300 to 6,800 transactions per weekday during each month of FY 2012. Bonita Canyon has had approximately 3,600 to 4,000 transactions per weekday during each month of FY 2012. La Paz, the lowest utilized ramp plaza, has had approximately 1,500 to 1,700 transactions per weekday during each month of FY 2012.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

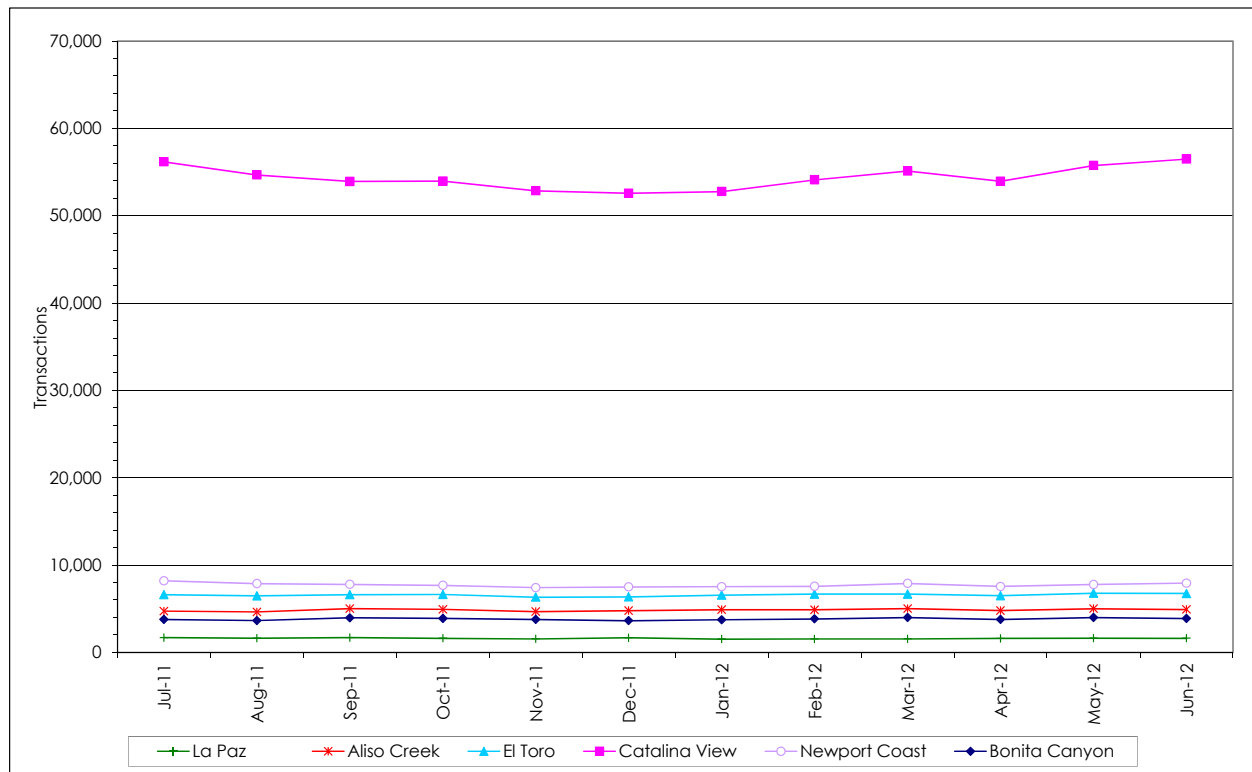
3.0 existing conditions
August 22, 2014

Figure 3-21: Average Weekday Volume by Paypoint (2007 vs. 2010 vs. 2012 vs. 2014)



3.0 existing conditions
August 22, 2014

Figure 3-22: Average Weekday Transactions by Month



3.2.3 Historic Responses to Toll Increases

3.2.3.1 2001 to 2007

In July 2001 the mainline toll was increased from \$2.25 to \$2.50. Comparing the seven months after the toll increase to the same months of the previous year, the mainline traffic remained flat.

In February 2002, cash tolls and peak FasTrak tolls were increased from \$2.50 to \$3.00 and \$2.75, respectively. The five months after this toll increase had 4 percent less mainline traffic than the previous year.

The next mainline toll increase took place in October 2003. Peak cash and peak FasTrak toll rates were increased from \$3.00 and \$2.75 to \$3.50 and \$3.00, respectively.

In July 2004, peak cash and FasTrak tolls were increased at the mainline plaza from \$3.50 and \$3.00 to \$4.00 and \$3.25, respectively. Off-peak cash rates were increased from \$3.00 to \$3.50 and off-peak FasTrak rates were increased from \$2.50 to \$2.75. In addition, all ramps had some level of toll increase, with La Paz and Newport Coast experiencing increases for both payment types, peak and off-peak. Aliso Creek, El Toro, and Bonita Canyon had only cash rate increases.



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

The six months after this toll increase had 1 percent more mainline traffic than the previous year and the total ramp plaza transactions increased by 2 percent.

In July 2005, weekday cash and FasTrak toll rates were all increased by \$0.25 from the 2004 rates. Weekend cash and FasTrak tolls were introduced at the mainline location; the new toll rates were \$3.50 and \$2.75, respectively. The six months after this toll increase had 4 percent more mainline traffic than the previous year.

The following toll increase occurred in July 2006, where Catalina View off-peak toll rates were increased by \$0.25 while peak cash and FasTrak toll rates increased by \$0.50. Transactions increased by 1 percent following this increase.

Another mainline toll increase took place in July 2007, where both cash and FasTrak tolls were increased by \$0.25 for peak, off-peak, and weekend periods. In addition, toll rates at El Toro and Newport Canyon were also increased by \$0.25 for both payment types, peak and off-peak. While transactions at Catalina View decreased by 3 percent, transactions at both of the ramp plazas increased by 5 to 10 percent.

3.2.3.2 2008 to 2014

In July 2008, toll rates at Catalina View were increased by \$0.25 for both payment types, peak, off-peak and weekend rates. In addition, La Paz, Los Alisos and Bonita Canyon also had \$0.25 increases for both payment types, peak and off-peak. Transactions at Catalina View decreased by 12 percent following the increase while total ramp transactions also decreased by 7 percent. While some of this decrease can be attributed to the suddenly weakened economy, the toll increase also contributed.

In July 2009, toll rates at Catalina View were again increased by \$0.25 for both payment types, peak, off-peak and weekend rates. The ramp plazas at El Toro and Newport Coast also had \$0.25 increases for both payment types, peak and off-peak. Transactions at Catalina View continued to decrease, losing 7 percent compared to the previous year. Ramp plaza transactions fell by 8 percent. The region was in the midst of the economic recession and toll transactions were clearly being impacted.

In 2011, toll increases were implemented at all mainline and ramp toll plazas. The Catalina View mainline toll plaza, as well as total ramp toll plaza transactions decreased by 1 percent. Transactions at the La Paz ramps decreased 8 percent while transactions at the Aliso Creek ramps increased 2 percent, suggesting increased use of competing arterials between these two adjacent interchanges.

In 2012, toll increases were implemented at all mainline and ramp toll plazas except for the La Paz ramps. The Catalina View mainline toll plaza transactions remained the same, while total ramp toll plaza transactions decreased by 3 percent. Transactions at the El Toro ramps

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

increased slightly while transactions at all other ramps decreased 3 to 5 percent. Transactions at the La Paz ramps decreased by 4 percent even though no toll increase was made at this ramp.

In 2013, similarly to 2012, toll increases were implemented at all mainline and ramp toll plazas except for the La Paz ramps. The average toll rate across the facility increased by approximately 10 percent; however, transactions increased. Overall transactions at the Catalina View mainline toll plaza were 5 percent higher in FY 2014 versus FY 2013. Ramp transactions also increased, though more modestly at 1 percent versus FY 2013.

Table 3-1 through Table 3-12 summarizes the impact to transaction for each toll increase.

Table 3-1: Toll Increase Impacts – July 2001

July 1, 2001 Toll Increase														
Toll	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 2.25	\$ 2.50	-	-	-	-	-	-	-	-	-	-	-	-
Peak Cash	\$ 2.25	\$ 2.50	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak AVI	\$ 2.25	\$ 2.50	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak Cash	\$ 2.25	\$ 2.50	-	-	-	-	-	-	-	-	-	-	-	-
Weekend AVI	\$ 2.25	\$ 2.50	-	-	-	-	-	-	-	-	-	-	-	-
Weekend Cash	\$ 2.25	\$ 2.50	-	-	-	-	-	-	-	-	-	-	-	-
Transactions (6 Months, Weeks 2-27)														
Year	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001	2000	2001
Peak AVI	2,880,165	3,028,221	144,522	151,359	307,760	330,791	359,858	386,683	411,187	469,798	114,206	142,016	1,337,533	1,480,647
Peak Cash	1,943,072	1,779,014	93,684	87,569	111,555	106,009	127,857	115,853	224,415	217,904	121,124	128,247	678,635	655,582
Off-Peak AVI	2,076,818	2,110,407	39,195	40,264	100,626	102,256	166,026	174,761	184,119	220,158	47,742	51,319	537,708	588,758
Off-Peak Cash	778,060	709,140	24,759	21,974	31,787	30,666	43,235	39,058	41,265	39,490	21,298	21,526	162,344	152,714
Weekend AVI	922,883	962,753	54,111	55,169	110,186	115,210	128,950	139,708	135,311	152,404	39,003	45,567	467,561	508,058
Weekend Cash	900,912	851,580	39,562	37,135	50,341	46,757	60,932	54,901	88,117	83,672	40,360	39,838	279,312	262,303
AVI Total	5,879,866	6,101,381	237,828	246,792	518,572	548,257	654,834	701,152	730,617	842,360	200,951	238,902	2,342,802	2,577,463
Cash Total	3,622,044	3,339,734	158,005	146,678	193,683	183,432	232,024	209,812	353,797	341,066	182,782	189,611	1,120,291	1,070,599
Peak Total	4,823,237	4,807,235	238,206	238,928	419,315	436,800	487,715	502,536	635,602	687,702	235,330	270,263	2,016,168	2,136,229
Off-Peak Total	2,854,878	2,819,547	63,954	62,238	132,413	132,922	209,261	213,819	225,384	259,648	69,040	72,845	700,052	741,472
Weekend Total	1,823,795	1,814,333	93,673	92,304	160,527	161,967	189,882	194,609	223,428	236,076	79,363	85,405	746,873	770,361
Total	9,501,910	9,441,115	395,833	393,470	712,255	731,689	886,858	910,964	1,084,414	1,183,426	383,733	428,513	3,463,093	3,648,062
Percent Change in Transactions														
Peak AVI	5%	5%	7%	7%	14%	14%	14%	14%	24%	24%	11%	11%	11%	11%
Peak Cash	-8%	-7%	-5%	-5%	-9%	-9%	-9%	-9%	-3%	-3%	6%	6%	-3%	-3%
Off-Peak AVI	2%	3%	2%	2%	5%	5%	5%	5%	20%	20%	7%	7%	9%	9%
Off-Peak Cash	-9%	-11%	-4%	-4%	-10%	-10%	-10%	-10%	-4%	-4%	1%	1%	-6%	-6%
Weekend AVI	4%	2%	5%	5%	8%	8%	8%	8%	13%	13%	17%	17%	9%	9%
Weekend Cash	-5%	-6%	-7%	-7%	-10%	-10%	-10%	-10%	-5%	-5%	-1%	-1%	-6%	-6%
AVI Total	4%	4%	6%	6%	7%	7%	7%	7%	13%	13%	13%	13%	10%	10%
Cash Total	-8%	-7%	-5%	-5%	-10%	-10%	-10%	-10%	-4%	-4%	4%	4%	-4%	-4%
Peak Total	0%	0%	4%	4%	3%	3%	3%	3%	8%	8%	15%	15%	6%	6%
Off-Peak Total	-1%	-3%	0%	0%	2%	2%	2%	2%	15%	15%	6%	6%	6%	6%
Weekend Total	-1%	-1%	1%	1%	3%	3%	3%	3%	6%	6%	8%	8%	3%	3%
Total	-1%	-1%	3%	3%	3%	3%	3%	3%	8%	8%	12%	12%	5%	5%



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-2: Toll Increase Impacts - February 2002

Toll	February 10, 2002 Toll Increase													
	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 2.50	\$ 2.75	-	-	-	-	-	-	-	-	-	-	-	-
Peak Cash	\$ 2.50	\$ 3.00	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak AVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak Cash	\$ 2.50	\$ 3.00	-	-	-	-	-	-	-	-	-	-	-	-
Weekend AVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weekend Cash	\$ 2.50	\$ 3.00	-	-	-	-	-	-	-	-	-	-	-	-
Transactions (6 Months, Weeks 33-6)														
Year	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
Peak AVI	2,123,412	2,154,005	39,462	39,486	103,883	100,069	167,744	174,289	210,254	224,479	51,197	54,741	572,540	593,064
Peak Cash	747,662	622,938	21,916	20,455	31,581	29,837	39,136	35,949	39,254	39,242	20,954	20,188	152,841	145,671
Off-Peak AVI	2,941,265	3,023,564	145,769	146,965	321,109	321,315	373,969	377,211	451,516	477,557	127,173	158,039	1,419,536	1,481,087
Off-Peak Cash	1,781,370	1,560,936	85,706	77,705	103,747	100,212	116,523	100,287	208,631	212,695	111,788	113,794	626,395	604,693
Weekend AVI	917,081	965,072	51,326	51,938	109,537	112,769	131,423	132,952	143,210	155,065	41,100	47,977	476,596	500,701
Weekend Cash	867,751	796,276	35,886	32,704	44,787	42,252	56,600	47,639	84,200	38,951	36,765	258,101	243,560	
AVI Total	5,981,758	6,142,641	236,557	238,389	534,529	534,153	673,136	684,452	804,980	857,101	219,470	260,757	2,488,672	2,574,852
Cash Total	3,396,783	2,980,150	143,508	130,864	180,115	172,301	212,259	183,875	329,762	336,137	171,693	170,747	1,037,337	993,924
Peak Total	2,871,074	2,776,943	61,378	59,941	135,464	129,906	206,880	210,238	249,508	263,721	72,151	74,929	725,381	738,735
Off-Peak Total	4,722,635	4,584,500	231,475	224,670	424,856	421,527	490,492	477,498	660,147	690,252	238,961	271,833	2,045,931	2,085,780
Weekend Total	1,784,832	1,761,348	87,212	84,642	154,324	155,021	188,023	180,591	225,087	239,265	80,051	84,742	734,697	744,261
Total	9,378,541	9,122,791	380,065	369,253	714,644	706,454	885,395	868,327	1,134,742	1,193,238	391,163	431,504	3,506,009	3,568,776
Percent Change in Transactions														
Peak AVI	1%		0%		-4%		4%		7%		7%		4%	
Peak Cash	-17%		-7%		-6%		-8%		0%		-4%		-5%	
Off-Peak AVI	3%		1%		0%		1%		6%		24%		4%	
Off-Peak Cash	-12%		-9%		-3%		-14%		2%		2%		-3%	
Weekend AVI	5%		1%		3%		1%		8%		17%		5%	
Weekend Cash	-8%		-9%		-6%		-16%		3%		-6%		-6%	
AVI Total	3%		1%		0%		2%		6%		19%		4%	
Cash Total	-12%		-9%		-4%		-13%		2%		-1%		-4%	
Peak Total	-3%		-2%		-4%		2%		6%		4%		2%	
Off-Peak Total	-3%		-3%		-1%		-3%		5%		14%		2%	
Weekend Total	-1%		-3%		0%		-4%		6%		6%		1%	
Total	-3%		-3%		-1%		-2%		5%		10%		2%	

Table 3-3: Toll Increase Impacts - October 2003

Toll	October 5, 2003 Toll Increase													
	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 2.75	\$ 3.00	-	-	-	-	-	-	-	-	-	-	-	-
Peak Cash	\$ 3.00	\$ 3.50	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak AVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weekend AVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weekend Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transactions (6 Months, Weeks 15-40)														
Year	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003	2002	2003
Peak AVI	3,166,058	3,425,756	160,479	184,719	335,105	367,118	401,014	458,221	526,066	579,747	184,587	246,699	1,607,251	1,836,504
Peak Cash	1,623,611	1,690,646	79,852	82,030	102,364	104,757	99,540	104,082	217,611	238,337	137,269	185,870	636,636	715,076
Off-Peak AVI	2,220,599	2,371,864	41,054	47,806	107,247	123,258	176,150	195,034	246,165	256,008	65,157	93,989	635,773	716,095
Off-Peak Cash	634,661	600,506	19,445	21,683	29,893	32,236	33,467	35,492	40,659	44,255	20,834	29,898	144,298	163,564
Weekend AVI	999,324	1,096,100	58,120	66,006	114,989	128,243	138,564	152,613	174,605	198,547	59,551	81,431	545,829	626,840
Weekend Cash	767,445	809,820	31,933	34,572	43,431	44,291	44,415	45,290	81,940	91,813	41,423	53,449	243,142	269,415
AVI Total	6,385,981	6,893,720	259,653	298,531	557,341	618,619	715,728	805,868	946,836	1,034,302	309,295	422,119	2,788,853	3,179,439
Cash Total	3,025,717	3,100,972	131,230	138,285	175,688	181,284	177,422	184,864	340,210	374,405	199,526	269,217	1,024,076	1,148,055
Peak Total	4,789,669	5,116,402	240,331	266,749	437,469	471,875	500,554	562,303	743,677	818,084	321,856	432,569	2,243,887	2,551,580
Off-Peak Total	2,855,260	2,972,370	60,499	69,489	137,140	155,494	209,617	230,526	286,824	300,263	85,991	123,887	780,071	879,659
Weekend Total	1,766,769	1,905,920	90,053	100,578	158,420	172,534	182,979	197,903	256,545	290,360	100,974	134,880	788,971	896,255
Total	9,411,698	9,994,692	390,883	436,816	733,029	799,903	893,150	990,732	1,287,046	1,408,707	508,821	691,336	3,812,929	4,327,494
Percent Change in Transactions														
Peak AVI	8%		15%		10%		14%		10%		34%		14%	
Peak Cash	4%		3%		2%		5%		10%		35%		12%	
Off-Peak AVI	7%		16%		15%		11%		4%		44%		13%	
Off-Peak Cash	-5%		12%		8%		6%		9%		44%		13%	
Weekend AVI	10%		14%		12%		10%		14%		37%		15%	
Weekend Cash	6%		8%		2%		2%		12%		29%		11%	
AVI Total	8%		15%		11%		13%		9%		36%		14%	
Cash Total	2%		5%		3%		4%		10%		35%		12%	
Peak Total	7%		11%		9%		12%		10%		34%		14%	
Off-Peak Total	4%		15%		13%		10%		5%		44%		13%	
Weekend Total	8%		12%		9%		8%		13%		34%		14%	
Total	6%		12%		9%		11%		9%		36%		13%	



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-4: Toll Increase Impacts – July 2004

July 5, 2004 Toll Increase														
Toll	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 3.00	\$ 3.25	\$ 0.75	\$ 1.00	-	-	-	-	\$ 1.00	\$ 1.25	-	-	-	-
Peak Cash	\$ 3.50	\$ 4.00	\$ 0.75	\$ 1.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.00	\$ 1.50	\$ 0.50	\$ 0.75	-	-
Off-Peak AVI	\$ 2.50	\$ 2.75	\$ 0.75	\$ 1.00	-	-	-	-	\$ 1.00	\$ 1.25	-	-	-	-
Off-Peak Cash	\$ 3.00	\$ 3.50	\$ 0.75	\$ 1.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.00	\$ 1.50	\$ 0.50	\$ 0.75	-	-
Weekend AVI	\$ 2.50	\$ 2.75	\$ 0.75	\$ 1.00	-	-	-	-	\$ 1.00	\$ 1.25	-	-	-	-
Weekend Cash	\$ 3.00	\$ 3.50	\$ 0.75	\$ 1.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.00	\$ 1.50	\$ 0.50	\$ 0.75	-	-
Transactions (6 Months, Weeks 2-27)														
Year	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004	2003	2004
Peak AVI	3,409,607	3,708,057	178,719	181,380	352,965	382,291	456,649	483,321	562,937	603,834	221,532	293,858	1,772,802	1,944,684
Peak Cash	1,840,210	1,650,554	83,872	53,259	106,457	92,774	114,381	99,565	249,934	186,154	179,194	156,385	733,838	588,137
Off-Peak AVI	2,251,082	2,396,246	44,211	47,178	112,061	132,328	184,844	184,352	245,615	251,506	78,751	113,750	665,482	729,114
Off-Peak Cash	656,003	519,193	21,261	13,022	30,790	28,726	36,055	29,874	45,553	32,908	27,210	24,093	160,869	128,623
Weekend AVI	1,111,264	1,188,562	63,377	62,960	121,593	130,174	150,659	159,107	192,076	203,491	70,904	98,384	598,609	654,116
Weekend Cash	907,083	821,126	35,035	23,085	44,413	37,486	51,028	45,063	99,612	81,118	50,069	49,259	280,157	236,011
AVI Total	6,771,953	7,292,865	286,307	291,518	586,619	644,793	792,152	826,780	1,000,628	1,058,831	371,187	505,992	3,036,893	3,327,914
Cash Total	3,403,296	2,990,873	140,168	89,366	181,660	158,986	201,464	174,502	395,099	300,180	256,473	229,737	1,174,864	952,771
Peak Total	5,249,817	5,358,611	262,591	234,639	459,422	475,065	571,030	582,886	812,871	789,988	400,726	450,243	2,506,640	2,532,821
Off-Peak Total	2,907,085	2,915,439	65,472	60,200	142,851	161,054	220,899	214,226	291,168	284,414	105,961	137,843	826,351	857,737
Weekend Total	2,018,347	2,009,688	98,412	86,045	166,006	167,660	201,687	204,170	291,688	284,609	120,973	147,643	878,766	890,127
Total	10,175,249	10,283,738	426,475	380,884	768,279	803,779	993,616	1,001,282	1,395,727	1,359,011	627,660	735,729	4,211,757	4,280,685
Percent Change in Transactions														
Peak AVI	9%		1%		8%		6%		7%		33%		10%	
Peak Cash	-10%		-36%		-13%		-13%		-26%		-13%		-20%	
Off-Peak AVI	6%		7%		18%		0%		2%		44%		10%	
Off-Peak Cash	-21%		-39%		-7%		-17%		-28%		-11%		-20%	
Weekend AVI	7%		-1%		7%		6%		6%		39%		9%	
Weekend Cash	-9%		-34%		-16%		-12%		-19%		-2%		-16%	
AVI Total	8%		2%		10%		4%		6%		36%		10%	
Cash Total	-12%		-36%		-12%		-13%		-24%		-10%		-19%	
Peak Total	2%		-11%		3%		2%		-3%		12%		1%	
Off-Peak Total	0%		-8%		13%		-3%		-2%		30%		4%	
Weekend Total	0%		-13%		1%		1%		-2%		22%		1%	
Total	1%		-11%		5%		1%		-3%		17%		2%	

Table 3-5: Toll Increase Impacts – July 2005

July 5, 2005 Toll Increase														
Toll	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 3.25	\$ 3.50	-	-	-	-	-	-	-	-	-	-	-	-
Peak Cash	\$ 4.00	\$ 4.25	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak AVI	\$ 2.75	\$ 3.00	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak Cash	\$ 3.50	\$ 3.75	-	-	-	-	-	-	-	-	-	-	-	-
Weekend AVI	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weekend Cash	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transactions (6 Months, Weeks 2-27)														
Year	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005	2004	2005
Peak AVI	3,708,057	4,039,412	181,380	187,075	382,291	415,297	483,321	500,604	603,834	625,276	293,858	339,184	1,944,684	2,067,436
Peak Cash	1,650,554	1,527,760	53,259	45,808	92,774	89,843	99,565	92,535	186,154	167,381	156,385	138,452	588,137	534,019
Off-Peak AVI	2,396,246	2,546,263	47,178	49,351	132,328	146,055	184,352	189,299	251,506	258,073	113,750	138,156	729,114	780,934
Off-Peak Cash	519,193	478,087	13,022	10,516	28,726	26,327	29,874	27,578	32,908	31,107	24,093	24,011	128,623	119,539
Weekend AVI	1,188,562	1,286,854	62,960	66,273	130,174	147,877	159,107	167,136	203,491	217,249	98,384	119,963	654,116	718,498
Weekend Cash	821,126	776,607	23,085	20,718	37,486	37,632	45,063	42,009	81,118	77,688	49,259	46,892	236,011	224,939
AVI Total	7,292,865	7,872,529	291,518	302,699	644,793	709,229	826,780	857,039	1,058,831	1,100,598	505,992	597,303	3,327,914	3,566,868
Cash Total	2,990,873	2,782,454	89,366	77,042	158,986	153,802	174,502	162,122	300,180	276,176	229,737	209,355	952,771	878,497
Peak Total	5,358,611	5,567,172	234,639	232,883	475,065	505,140	582,886	593,139	789,988	792,657	450,243	477,636	2,532,821	2,601,455
Off-Peak Total	2,915,439	3,024,350	60,200	59,867	161,054	172,382	214,226	216,877	284,414	289,180	137,843	162,167	857,737	900,473
Weekend Total	2,009,688	2,063,461	86,045	86,991	167,660	185,509	204,170	209,145	284,609	294,937	147,643	166,855	890,127	943,437
Total	10,283,738	10,654,983	380,884	379,741	803,779	863,031	1,001,282	1,019,161	1,359,011	1,376,774	735,729	806,658	4,280,685	4,445,365
Percent Change in Transactions														
Peak AVI	9%		3%		9%		4%		4%		15%		6%	
Peak Cash	-7%		-14%		-3%		-7%		-10%		-11%		-9%	
Off-Peak AVI	6%		5%		10%		6%		3%		21%		7%	
Off-Peak Cash	-8%		-19%		-8%		-8%		-5%		0%		-7%	
Weekend AVI	8%		5%		14%		5%		7%		22%		10%	
Weekend Cash	-5%		-10%		0%		-7%		-4%		-5%		-5%	
AVI Total	8%		4%		10%		4%		4%		18%		7%	
Cash Total	-7%		-14%		-3%		-7%		-8%		-9%		-8%	
Peak Total	4%		-1%		8%		2%		0%		6%		3%	
Off-Peak Total	4%		-1%		7%		1%		2%		18%		5%	
Weekend Total	3%		1%		11%		2%		4%		13%		6%	
Total	4%		0%		7%		2%		1%		10%		4%	



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-6: Toll Increase Impacts – July 2006

July 3, 2006 Toll Increase																
Toll	Mainline		Ramps													
	From	To	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
Peak AVI	\$ 3.50	\$ 4.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peak Cash	\$ 4.25	\$ 4.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak AVI	\$ 3.00	\$ 3.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Off-Peak Cash	\$ 3.75	\$ 4.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weekend AVI	\$ 2.75	\$ 3.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Weekend Cash	\$ 3.50	\$ 3.75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transactions (6 Months, Weeks 1-26)																
Year	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006	2005	2006
Peak AVI	4,048,774	4,217,108	186,956	191,701	414,778	431,565	501,279	530,078	626,375	663,027	339,611	355,114	2,068,999	2,171,485		
Peak Cash	1,546,266	1,453,310	46,022	43,119	90,040	86,904	93,380	93,441	169,456	161,382	139,303	120,969	538,201	505,815		
Off-Peak AVI	2,538,311	2,569,031	49,106	52,444	145,113	152,487	188,518	207,873	257,319	271,356	137,665	145,014	777,721	829,174		
Off-Peak Cash	480,586	425,602	10,558	10,202	26,323	25,831	27,698	27,963	31,186	30,035	24,094	21,573	119,859	115,604		
Weekend AVI	1,291,691	1,354,526	66,261	71,836	147,485	155,916	166,805	178,398	217,189	232,765	119,551	128,355	717,291	767,270		
Weekend Cash	784,092	751,040	20,858	20,139	37,667	35,374	42,540	43,307	78,389	73,795	46,793	43,510	226,247	216,125		
AVI Total	7,878,776	8,140,665	302,323	315,981	707,376	739,968	856,602	916,349	1,100,883	1,167,148	596,827	628,483	3,584,011	3,767,929		
Cash Total	2,810,944	2,629,952	77,438	73,460	154,030	148,109	163,618	164,711	279,031	265,212	210,190	186,052	884,307	837,544		
Peak Total	5,595,040	5,670,418	232,978	234,820	504,818	518,469	594,659	623,519	795,831	824,409	478,914	476,083	2,607,200	2,677,300		
Off-Peak Total	3,018,897	2,994,633	59,664	62,646	171,436	178,318	216,216	235,836	288,505	301,391	161,759	166,587	897,580	944,778		
Weekend Total	2,075,783	2,105,566	87,119	91,975	185,152	191,290	209,345	221,705	295,578	306,560	166,344	171,865	943,538	983,395		
Total	10,689,720	10,770,617	379,761	389,441	861,406	888,077	1,020,220	1,081,060	1,379,914	1,432,360	807,077	814,535	4,448,318	4,605,473		
Percent Change in Transactions																
Peak AVI	4%		3%		4%		6%		6%		5%		5%			
Peak Cash	-6%		-6%		-3%		0%		-5%		-13%		-6%			
Off-Peak AVI	1%		7%		5%		10%		5%		5%		7%			
Off-Peak Cash	-11%		-3%		-2%		1%		-4%		-10%		-4%			
Weekend AVI	5%		8%		6%		7%		7%		7%		7%			
Weekend Cash	-4%		-3%		-6%		2%		-6%		-7%		-4%			
AVI Total	3%		5%		5%		7%		6%		5%		6%			
Cash Total	-6%		-5%		-4%		1%		-5%		-11%		-5%			
Peak Total	1%		1%		3%		5%		4%		3%		3%			
Off-Peak Total	-1%		5%		4%		9%		4%		3%		5%			
Weekend Total	1%		6%		3%		6%		4%		3%		4%			
Total	1%		3%		3%		6%		4%		1%		4%			

Table 3-7: Toll Increase Impacts – July 2007

July 2, 2007 Toll Increase															
Toll	Mainline		Ramps												
	From	To	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps
Peak AVI	\$ 4.00	\$ 4.25	-	-	-	-	\$ 1.50	\$ 1.75	\$ 1.25	\$ 1.50	-	-	-	-	-
Peak Cash	\$ 4.75	\$ 5.00	-	-	-	-	\$ 1.75	\$ 2.00	\$ 1.50	\$ 1.75	-	-	-	-	-
Off-Peak AVI	\$ 3.25	\$ 3.50	-	-	-	-	\$ 1.50	\$ 1.75	\$ 1.25	\$ 1.50	-	-	-	-	-
Off-Peak Cash	\$ 4.00	\$ 4.25	-	-	-	-	\$ 1.75	\$ 2.00	\$ 1.50	\$ 1.75	-	-	-	-	-
Weekend AVI	\$ 3.00	\$ 3.25	-	-	-	-	\$ 1.50	\$ 1.75	\$ 1.25	\$ 1.50	-	-	-	-	-
Weekend Cash	\$ 3.75	\$ 4.00	-	-	-	-	\$ 1.75	\$ 2.00	\$ 1.50	\$ 1.75	-	-	-	-	-
Transactions (6 Months, Weeks 1-26)															
Year	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	2006	2007	
Peak AVI	4,217,108	4,168,999	191,701	192,708	431,565	439,448	530,078	572,123	663,027	720,499	355,114	363,276	2,171,485	2,288,054	
Peak Cash	1,453,310	1,319,207	43,119	42,115	86,904	79,969	93,441	88,376	161,382	154,117	120,969	126,539	505,815	491,116	
Off-Peak AVI	2,569,031	2,510,644	52,444	49,433	152,487	149,511	207,873	265,789	271,356	277,809	145,014	149,735	829,174	892,277	
Off-Peak Cash	425,602	393,329	10,202	9,598	25,831	22,977	27,963	31,709	30,035	26,362	21,573	20,609	115,604	111,255	
Weekend AVI	1,354,526	1,353,182	71,836	72,652	155,916	158,133	178,398	187,829	232,765	247,794	128,355	133,593	767,270	800,001	
Weekend Cash	751,040	700,112	20,139	19,930	35,374	31,610	43,307	40,375	73,795	71,249	43,510	45,748	216,125	208,912	
AVI Total	8,140,665	8,032,825	315,981	314,793	739,968	747,092	916,349	1,025,741	1,167,148	1,246,102	628,483	646,604	3,767,929	3,980,332	
Cash Total	2,629,952	2,412,648	73,460	71,643	148,109	134,556	164,711	160,460	265,212	251,728	186,052	192,896	837,544	811,283	
Peak Total	5,670,418	5,488,206	234,820	234,823	518,469	519,417	623,519	660,499	824,409	874,616	476,083	489,815	2,677,300	2,779,170	
Off-Peak Total	2,994,633	2,903,973	62,646	59,031	178,318	172,488	235,836	297,498	301,391	304,171	166,587	170,344	944,778	1,008,532	
Weekend Total	2,105,566	2,053,294	91,975	92,582	191,290	189,743	221,705	228,204	306,560	319,043	171,865	179,341	983,395	1,008,913	
Total	10,770,617	10,445,473	389,441	386,436	888,077	881,648	1,081,060	1,186,201	1,432,360	1,497,830	814,535	839,500	4,605,473	4,791,615	
Percent Change in Transactions															
Peak AVI	-1%		1%		2%		8%		9%		2%		5%		
Peak Cash	-9%		-2%		-8%		-5%		-5%		5%		-3%		
Off-Peak AVI	-2%		-6%		-2%		28%		2%		3%		8%		
Off-Peak Cash	-8%		-6%		-11%		13%		-12%		-4%		-4%		
Weekend AVI	0%		1%		1%		5%		6%		4%		4%		
Weekend Cash	-7%		-1%		-11%		-7%		-3%		5%		-3%		
AVI Total	-1%		0%		1%		12%		7%		3%		6%		
Cash Total	-8%		-2%		-9%		-3%		-5%		4%		-3%		
Peak Total	-3%		0%		0%		6%		6%		3%		4%		
Off-Peak Total	-3%		-6%		-3%		26%		1%		2%		6%		
Weekend Total	-2%		1%		-1%		3%		4%		4%		3%		
Total	-3%		-1%		-1%		10%		5%		3%		4%		



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-8: Toll Increase Impacts – July 2008

July 1, 2008 Toll Increase														
Toll	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 4.25	\$ 4.50	\$ 1.00	\$ 1.25	\$ 1.25	\$ 1.50	-	-	-	-	\$ 0.50	\$ 0.75	-	-
Peak Cash	\$ 5.00	\$ 5.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	-	-	-	-	\$ 0.75	\$ 1.00	-	-
Off-Peak AVI	\$ 3.50	\$ 3.75	\$ 1.00	\$ 1.25	\$ 1.25	\$ 1.50	-	-	-	-	\$ 0.50	\$ 0.75	-	-
Off-Peak Cash	\$ 4.25	\$ 4.50	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	-	-	-	-	\$ 0.75	\$ 1.00	-	-
Weekend AVI	\$ 3.25	\$ 3.50	\$ 1.00	\$ 1.25	\$ 1.25	\$ 1.50	-	-	-	-	\$ 0.50	\$ 0.75	-	-
Weekend Cash	\$ 4.00	\$ 4.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	-	-	-	-	\$ 0.75	\$ 1.00	-	-
Transactions (6 Months, Weeks 1-26)														
Year	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008	2007	2008
Peak AVI	4,168,999	3,720,632	192,708	174,557	439,448	411,925	572,123	545,854	720,499	689,607	363,276	330,683	2,288,054	2,152,626
Peak Cash	1,319,207	1,086,080	42,115	31,816	79,969	66,467	88,376	79,899	154,117	138,878	126,539	90,000	491,116	407,060
Off-Peak AVI	2,510,644	2,261,948	49,433	46,134	149,511	146,581	265,789	254,650	277,809	264,428	149,735	138,212	892,277	850,005
Off-Peak Cash	393,329	330,402	9,598	7,674	22,977	18,482	31,709	26,564	26,362	25,748	20,609	15,595	111,255	94,063
Weekend AVI	1,353,182	1,220,637	72,652	65,428	158,133	152,126	187,829	180,169	247,794	239,399	133,593	124,415	800,001	761,537
Weekend Cash	700,112	589,133	19,930	15,927	31,610	29,163	40,375	37,117	71,249	69,350	45,748	36,477	208,912	188,034
AVI Total	8,032,825	7,203,217	314,793	286,119	747,092	710,632	1,025,741	980,673	1,246,102	1,193,434	646,604	593,310	3,980,332	3,764,168
Cash Total	2,412,848	2,005,615	71,643	55,417	134,556	114,112	160,460	143,580	251,728	233,976	192,896	142,072	811,283	689,157
Peak Total	5,488,206	4,806,712	234,823	206,373	519,417	478,392	660,499	625,753	874,616	828,485	489,815	420,683	2,779,170	2,559,686
Off-Peak Total	2,903,973	2,592,350	59,031	53,808	172,488	165,063	297,498	281,214	304,171	290,176	170,344	153,807	1,003,532	944,068
Weekend Total	2,053,294	1,809,770	92,582	81,355	189,743	181,289	228,204	217,286	319,043	308,749	179,341	160,892	1,008,913	949,571
Total	10,445,473	9,208,832	386,436	341,536	881,648	824,744	1,186,201	1,124,253	1,497,830	1,427,410	839,500	735,382	4,791,615	4,453,325
Percent Change in Transactions														
Peak AVI	-11%		-9%		-6%		-5%		-4%		-9%		-6%	
Peak Cash	-18%		-24%		-17%		-10%		-10%		-29%		-17%	
Off-Peak AVI	-10%		-7%		-2%		-4%		-4%		-8%		-5%	
Off-Peak Cash	-16%		-20%		-20%		-16%		-2%		-24%		-15%	
Weekend AVI	-10%		-10%		-4%		-4%		-3%		-7%		-5%	
Weekend Cash	-16%		-20%		-8%		-8%		-3%		-20%		-10%	
AVI Total	-10%		-9%		-5%		-4%		-4%		-8%		-5%	
Cash Total	-17%		-23%		-15%		-11%		-7%		-26%		-15%	
Peak Total	-12%		-12%		-8%		-5%		-5%		-14%		-8%	
Off-Peak Total	-11%		-9%		-4%		-5%		-5%		-10%		-6%	
Weekend Total	-12%		-12%		-4%		-5%		-3%		-10%		-6%	
Total	-12%		-12%		-6%		-5%		-5%		-12%		-7%	

Table 3-9: Toll Increase Impacts – July 2009

July 6, 2009 Toll Increase														
Toll	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 4.50	\$ 4.75	-	-	-	-	\$ 1.75	\$ 2.00	\$ 1.50	\$ 1.75	-	-	-	-
Peak Cash	\$ 5.25	\$ 5.50	-	-	-	-	\$ 2.00	\$ 2.25	\$ 1.75	\$ 2.00	-	-	-	-
Off-Peak AVI	\$ 3.75	\$ 4.00	-	-	-	-	\$ 1.75	\$ 2.00	\$ 1.50	\$ 1.75	-	-	-	-
Off-Peak Cash	\$ 4.50	\$ 4.75	-	-	-	-	\$ 2.00	\$ 2.25	\$ 1.75	\$ 2.00	-	-	-	-
Weekend AVI	\$ 3.50	\$ 3.75	-	-	-	-	\$ 1.75	\$ 2.00	\$ 1.50	\$ 1.75	-	-	-	-
Weekend Cash	\$ 4.25	\$ 4.50	-	-	-	-	\$ 2.00	\$ 2.25	\$ 1.75	\$ 2.00	-	-	-	-
Transactions (6 Months, Weeks 2-27)														
Year	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Peak AVI	3,684,539	3,398,546	173,548	158,091	409,126	383,971	541,031	500,484	683,404	613,582	327,300	294,394	2,134,409	1,950,522
Peak Cash	1,077,550	986,689	31,512	29,267	65,826	59,536	79,102	68,056	137,340	110,940	88,059	72,310	401,839	340,109
Off-Peak AVI	2,229,053	2,025,583	45,798	40,481	144,931	132,218	250,762	236,333	261,325	243,440	136,127	123,758	838,943	776,230
Off-Peak Cash	326,292	287,869	7,557	6,380	18,262	16,513	26,111	22,598	25,516	22,987	15,312	14,709	92,758	83,187
Weekend AVI	1,215,725	1,171,869	65,408	59,384	151,854	142,257	179,347	171,062	238,968	232,093	124,454	113,787	760,031	718,583
Weekend Cash	580,679	560,896	15,809	14,037	29,017	26,845	36,525	33,794	67,727	64,659	35,962	35,352	185,040	174,687
AVI Total	7,129,317	6,595,998	284,754	257,956	705,911	658,446	971,140	907,879	1,183,697	1,089,115	587,881	531,939	3,733,383	3,445,335
Cash Total	1,984,521	1,835,454	54,878	49,684	113,105	102,894	141,738	124,448	230,583	198,586	139,333	122,371	679,637	597,983
Peak Total	4,762,089	4,385,235	205,060	187,358	474,952	443,507	620,133	568,540	820,744	724,522	415,359	366,704	2,536,248	2,290,631
Off-Peak Total	2,555,345	2,313,452	53,355	46,861	163,193	148,731	276,873	258,931	286,841	266,427	151,439	138,467	931,701	859,417
Weekend Total	1,796,404	1,732,765	81,217	73,421	180,871	169,102	215,872	204,856	306,695	296,752	160,416	149,139	945,071	893,270
Total	9,113,838	8,431,452	339,632	307,640	819,016	761,340	1,112,878	1,032,327	1,414,280	1,287,701	727,214	654,310	4,413,020	4,043,318
Percent Change in Transactions														
Peak AVI	-8%		-9%		-6%		-7%		-10%		-10%		-9%	
Peak Cash	-8%		-7%		-10%		-14%		-19%		-18%		-15%	
Off-Peak AVI	-9%		-12%		-9%		-9%		-8%		-9%		-7%	
Off-Peak Cash	-12%		-16%		-10%		-13%		-10%		-4%		-10%	
Weekend AVI	-4%		-9%		-6%		-5%		-3%		-9%		-5%	
Weekend Cash	-3%		-11%		-7%		-7%		-5%		-2%		-6%	
AVI Total	-7%		-9%		-7%		-7%		-8%		-10%		-8%	
Cash Total	-8%		-9%		-9%		-12%		-14%		-12%		-12%	
Peak Total	-8%		-9%		-7%		-8%		-12%		-12%		-10%	
Off-Peak Total	-9%		-12%		-9%		-6%		-3%		-9%		-8%	
Weekend Total	-4%		-10%		-7%		-5%		-3%		-7%		-5%	
Total	-7%		-9%		-7%		-7%		-9%		-10%		-8%	



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-10: Toll Increase Impacts – July 2011

July 1, 2011 Toll Increase														
Toll	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 4.75	\$ 5.00	\$ 1.25	\$ 1.30	\$ 1.50	\$ 1.60	\$ 2.00	\$ 2.10	\$ 1.75	\$ 1.85	\$ 0.75	\$ 0.80	-	-
Peak Cash	\$ 5.50	\$ 5.75	\$ 1.50	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.00	\$ 2.25	\$ 1.00	\$ 1.25	-	-
Off-Peak AVI	\$ 4.00	\$ 4.20	\$ 1.25	\$ 1.30	\$ 1.50	\$ 1.60	\$ 2.00	\$ 2.10	\$ 1.75	\$ 1.85	\$ 0.75	\$ 0.80	-	-
Off-Peak Cash	\$ 4.75	\$ 5.00	\$ 1.50	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.00	\$ 2.25	\$ 1.00	\$ 1.25	-	-
Weekend AVI	\$ 3.75	\$ 3.95	\$ 1.25	\$ 1.30	\$ 1.50	\$ 1.60	\$ 2.00	\$ 2.10	\$ 1.75	\$ 1.85	\$ 0.75	\$ 0.80	-	-
Weekend Cash	\$ 4.50	\$ 4.75	\$ 1.50	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.00	\$ 2.25	\$ 1.00	\$ 1.25	-	-
Transactions (Weeks 1-24)														
FY	'11	'12	'11	'12	'11	'12	'11	'12	'11	'12	'11	'12	'11	'12
Peak AVI	1,977,199	1,999,300	37,722	36,828	128,200	134,984	230,247	228,034	226,391	225,483	115,434	114,450	737,994	739,779
Peak Cash	296,784	291,644	6,274	5,090	14,899	13,445	22,599	20,541	21,659	21,673	13,224	10,573	78,655	71,322
Off-Peak AVI	3,202,568	3,189,805	140,152	129,394	357,793	368,532	465,401	461,765	567,446	570,209	267,174	264,188	1,797,966	1,794,088
Off-Peak Cash	959,671	935,541	25,008	21,499	52,962	49,755	63,485	61,842	109,469	105,417	63,996	56,164	314,920	294,677
Weekend AVI	1,078,087	1,079,917	53,140	48,430	128,422	133,960	155,446	155,083	211,355	211,040	102,422	102,985	650,785	651,498
Weekend Cash	535,415	507,654	12,623	10,994	24,075	22,897	32,312	31,699	62,961	60,382	32,460	28,016	164,431	153,988
AVI Total	6,257,854	6,269,022	231,014	214,652	614,415	637,476	851,094	844,882	1,005,192	1,006,732	485,030	481,623	3,186,745	3,185,365
Cash Total	1,791,870	1,734,839	43,905	37,583	91,936	86,097	118,396	114,082	194,089	187,472	109,680	94,753	558,006	519,987
Peak Total	2,273,983	2,290,944	43,996	41,918	143,099	148,429	252,846	248,575	248,050	247,156	128,658	125,023	816,649	811,101
Off-Peak Total	4,162,239	4,125,346	165,160	150,893	410,755	418,287	528,886	523,607	676,915	675,626	331,170	320,352	2,112,886	2,088,765
Weekend Total	1,613,502	1,587,571	65,763	59,424	152,497	156,857	187,758	186,782	274,316	271,422	134,882	131,001	815,216	805,486
Total	8,049,724	8,003,861	274,919	252,235	706,351	723,573	969,490	958,964	1,199,281	1,194,204	594,710	576,376	3,744,751	3,705,352
Percent Change in Transactions														
Peak AVI	1%		-2%		5%		-1%		0%		-1%		0%	
Peak Cash	-2%		-19%		-10%		-9%		0%		-20%		-9%	
Off-Peak AVI	0%		-8%		3%		-1%		0%		-1%		0%	
Off-Peak Cash	-3%		-14%		-6%		-3%		-4%		-12%		-6%	
Weekend AVI	0%		-9%		4%		0%		0%		1%		0%	
Weekend Cash	-5%		-13%		-5%		-2%		-4%		-14%		-6%	
AVI Total	0%		-7%		4%		-1%		0%		-1%		0%	
Cash Total	-3%		-14%		-6%		-4%		-3%		-14%		-7%	
Peak Total	1%		-5%		4%		-2%		0%		-3%		-1%	
Off-Peak Total	-1%		-9%		2%		-1%		0%		-3%		-1%	
Weekend Total	-2%		-10%		3%		-1%		-1%		-3%		-1%	
Total	-1%		-8%		2%		-1%		0%		-3%		-1%	

Table 3-11: Toll Increase Impacts – July 2012

July 1, 2012 Toll Increase														
Toll	Mainline		Ramps											
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
	From	To	From	To	From	To	From	To	From	To	From	To	-	-
Peak AVI	\$ 5.00	\$ 5.50	\$ 1.30	\$ 1.30	\$ 1.60	\$ 1.75	\$ 2.10	\$ 2.30	\$ 1.85	\$ 2.05	\$ 0.80	\$ 0.90	-	-
Peak Cash	\$ 5.75	\$ 6.25	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.75	\$ 2.25	\$ 2.50	\$ 1.25	\$ 1.50	-	-
Off-Peak AVI	\$ 4.20	\$ 4.60	\$ 1.30	\$ 1.30	\$ 1.60	\$ 1.75	\$ 2.10	\$ 2.30	\$ 1.85	\$ 2.05	\$ 0.80	\$ 0.90	-	-
Off-Peak Cash	\$ 5.00	\$ 5.50	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.75	\$ 2.25	\$ 2.50	\$ 1.25	\$ 1.50	-	-
Weekend AVI	\$ 3.95	\$ 4.35	\$ 1.30	\$ 1.30	\$ 1.60	\$ 1.75	\$ 2.10	\$ 2.30	\$ 1.85	\$ 2.05	\$ 0.80	\$ 0.90	-	-
Weekend Cash	\$ 4.75	\$ 5.25	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.75	\$ 2.25	\$ 2.50	\$ 1.25	\$ 1.50	-	-
Transactions (Weeks 1-26)														
FY	'12	'13	'12	'13	'12	'13	'12	'13	'12	'13	'12	'13	'12	'13
Peak AVI	2,105,841	2,163,793	39,118	38,230	143,146	144,108	240,470	237,835	239,002	232,972	120,998	116,145	782,734	769,290
Peak Cash	310,713	286,691	5,458	4,773	14,290	12,420	21,802	20,206	23,244	20,873	11,239	9,928	76,033	68,200
Off-Peak AVI	3,437,036	3,527,554	140,187	134,612	398,268	389,377	497,900	505,446	613,120	601,480	282,910	277,938	1,932,385	1,908,853
Off-Peak Cash	1,022,968	936,172	23,457	21,914	53,798	44,918	66,794	63,250	114,301	101,894	60,123	49,269	318,473	281,245
Weekend AVI	1,151,626	1,155,692	51,429	50,750	143,217	139,590	165,974	166,797	224,302	224,644	109,347	104,688	694,269	686,469
Weekend Cash	541,653	499,488	11,681	11,335	24,591	20,672	33,691	33,912	64,320	56,789	29,592	25,825	163,875	148,533
AVI Total	6,694,503	6,847,039	230,734	223,592	684,631	673,075	904,344	910,078	1,076,424	1,059,096	513,255	498,771	3,409,388	3,364,612
Cash Total	1,875,334	1,722,351	40,596	38,022	92,679	78,010	122,287	117,368	201,865	179,556	100,954	85,022	558,381	497,978
Peak Total	2,416,554	2,450,484	44,576	43,003	157,436	156,528	262,272	258,041	262,246	253,845	132,237	126,073	858,767	837,490
Off-Peak Total	4,460,004	4,463,726	163,644	156,526	452,066	434,295	564,694	568,696	727,421	703,374	343,033	327,207	2,250,858	2,190,098
Weekend Total	1,693,279	1,655,180	63,110	62,085	167,808	160,262	199,665	200,709	288,622	281,433	138,939	130,513	858,144	835,002
Total	8,569,837	8,569,390	271,330	261,614	777,310	751,085	1,026,631	1,027,446	1,278,289	1,238,652	614,209	583,793	3,967,769	3,862,590
Percent Change in Transactions														
Peak AVI	3%		-2%		1%		-1%		-3%		-4%		-2%	
Peak Cash	-8%		-13%		-13%		-7%		-10%		-12%		-10%	
Off-Peak AVI	3%		-4%		-2%		2%		-2%		-2%		-1%	
Off-Peak Cash	-8%		-7%		-17%		-5%		-11%		-12%		-12%	
Weekend AVI	0%		-1%		-3%		0%		0%		-4%		-1%	
Weekend Cash	-8%		-3%		-16%		1%		-12%		-13%		-9%	
AVI Total	2%		-3%		-2%		1%		-2%		-3%		-1%	
Cash Total	-8%		-6%		-16%		-4%		-11%		-16%		-11%	
Peak Total	1%		-4%		-1%		-2%		-3%		-5%		-2%	
Off-Peak Total	0%		-4%		-4%		1%		-3%		-5%		-3%	
Weekend Total	-2%		-2%		-4%		1%		-2%		-6%		-3%	
Total	0.0%		-4%		-3%		0%		-3%		-5%		-3%	



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-12: Toll Increase Impacts – July 2013

July 1, 2013 Toll Increase														
Mainline														
	Catalina View		La Paz		Aliso Creek		El Toro		Newport Coast		Bonita Canyon		All Ramps	
Toll	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014	2013	2014
Peak AVI	\$ 5.50	\$ 6.05	\$ 1.30	\$ 1.30	\$ 1.75	\$ 1.85	\$ 2.30	\$ 2.40	\$ 2.05	\$ 2.15	\$ 0.90	\$ 0.95	-	-
Peak Cash	\$ 6.25	\$ 6.75	\$ 1.75	\$ 1.75	\$ 2.25	\$ 2.50	\$ 2.75	\$ 3.00	\$ 2.50	\$ 2.75	\$ 1.50	\$ 1.75	-	-
Off-Peak AVI	\$ 4.60	\$ 5.05	\$ 1.30	\$ 1.30	\$ 1.75	\$ 1.85	\$ 2.30	\$ 2.40	\$ 2.05	\$ 2.15	\$ 0.90	\$ 0.95	-	-
Off-Peak Cash	\$ 5.50	\$ 6.00	\$ 1.75	\$ 1.75	\$ 2.25	\$ 2.50	\$ 2.75	\$ 3.00	\$ 2.50	\$ 2.75	\$ 1.50	\$ 1.75	-	-
Weekend AVI	\$ 4.35	\$ 4.80	\$ 1.30	\$ 1.30	\$ 1.75	\$ 1.85	\$ 2.30	\$ 2.40	\$ 2.05	\$ 2.15	\$ 0.90	\$ 0.95	-	-
Weekend Cash	\$ 5.25	\$ 5.75	\$ 1.75	\$ 1.75	\$ 2.25	\$ 2.50	\$ 2.75	\$ 3.00	\$ 2.50	\$ 2.75	\$ 1.50	\$ 1.75	-	-
Transactions (Weeks 1-26)														
FY	'13	'14	'13	'14	'13	'14	'13	'14	'13	'14	'13	'14	'13	'14
Peak AVI	2,163,793	2,291,018	38,230	38,397	144,108	144,474	237,835	243,667	232,972	233,726	116,145	114,515	769,290	774,779
Peak Cash	286,691	305,814	4,773	5,138	12,420	9,980	20,206	21,618	20,873	22,227	9,928	9,361	68,200	68,324
Off-Peak AVI	3,527,554	3,797,287	134,612	137,037	389,377	385,646	505,446	520,674	601,480	621,699	277,938	278,562	1,908,853	1,943,618
Off-Peak Cash	936,172	1,001,966	21,914	21,151	44,918	39,013	63,250	64,932	101,894	110,066	49,269	47,048	281,245	282,210
Weekend AVI	1,155,692	1,260,019	50,750	50,502	139,590	137,441	166,797	170,606	224,644	235,519	104,688	106,062	686,469	700,130
Weekend Cash	499,488	548,928	11,335	11,047	20,672	19,301	33,912	33,748	56,789	65,507	25,825	26,424	148,533	156,027
AVI Total	6,847,039	7,348,324	223,592	225,936	673,075	667,561	910,078	934,947	1,059,096	1,090,944	498,771	499,139	3,364,612	3,418,527
Cash Total	1,722,351	1,856,708	38,022	37,336	78,010	68,294	117,368	120,298	179,556	197,800	85,022	82,833	497,978	506,561
Peak Total	2,450,484	2,596,832	43,003	43,535	156,528	154,454	258,041	265,285	253,845	255,953	126,073	123,876	837,490	843,103
Off-Peak Total	4,463,726	4,799,253	156,526	158,188	434,295	424,659	568,696	585,606	703,374	731,765	327,207	325,610	2,190,098	2,225,828
Weekend Total	1,655,180	1,808,947	62,085	61,549	160,262	156,742	200,709	204,354	281,433	301,026	130,513	132,486	835,002	856,157
Total	8,569,390	9,205,032	261,614	263,272	751,085	735,855	1,027,446	1,055,245	1,238,652	1,288,744	583,793	581,972	3,862,590	3,925,088
Percent Change in Transactions														
Peak AVI	6%		0%		0%		2%		0%		-1%		1%	
Peak Cash	7%		8%		-20%		7%		6%		-6%		0%	
Off-Peak AVI	8%		2%		-1%		3%		3%		0%		2%	
Off-Peak Cash	7%		-3%		-13%		3%		8%		-5%		0%	
Weekend AVI	9%		0%		-2%		2%		5%		1%		2%	
Weekend Cash	10%		-3%		-7%		0%		15%		2%		5%	
AVI Total	7%		1%		-1%		3%		3%		0%		2%	
Cash Total	8%		-2%		-12%		2%		10%		-3%		2%	
Peak Total	6%		1%		-1%		3%		1%		-2%		1%	
Off-Peak Total	8%		1%		-2%		3%		4%		0%		2%	
Weekend Total	9%		-1%		-2%		2%		7%		2%		3%	
Total	7%		1%		-2%		3%		4%		0%		2%	

3.2.4 Seasonal Variation

Average weekday transactions over the past few years have occurred in similar patterns during each fiscal year; overall, average weekday transactions by month does not change much throughout the year. Average weekday transactions are typically the highest during the months of May and June and the lowest during the month of January. As shown on Table 3-13, the actual transaction data for fiscal years 2012 and 2014 has been indexed to show on a percent basis what each month of the year represented as compared to the average month.

Table 3-13: Monthly Variation in Average Weekday Transactions (FY 2012 vs. 2014)

	Average Weekday Transactions	Index		Average Weekday Transactions	Index
July-11	81,306	1.03	July-13	82,088	1.00
August-11	78,412	1.00	August-13	83,040	1.01
September-11	78,791	1.00	September-13	82,312	1.00
October-11	78,003	0.99	October-13	82,031	1.00
November-11	76,045	0.97	November-13	80,870	0.99
December-11	76,720	0.98	December-13	80,397	0.98
January-12	77,040	0.98	January-14	79,287	0.97
February-12	78,457	1.00	February-14	80,883	0.99
March-12	79,493	1.01	March-14	84,429	1.03
April-12	77,281	0.98	April-14	82,367	1.00
May-12	80,912	1.03	May-14	83,667	1.02
June-12	81,135	1.03	June-14	83,323	1.02
Average	78,633		Average	82,058	



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

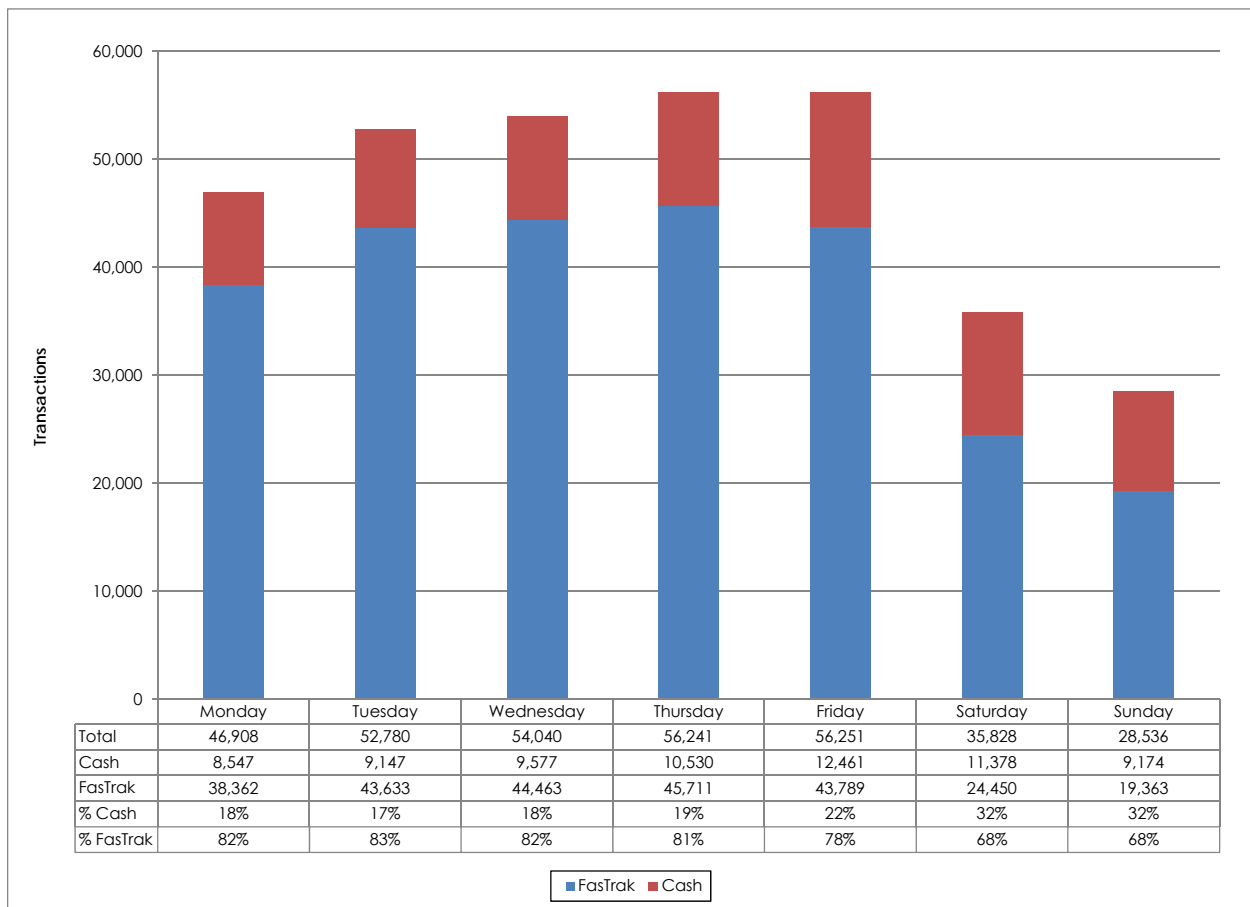
3.0 existing conditions
August 22, 2014

3.2.5 Day of the Week Variations

At the Catalina View mainline plaza, average weekday transactions are higher than average weekend transactions with Friday transactions being the highest and Sunday transactions the lowest.

For an average week in fiscal year 2012, Catalina View has approximately 47,000 transactions on Monday with slightly more transactions each day as the week progresses. By Friday, the number of transactions has increased to over 56,000. Weekend transactions are much lower, with about 36,000 on Saturday and 29,000 on Sunday. **Figure 3-23** shows the daily variation in transaction volume by payment type at Catalina View.

Figure 3-23: Day of the Week Variation – Catalina View (FY 2012)



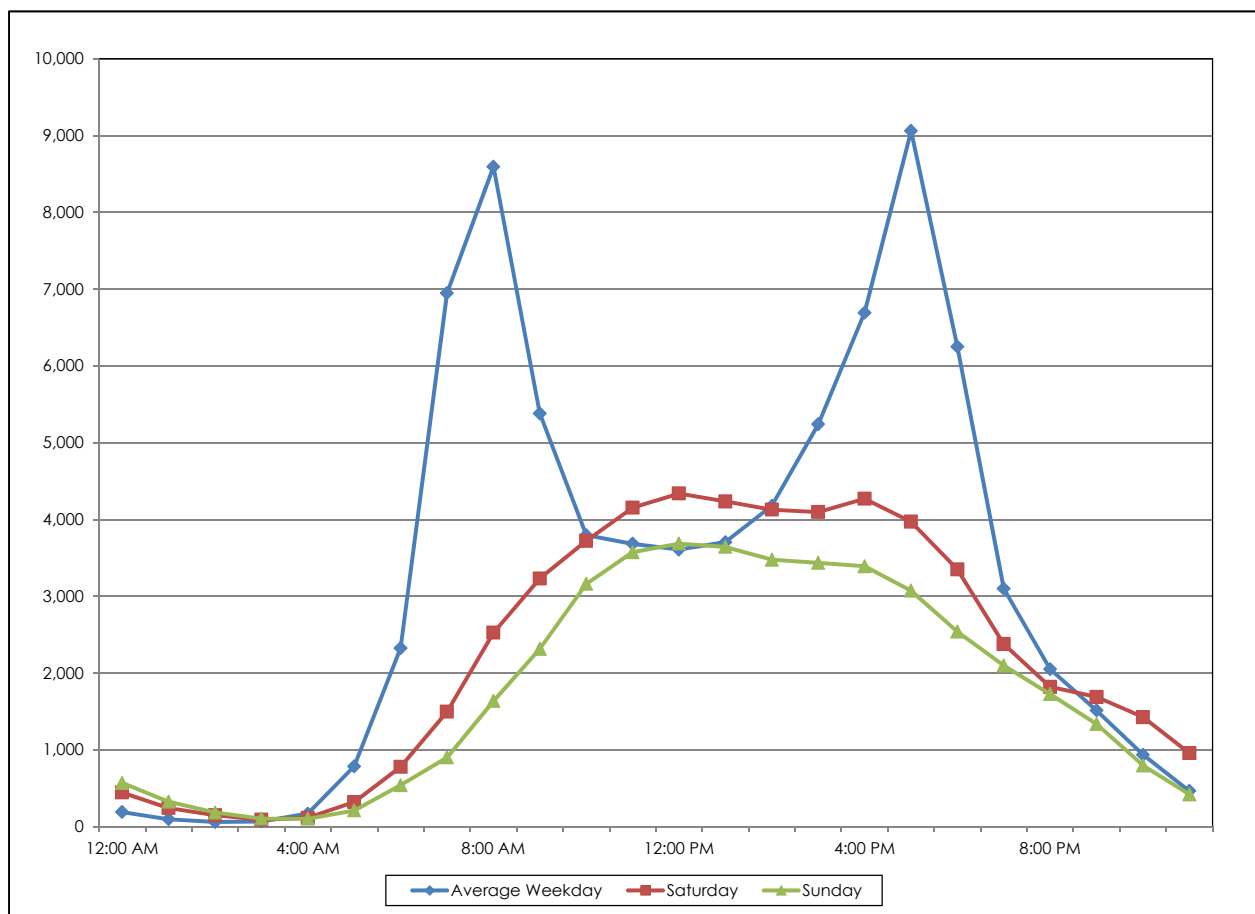
3.0 existing conditions
 August 22, 2014

3.2.6 Time of Day and Directional Variation

Hourly traffic variations for a typical weekday and weekend day on the SJHTC are shown in **Figure 3-24**. As seen in this chart, the total amount of transactions during a typical weekday is 8,600 in the AM peak hour and 9,000 in the PM peak hour (a total of all plazas, both directions). Transactions during the midday average about 3,500 per hour.

During a typical weekend day, there are fewer transactions than on weekdays; however, Saturdays have more transactions than Sundays. As shown in the hourly traffic data, the highest weekend transaction rate occurs between the hours of 11 AM and 5 PM, where there are 4,000 to 4,300 transactions per hour on a Saturday and about 3,300 to 3,600 on a Sunday.

Figure 3-24: San Joaquin Hills Typical Hourly Transaction Distribution



Weekday hourly and directional traffic variations are shown for the mainline toll plaza in **Figure 3-25**. Weekday traffic at Catalina View peaks in the morning between 8 AM and 9 AM in the northbound direction, with a volume of around 4,900 vehicles. In the evening, traffic peaks in the southbound direction between 5 PM and 6 PM, with a volume of about 4,800 vehicles.



3.0 existing conditions
August 22, 2014

Figure 3-25: Catalina View Hourly Transaction Distribution – Weekday and Weekend

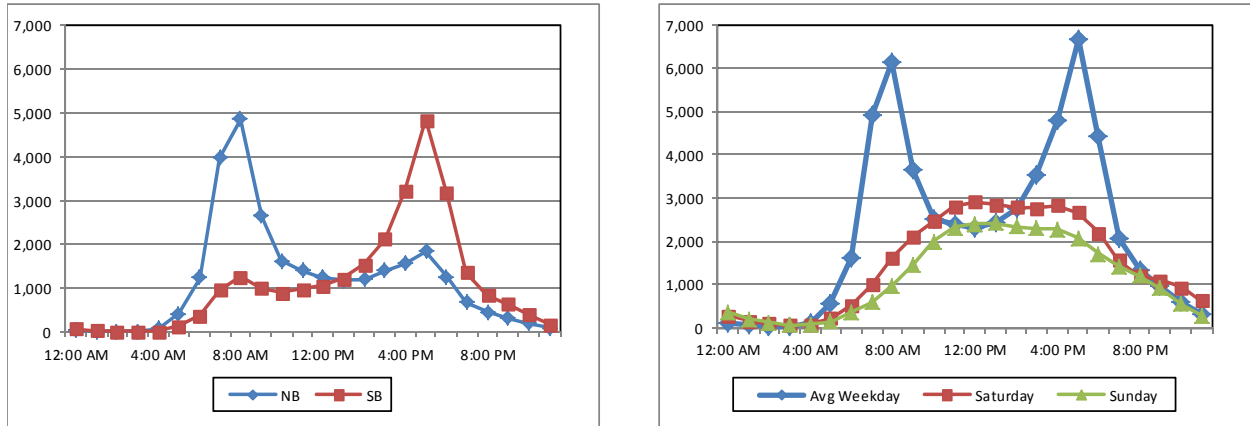
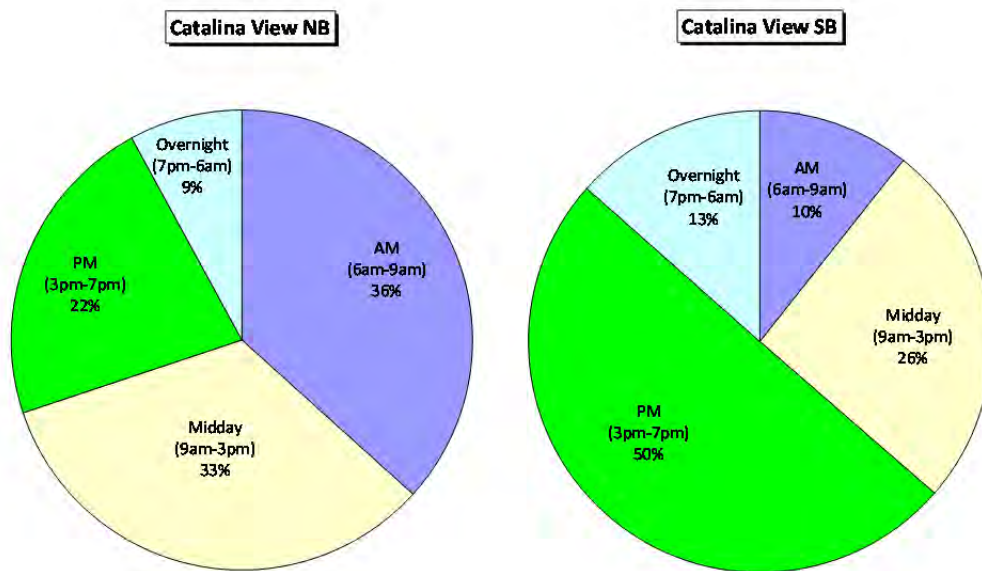


Figure 3-26 shows, for each direction of the Catalina View mainline toll plaza, the percentage of traffic over the course of 24 hours on an average weekday, shown during four time periods: AM (6 to 9 am), midday (9am to 3pm), PM (3 to 7pm) and overnight (7pm to 6am). The traffic at each plaza has been split by direction.

At Catalina View in the northbound direction, 36 percent of the daily traffic occurs in the AM time period, 33 percent occurs during the midday time period, 22 percent during the PM time period, and 9 percent occurs during the overnight time period. In the southbound direction, 10 percent of the daily traffic occurs in the AM time period, 26 percent occurs in the midday, 50 percent occurs in the PM, and 14 percent occurs in the overnight time period.

Figure 3-26: Catalina View Transactions by Time of Day



3.0 existing conditions
August 22, 2014

3.2.7 FasTrak Trends

Overall usage of FasTrak on the SJHTC during the past ten years has increased from 45 percent to almost 85 percent of all transactions. The increase in FasTrak usage is mainly attributed to toll increases along the corridor. An example of this was the implementation of a new tolling structure on February 11, 2002, where cash tolls increased at the Catalina View mainline toll plaza by \$0.50. This prompted some of the cash-paying customers to switch to FasTrak.

The percent of total transactions that are made by FasTrak vary hour by hour during a typical weekday, with the peak travel periods in the morning and evening periods exceeding 85 percent of total transactions by FasTrak. At Catalina View, the morning and evening peak periods approach 90 percent FasTrak usage.

As discussed in more detail below, the conversion to all-electronic tolling appears to have increased the overall FasTrak usage on the facility by a few percent.

3.2.8 All-Electronic Tolling

In May 2014, the San Joaquin Hills Transportation Corridor implemented all-electronic tolling and no longer accepts cash as an on-road payment method. The agency replaced cash collection with four new payment options:

- Prepaid ExpressAccount
- Charge ExpressAccount
- Invoice ExpressAccount
- One-Time-Toll™

With a Prepaid ExpressAccount, you can prepay and replenish tolls using credit card, cash or check. All tolls will be calculated and charged based on a reading of your license plate at tolling locations. Statements can be emailed monthly or mailed quarterly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

With a Charge ExpressAccount, the appropriate toll(s) are charged to your account and, then, to your credit card based on photos of your vehicle's license plates taken at a tolling location(s). Depending on image processing and the credit card company, it may take two to five business days for the tolls to appear on your ExpressAccount and credit card statement. ExpressAccount statements can be emailed monthly or postal mailed quarterly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions

August 22, 2014

With an Invoice ExpressAccount users will be sent a monthly invoice itemizing accumulated tolls. All tolls will be calculated and charged based on a reading of your license plate at tolling locations. Invoices can be paid via credit card, cash or check. Statements will be emailed monthly and account maintenance is easy online or via TCA's free app. Users would not be issued a FasTrak transponder, which means that they would not be able to use their Prepaid ExpressAccount to pay tolls electronically on other tolled bridges, lanes and roads in California.

For users that drive the SJHTC and do not have a FasTrak or ExpressAccount, the option to pay via One-Time-Toll™ also exists. The One-Time-Toll payment option must be used within 48 hours of driving The Toll Roads and may be used as often as needed.

The differential between FasTrak toll rates and the ExpressAccount rates is \$1.00.

While it is early in the conversion process and the implementation of AET is still in its ramp-up phase, preliminary transaction and revenue data review suggests that there has been a reduction in growth in overall transactions and revenue on the SJHTC following the conversion to AET. Part of this revenue loss, however, can be attributed to former cash users switching to FasTrak as the overall FasTrak percentage has increased, leading to more users paying a reduced toll rate, lowering the average toll rate and subsequently gross toll revenues.

In addition to going cashless, two other changes were introduced to the SJHTC toll rate structure. Beginning July 1, 2014, the peak period toll rate at the Catalina View mainline plaza was split into "peak" and "pre-peak and post-peak" toll rates. The peak hour rates are in effect from 8-9am in the northbound direction and 5-6pm in the southbound direction. The pre-peak and post-peak hours are from 7-8am and 9-10am in the northbound direction and 3-5pm and 6-7pm in the southbound direction.

The peak period was also expanded from two to three hours in the AM peak period and from three to four hours in the PM peak period.

3.0 existing conditions
August 22, 2014

3.2.9 Commercial Vehicles

The majority of transactions at all of the toll plazas, both mainline and ramp, are made by customers driving passenger vehicles. As shown in **Table 3-14**, the overall percentage of trucks on the SJH system is about 0.6 percent; the remaining 99.4 percent are passenger vehicles. At Catalina View, there are 0.4 percent trucks on a typical weekday.

Table 3-14: Average Weekday Commercial Vehicle Percentage

Plaza	Daily Trucks	Daily Vehicles	Truck Percentage
Aliso Creek	234	29,998	0.8%
Bonita	151	23,801	0.6%
CV Barrier	1,216	331,422	0.4%
El Toro	648	39,800	1.6%
La Paz	196	9,338	2.1%
Newport Coast	297	47,587	0.6%
SJH TOTAL	2,742	481,946	0.6%

3.2.10 Historic Revenue Trends

Figure 3-27 displays detailed transaction and revenue data from July 1997 through June 2014. System-wide monthly revenues from the SJHTC have increased during the past seventeen years, from \$2.6 million in July 1997 to over \$9.0 million in June 2014. Revenues have increased steadily as tolls have been increased. In the period from FY 2003 to FY 2007, transaction revenues have increased by 45 percent due to higher tolls and an impressive 15 percent growth in transactions.

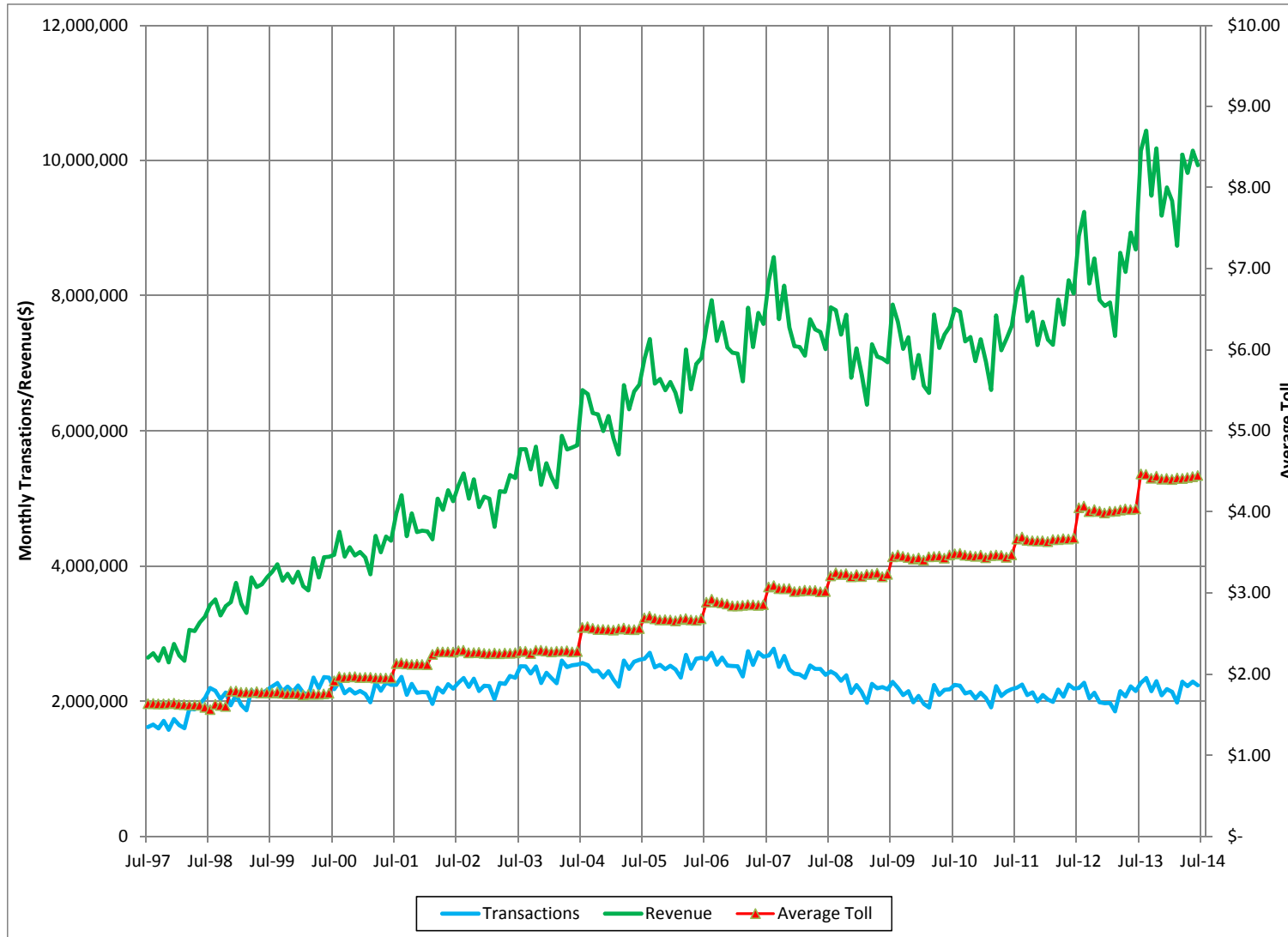
The Great Recession had a significant impact on toll transactions and revenues. Between FY 2008 and FY 2010, average weekday transactions decreased almost 20 percent, falling from 97,000 per day to 78,000 per day. Due to toll increases, however, revenues had only fallen 3 percent to \$87.1 million. Toll transactions in FY 2011 and 2012 have been flat with almost no growth; however, given the implementation of a system-wide toll increase in July 2011, revenues were up 6 percent between FY 2011 and 2012. Since 2012, the number of transactions has remained constant independently of the toll increases, which has led to a boost in revenue. The combination of a toll increase with no toll transaction losses gives reason for cautious optimism that the region may be recovering from the Great Recession and traffic growth is returning.

In the past year, even though there was a ten percent toll increase implemented on July 1, 2013, average weekday transactions have increased by almost six percent on the SJHTC.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
 August 22, 2014

Figure 3-27: SJHTC Historic Monthly Transactions and Revenue



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-15: Monthly Average Weekday Transactions

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
July	81,351	82,127	81,435	82,566	92,973	93,639	98,052	97,643	98,149	88,427	80,948	81,447	81,306	79,750	82,088
August	80,758	80,945	83,709	84,100	90,887	90,879	95,976	95,940	98,168	86,773	78,248	78,618	78,412	79,509	83,040
September	81,190	81,675	80,670	85,377	91,283	92,386	95,088	97,423	97,960	87,047	77,987	79,155	78,791	79,371	82,312
October	81,773	79,833	82,146	84,355	90,532	90,675	94,066	96,677	94,285	85,640	77,453	78,796	78,003	77,146	82,031
November	82,427	82,221	79,653	83,897	91,303	91,856	102,034	98,242	94,012	83,098	75,814	77,209	76,045	76,825	80,870
December	81,732	81,034	82,893	82,262	87,817	90,020	91,477	95,216	90,031	81,321	75,292	77,897	76,720	74,280	80,397
January	80,554	78,203	79,511	82,736	88,657	88,492	92,018	94,242	90,366	79,805	75,108	77,495	77,040	74,246	79,287
February	82,415	82,115	80,827	83,235	90,841	91,916	97,013	97,507	93,248	81,613	77,790	78,676	78,457	76,324	80,883
March	84,561	83,333	81,515	84,345	92,859	93,560	97,174	100,004	93,628	81,931	79,740	79,826	79,493	79,500	84,429
April	83,705	81,852	79,426	83,856	93,027	93,742	95,470	96,348	92,165	80,098	77,159	77,643	77,281	76,928	82,367
May	85,370	83,395	82,483	87,997	94,674	95,980	95,792	99,590	91,971	81,992	79,982	78,882	80,912	80,847	83,667
June	86,879	84,414	83,383	87,678	93,860	96,734	98,005	99,789	89,555	79,229	79,135	79,721	81,135	82,041	83,323
Average Annual	82,726	81,762	81,471	84,367	91,559	92,490	96,014	97,385	93,628	83,081	77,888	78,780	78,633	78,064	82,058
Total FY Transactions	26,660,797	26,054,876	26,055,147	27,024,334	29,416,339	29,585,828	30,622,020	31,096,854	30,095,299	26,810,468	25,308,372	25,451,120	25,424,605	24,984,196	26,459,758

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
July		1%	-1%	1%	13%	1%	5%	0%	1%	-10%	-8%	1%	0%	-2%	3%
August		0%	3%	0%	8%	0%	6%	0%	2%	-12%	-10%	0%	0%	1%	4%
September		1%	-1%	6%	7%	1%	3%	2%	1%	-11%	-10%	1%	0%	1%	4%
October		-2%	3%	3%	7%	0%	4%	3%	-2%	-9%	-10%	2%	-1%	-1%	6%
November		0%	-3%	5%	9%	1%	11%	-4%	-4%	-12%	-9%	2%	-2%	1%	5%
December		-1%	2%	-1%	7%	3%	2%	4%	-5%	-10%	-7%	3%	-2%	-3%	8%
January		-3%	2%	4%	7%	0%	4%	2%	-4%	-12%	-6%	3%	-1%	-4%	7%
February		0%	-2%	3%	9%	1%	6%	1%	-4%	-12%	-5%	1%	0%	-3%	6%
March		-1%	-2%	3%	10%	1%	4%	3%	-6%	-12%	-3%	0%	0%	0%	6%
April		-2%	-3%	6%	11%	1%	2%	1%	-4%	-13%	-4%	1%	0%	0%	7%
May		-2%	-1%	7%	8%	1%	0%	4%	-8%	-11%	-2%	-1%	3%	0%	3%
June		-3%	-1%	5%	7%	3%	1%	2%	-10%	-12%	0%	1%	2%	1%	2%
Average Annual		-1%	0%	4%	9%	1%	4%	1%	-4%	-11%	-6%	1%	0%	-1%	5%
Total FY Transactions		-2%	0%	4%	9%	1%	4%	2%	-3%	-11%	-6%	1%	0%	-2%	6%



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-16: Monthly Total Revenue

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
July	\$ 3,914,869	\$ 4,164,207	\$ 4,773,469	\$ 5,188,965	\$ 5,725,795	\$ 6,599,013	\$ 7,071,665	\$ 7,553,151	\$ 8,216,142	\$ 7,825,432	\$ 7,866,472	\$ 7,802,291	\$ 8,051,277	\$ 8,881,839	\$ 10,148,660
August	\$ 4,025,425	\$ 4,504,322	\$ 5,045,156	\$ 5,367,836	\$ 5,727,199	\$ 6,542,739	\$ 7,357,585	\$ 7,931,888	\$ 8,569,854	\$ 7,781,395	\$ 7,611,250	\$ 7,764,458	\$ 8,275,989	\$ 9,237,763	\$ 10,440,746
September	\$ 3,783,284	\$ 4,139,792	\$ 4,441,295	\$ 4,996,373	\$ 5,428,593	\$ 6,259,982	\$ 6,698,331	\$ 7,329,377	\$ 7,651,503	\$ 7,423,010	\$ 7,213,073	\$ 7,324,313	\$ 7,622,629	\$ 8,180,254	\$ 9,480,341
October	\$ 3,883,846	\$ 4,276,039	\$ 4,775,834	\$ 5,279,801	\$ 5,762,823	\$ 6,241,290	\$ 6,765,179	\$ 7,606,182	\$ 8,146,242	\$ 7,714,413	\$ 7,382,138	\$ 7,387,838	\$ 7,755,628	\$ 8,550,127	\$ 10,177,080
November	\$ 3,751,976	\$ 4,154,689	\$ 4,502,070	\$ 4,870,743	\$ 5,199,004	\$ 5,996,021	\$ 6,601,050	\$ 7,230,473	\$ 7,526,332	\$ 6,784,947	\$ 6,774,350	\$ 7,031,502	\$ 7,270,361	\$ 7,933,632	\$ 9,184,378
December	\$ 3,912,611	\$ 4,207,304	\$ 4,520,647	\$ 5,024,616	\$ 5,519,361	\$ 6,217,324	\$ 6,720,162	\$ 7,156,522	\$ 7,252,168	\$ 7,219,659	\$ 7,120,305	\$ 7,353,891	\$ 7,610,239	\$ 7,845,599	\$ 9,599,174
January	\$ 3,700,033	\$ 4,120,946	\$ 4,511,048	\$ 4,995,626	\$ 5,319,274	\$ 5,888,107	\$ 6,558,837	\$ 7,139,824	\$ 7,237,519	\$ 6,828,174	\$ 6,663,040	\$ 7,021,927	\$ 7,345,053	\$ 7,897,380	\$ 9,400,679
February	\$ 3,638,730	\$ 3,877,187	\$ 4,392,532	\$ 4,579,079	\$ 5,164,555	\$ 5,651,177	\$ 6,277,901	\$ 6,730,209	\$ 7,111,362	\$ 6,384,910	\$ 6,560,026	\$ 6,603,551	\$ 7,271,749	\$ 7,404,542	\$ 8,738,338
March	\$ 4,115,711	\$ 4,444,429	\$ 4,995,642	\$ 5,105,672	\$ 5,926,890	\$ 6,673,213	\$ 7,201,307	\$ 7,819,611	\$ 7,647,593	\$ 7,280,190	\$ 7,718,924	\$ 7,704,371	\$ 7,940,121	\$ 8,631,604	\$ 10,082,371
April	\$ 3,829,307	\$ 4,203,884	\$ 4,830,620	\$ 5,094,477	\$ 5,723,728	\$ 6,317,221	\$ 6,612,744	\$ 7,237,715	\$ 7,501,594	\$ 7,098,609	\$ 7,224,360	\$ 7,191,539	\$ 7,571,578	\$ 8,349,915	\$ 9,813,702
May	\$ 4,128,156	\$ 4,433,903	\$ 5,118,520	\$ 5,343,157	\$ 5,751,005	\$ 6,579,061	\$ 6,986,618	\$ 7,743,032	\$ 7,459,494	\$ 7,066,187	\$ 7,422,805	\$ 7,363,316	\$ 8,225,201	\$ 8,932,209	\$ 10,143,251
June	\$ 4,135,048	\$ 4,374,669	\$ 4,958,077	\$ 5,301,156	\$ 5,783,133	\$ 6,679,991	\$ 7,076,626	\$ 7,580,727	\$ 7,209,510	\$ 7,012,997	\$ 7,539,072	\$ 7,554,666	\$ 8,032,259	\$ 8,683,502	\$ 9,929,645
Total Year	\$ 46,818,996	\$ 50,901,371	\$ 56,864,910	\$ 61,147,501	\$ 67,031,360	\$ 75,645,139	\$ 81,928,005	\$ 89,058,711	\$ 91,529,313	\$ 86,419,923	\$ 87,095,815	\$ 88,103,663	\$ 92,972,084	\$ 100,528,366	\$ 117,138,365
	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014
	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
July		6%	15%	9%	10%	15%	7%	7%	9%	-5%	1%	-1%	3%	10%	14%
August		12%	12%	6%	7%	14%	12%	8%	8%	-9%	-2%	2%	7%	12%	13%
September		9%	7%	12%	9%	15%	7%	9%	4%	-3%	-3%	2%	4%	7%	16%
October		10%	12%	11%	9%	8%	12%	7%	7%	-5%	-4%	0%	5%	10%	19%
November		11%	8%	8%	7%	15%	10%	10%	4%	-10%	0%	4%	3%	9%	16%
December		8%	7%	11%	10%	13%	8%	6%	1%	0%	-1%	3%	3%	3%	22%
January		11%	9%	11%	6%	11%	11%	9%	1%	-6%	-2%	5%	5%	8%	19%
February		7%	13%	4%	13%	9%	11%	7%	6%	-10%	3%	1%	10%	2%	18%
March		8%	12%	2%	16%	13%	8%	9%	-2%	-5%	6%	0%	3%	9%	17%
April		10%	15%	5%	12%	10%	5%	9%	4%	-5%	2%	0%	5%	10%	18%
May		7%	15%	4%	8%	14%	6%	11%	-4%	-5%	5%	-1%	12%	9%	14%
June		6%	13%	7%	9%	16%	6%	7%	-5%	-3%	8%	0%	6%	8%	14%
Total Year		9%	12%	8%	10%	13%	8%	9%	3%	-6%	1%	1%	6%	8%	17%



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

3.0 existing conditions
August 22, 2014

Table 3-17: Historic Toll Rate Schedule

FISCAL YEAR ENDING JUNE 30		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
SAN JOAQUIN HILLS		HISTORIC														
La Paz	Cash	\$ 0.50	\$ 0.75	\$ 0.75	\$ 0.75	\$ 0.75	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.75	\$ 1.75
	FasTrak	\$ 0.50	\$ 0.75	\$ 0.75	\$ 0.75	\$ 0.75	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.30	\$ 1.30	\$ 1.30
Aliso Creek	Cash	\$ 0.75	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.25	\$ 2.50
	FasTrak	\$ 0.75	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.60	\$ 1.75	\$ 1.85
El Toro	Cash	\$ 1.00	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.00	\$ 2.25	\$ 2.25	\$ 2.50	\$ 2.75	\$ 3.00
	FasTrak	\$ 1.00	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.00	\$ 2.10	\$ 2.30	\$ 2.40
Catalina View ML	Cash Non-Peak	\$ 2.25	\$ 2.50	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.50	\$ 3.75	\$ 4.00	\$ 4.25	\$ 4.50	\$ 4.75	\$ 4.75	\$ 5.00	\$ 5.50	\$ 6.00
	FasTrak Non-Peak	\$ 2.25	\$ 2.50	\$ 2.50	\$ 2.50	\$ 2.50	\$ 2.75	\$ 3.00	\$ 3.25	\$ 3.50	\$ 3.75	\$ 4.00	\$ 4.00	\$ 4.20	\$ 4.60	\$ 5.05
	Cash Peak	\$ 2.25	\$ 2.50	\$ 3.00	\$ 3.00	\$ 3.50	\$ 4.00	\$ 4.25	\$ 4.75	\$ 5.00	\$ 5.25	\$ 5.50	\$ 5.50	\$ 5.75	\$ 6.25	\$ 6.75
	FasTrak Peak	\$ 2.25	\$ 2.50	\$ 2.75	\$ 2.75	\$ 3.00	\$ 3.25	\$ 3.50	\$ 4.00	\$ 4.25	\$ 4.50	\$ 4.75	\$ 4.75	\$ 5.00	\$ 5.50	\$ 6.05
	Weekend Cash	\$ 2.25	\$ 2.50	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.50	\$ 3.50	\$ 3.75	\$ 4.00	\$ 4.25	\$ 4.50	\$ 4.50	\$ 4.75	\$ 5.25	\$ 5.75
	Weekend FasTrak	\$ 2.25	\$ 2.50	\$ 2.50	\$ 2.50	\$ 2.50	\$ 2.75	\$ 2.75	\$ 3.00	\$ 3.25	\$ 3.50	\$ 3.75	\$ 3.75	\$ 3.95	\$ 4.35	\$ 4.80
Newport Coast	Cash	\$ 0.50	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.50	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.75	\$ 2.00	\$ 2.00	\$ 2.25	\$ 2.50	\$ 2.75
	FasTrak	\$ 0.50	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.25	\$ 1.25	\$ 1.25	\$ 1.50	\$ 1.50	\$ 1.75	\$ 1.75	\$ 1.85	\$ 2.05	\$ 2.15
Bonita Canyon	Cash	\$ 0.25	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.75	\$ 0.75	\$ 0.75	\$ 0.75	\$ 1.00	\$ 1.00	\$ 1.00	\$ 1.25	\$ 1.50	\$ 1.75
	FasTrak	\$ 0.25	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.50	\$ 0.75	\$ 0.75	\$ 0.75	\$ 0.80	\$ 0.90	\$ 0.95

FISCAL YEAR ENDING JUNE 30		2015
SAN JOAQUIN HILLS		
La Paz	Non-FasTrak	\$ 2.34
	FasTrak	\$ 1.34
Aliso Creek	Non-FasTrak	\$ 2.91
	FasTrak	\$ 1.91
El Toro	Non-FasTrak	\$ 3.52
	FasTrak	\$ 2.52
Catalina View ML	ExpressAccount Non-Peak	\$ 6.15
	FasTrak Non-Peak	\$ 5.15
	One-Time Toll™ Non-Peak	\$ 7.35
	ExpressAccount Peak	\$ 7.65
	FasTrak Peak	\$ 6.65
	One-Time Toll™ Peak	\$ 7.65
	ExpressAccount Pre-/Post-Peak	\$ 7.35
	FasTrak Pre-/Post-Peak	\$ 6.35
	One-Time Toll™ Pre-/Post-Peak	\$ 7.35
	Weekend ExpressAccount	\$ 8.35
	Weekend FasTrak	\$ 4.90
	Weekend One-Time Toll™	\$ 7.35
Newport Coast	Non-FasTrak	\$ 3.26
	FasTrak	\$ 2.26
Bonita Canyon	Non-FasTrak	\$ 2.00
	FasTrak	\$ 1.00



4.0 SOCIO-ECONOMIC VARIABLES AND LAND USE

This section contains detailed forecasts and supporting commentary on socioeconomic trends in the five counties constituting the "Study Area" between 2010 and 2035 (the "Forecast Period"). The Study Area consists of Los Angeles, Orange, San Bernardino, Riverside, and San Diego counties. Ventura and Imperial counties are also part of the modeled area but are not considered significant with regard to traffic on the Orange County highway network, and the adopted forecasts from SCAG were therefore only validated at the county level. The forecast data developed by PB for use in traffic modeling on the TCAs' toll roads are referred to throughout this section as the "Base Case" forecasts. Sensitivity scenarios are covered in another section of the traffic and revenue report.

4.1 SUMMARY CONCLUSIONS

Employment¹ in the Study Area is forecast to grow by 2.4 million jobs, from 7.5 to 9.9 million during the Forecast Period, a compound annual growth rate of 1.1%. Households² in the Study Area will grow by close to 1.45 million over the Forecast Period from 6.6 to 8.1 million, a 0.9% compound annual growth rate. Housing growth will closely track job growth region-wide, although housing production will vary by market due to overbuilding in some submarkets, such as the Inland Empire³, and very wide differences in values due to location. Dual-income households will become more common throughout the Study Area, and preferences for smaller home sizes near transit that accesses job centers have spread from Los Angeles to formerly less dense areas including central Orange County.

In higher cost areas, including southern and coastal parts of Orange County served by the San Joaquin Hills toll road, localized jobs/housing imbalances will continue. The relatively high cost of living in Orange County has caused many people with jobs there to seek lower cost housing options in places such as the Inland Empire, and to a lesser extent, San Diego County. The resulting commutation pattern into Orange County from external areas has created strong traffic demand on SR 91, which feeds traffic to the Orange County roadway network from the east and I-5, which feeds the network from the south (more directly impacting traffic on the San Joaquin Hills toll road). **Table 4-1** presents a summary of the Base Case Study Area employment and household forecasts.

¹ "Employment," unless otherwise stated, refers to a comprehensive measure of non-farm at-place wage and salary jobs plus government and agricultural workers.

² "Households," unless otherwise stated, refer to occupied dwelling units.

³ The "Inland Empire" consists of the western portions of Riverside and San Bernardino counties, including but not limited to the cities of Corona, Chino, Ontario, Riverside, and San Bernardino.

Table 4-1: Base Case Study Area Employment and Household Forecast (000s)

Employment	2010	2015	2020	2025	2030	2035
Total Employment	7,496	8,150	8,612	9,040	9,460	9,871
Period	2012-15	2015-20	2020-25	2025-30	2030-35	2012-35
Incremental Growth	654	462	428	421	411	2,375
Average Annual Growth	218	92	86	84	82	103
CAGR [1]	1.69%	1.11%	0.97%	0.91%	0.85%	1.11%
Households	2010	2015	2020	2025	2030	2035
Total Households	6,643	6,921	7,257	7,541	7,819	8,093
Period	2012-15	2015-20	2020-25	2025-30	2030-35	2012-35
Incremental Growth	278	336	284	279	274	1,450
Average Annual Growth	93	67	57	56	55	63
CAGR [1]	1.37%	0.95%	0.77%	0.73%	0.69%	0.86%

[1] Compound Annual Growth Rate

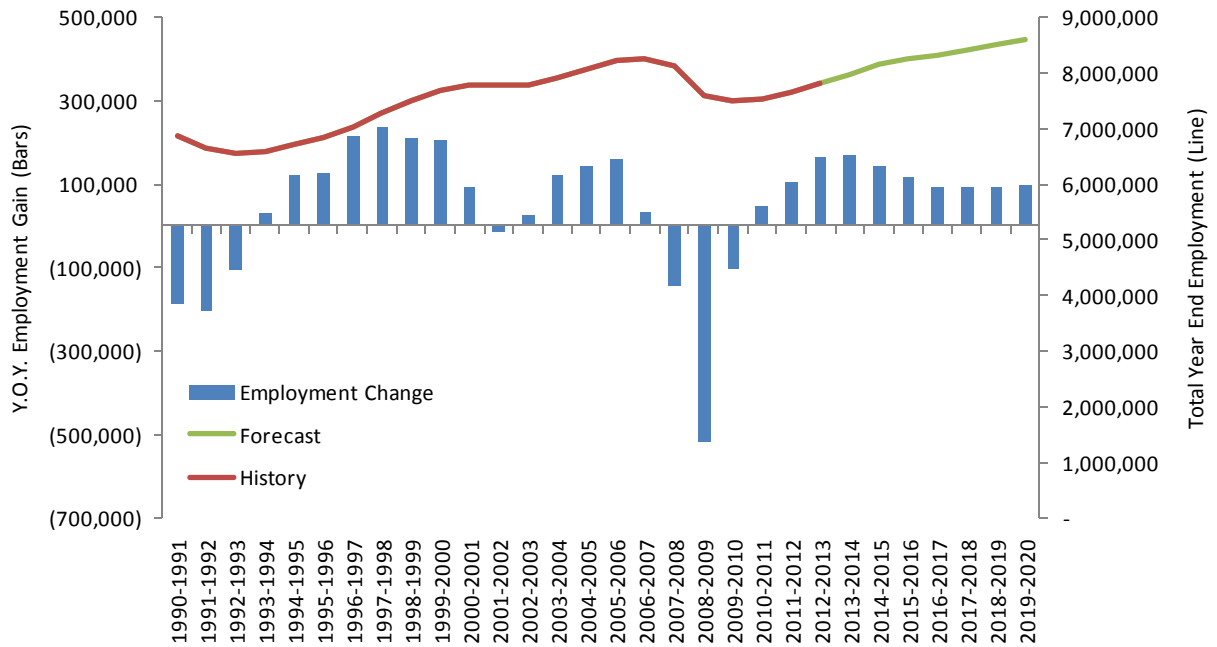
4.1.1 Study Area Employment Summary

The California Economic Development Department (EDD) reports that the Study Area added approximately 71,500 jobs annually (on average) between 1990 and 2007. Between 2007 and 2009, the Study Area lost approximately 761,000 jobs, or 9.2% of its total job base, reducing total jobs to approximately 7.5 million, a level not seen since the 1999 to 2000 period.

Since 2010, job growth has been positive in all Study Area counties. The Base Case forecast increment between 2010 and 2015 is just over 650,000 jobs, and between 2010 and mid-year 2014, according to the EDD, the Study Area grew by approximately 565,000 jobs.

The strongest job growth over the last 18 months has occurred in the Inland Empire, growing approximately 5.6%, followed by the three other Study Area counties, which all grew by approximately 3.7%. **Figure 4-1** shows historical and forecast employment changes in the Study Area through 2020. The figure shows that the Base Case incorporates a period of stronger growth through 2015, followed by a return to more moderate growth between 2015 and 2020.

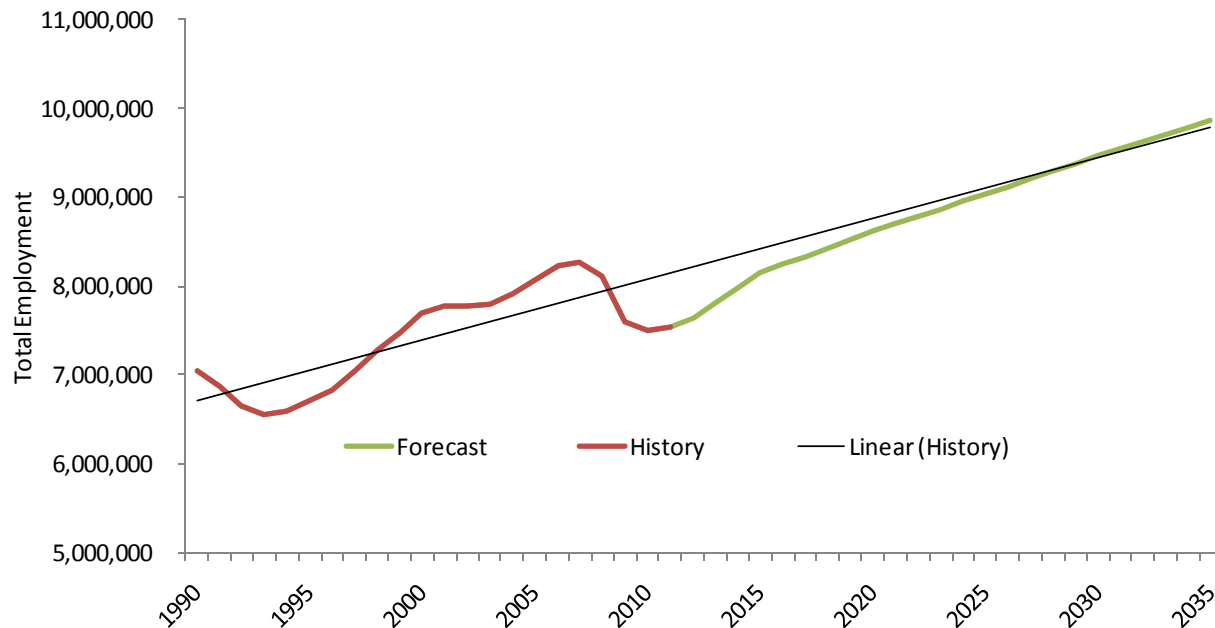
Figure 4-1: Historical and Forecast Study Area Employment Gains and Total Employment



The Base Case forecasts an average of 95,000 new jobs per year in the Study Area between 2010 and 2035, with higher levels in the near term due in part to the continued recovery from the “Great Recession.” While the Study Area economy continues to improve, the strength of the recovery has varied by area. The Inland Empire has had the strongest job growth over the last 18 months relative to other Study Area counties, though it was hit the hardest during the recession, and unemployment remains high.

There are certain issues related to the cost of operating businesses in California that will hamper growth, but the highly educated workforce, industrial diversity, large established international trade industry, and population growth of the various urban cores within the Study Area will support job growth in the long-term. **Figure 4-2** shows historical Study Area employment and the Base Case employment forecast. The black line represents the linear trend line of the historical data series. This figure shows that the Base Case forecast is not expected to “catch up” with the historical trend line within the Forecast Period.

Figure 4-2: Historical and Base Case Study Area Employment Forecasts



Annual employment growth between 2012 and 2015 is forecast to continue in the 1.5% to 2.0% range, which is relatively slower than the recovery periods that followed previous recessions. Signs that the recovery from the Great Recession is gaining momentum in the Study Area include the following:

- (i) Construction activity, which is typically one of the leading growth sectors in economic recovery periods due to demand that is pent-up during recessions, has picked up as vacant residential and non-residential properties have been absorbed and markets (prices and inventories) have stabilized. The reduction in construction activity during and immediately following the recession resulted in pent up demand in the most desirable areas, which are now experience strong price appreciation.
- (ii) The negative impacts that the recession had on the credit markets, that constrained personal and business lending (especially for small businesses) is less of an issue today than it was immediately following the economic downturn.

Although the pendulum has swung back to strong supply and demand conditions for for-sale and rental residential units in many areas, fundamentals for employment and resulting demand for commercial space are less robust, due to a variety of factors, including: 1) the general trend of businesses doing more with less, including sharing work space and telecommuting; 2) investments in computer technology and automation to reduce workforce; 3) outsourcing to reduce overhead and increase profits; and 4) the absorption of commercial space that went

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use

August 22, 2014

vacant during the recession. These findings are further supported by the analysis of Orange County focus areas discussed in later sections. Interviews with developers and planners involved with some of the larger-scale master-planned communities have bullish forecasts for the residential components of their projects but remain less confident in the prospects for commercial land uses, with longer forecast absorption periods.

In the longer-term, the Study Area forecast reflects several fundamental characteristics of Southern California that have impacted growth in the past:

- (i) The diverse mix of employment in the Study Area, including high tech manufacturing (electronics, medical devices, defense equipment, etc.), leisure and hospitality jobs, retail jobs, medical services jobs to support the aging population, and educational services jobs to fuel future innovation and economic growth.
- (ii) Moderation in Los Angeles County job growth as that portion of the Study Area has matured, costs have risen, and opportunities for development on vacant land have become increasingly scarce.
- (iii) Ongoing declines in certain manufacturing categories, some of which are migrating within the Study Area to lower cost operating environments such as the Inland Empire, and others (mainly less advanced manufacturing processes) that could continue moving off shore. It is notable that rising transportation costs and increased exchange rate risk has prompted some companies to bring previously off-shored manufacturing processes back to the U.S., though this is an exception and no real trend can be identified as of yet.
- (iv) Continued housing / jobs imbalance in certain key parts of the Study Area, including Orange County, where the build-out of remaining vacant land is arguably within the forecast horizon (2035). Even under current plans where far more land will be dedicated for residential development than commercial, long commute times will be the norm for many Orange County workers seeking less expensive residential options outside of the county. No substantial improvements to transportation corridors between Orange County and the Inland Empire (SR-91 and Ortega Highway) are assumed in the Base Case.
- (v) The challenges of operating a business in California will continue, which is expected to cause some businesses to relocate to other more business-friendly states such as Arizona, Nevada, Texas, or Utah. The abolishment of redevelopment agencies in California has delayed development of certain major real estate projects. However, it is possible (pending local jurisdictional policies) that this move could result in more development in the long-term as developers of large projects are forced to improve their financials by substituting more

productive uses (residential and commercial) for public space and other non-revenue generating project components.

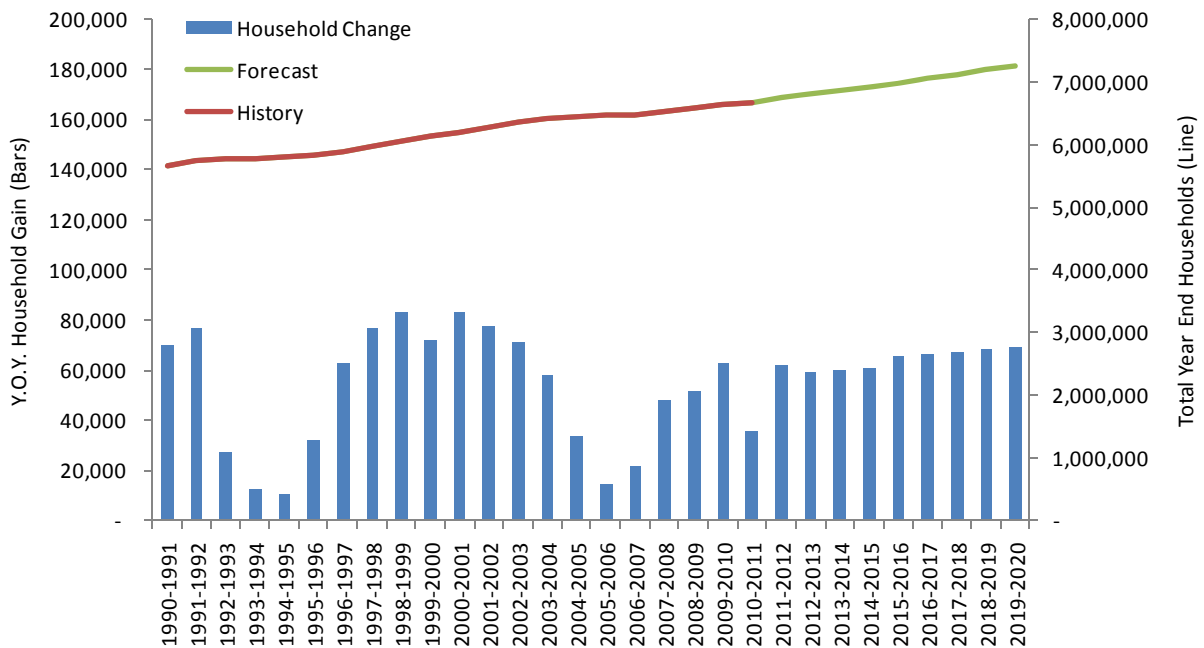
The gradual decline in job growth in the Study Area, especially after 2020, is a result of the continued maturation of certain formerly high growth areas (including many parts of Orange County), while those areas of the Study Area that are currently mature, such as Los Angeles County, will continue to grow only through redevelopment to higher densities.

Within the Study Area, the strongest long-term employment growth is expected in the Inland Empire, where Riverside and San Bernardino county employment is forecast to grow at average annual rates of 2.2% and 1.6%, respectively, over the Forecast Period. Inland Empire job growth will result from two broad trends: 1) the need for nearby population serving jobs to serve large numbers of new residents, and 2) the high cost of doing business in established Orange and Los Angeles county locations, especially for companies with large land demands such as certain types of manufacturing and distribution.

4.1.2 Study Area Household Summary

Between 1990 and 2005, the Study Area averaged approximately 56,500 new households per year. This trend is expected to continue (or be slightly more robust) in the future, as reflected in the approximately 63,000 annual households expected to be added during the Forecast Period. **Figure 4-3** shows historical and forecast household gains in the Study Area.

Figure 4-3: Historical and Forecast Study Area Household Gains and Forecast



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

The Base Case forecast takes into consideration the current inventory of homes for sale, which has been reduced dramatically since 2010 due to pent up demand and a reduction in new home construction following the Great Recession. Growth during the 2010 to 2015 period is expected to be higher than the 2015 to 2020 period in light of the job recovery outlined above. Household growth will lag job growth as unemployed workers already represented in household numbers begin to find jobs.

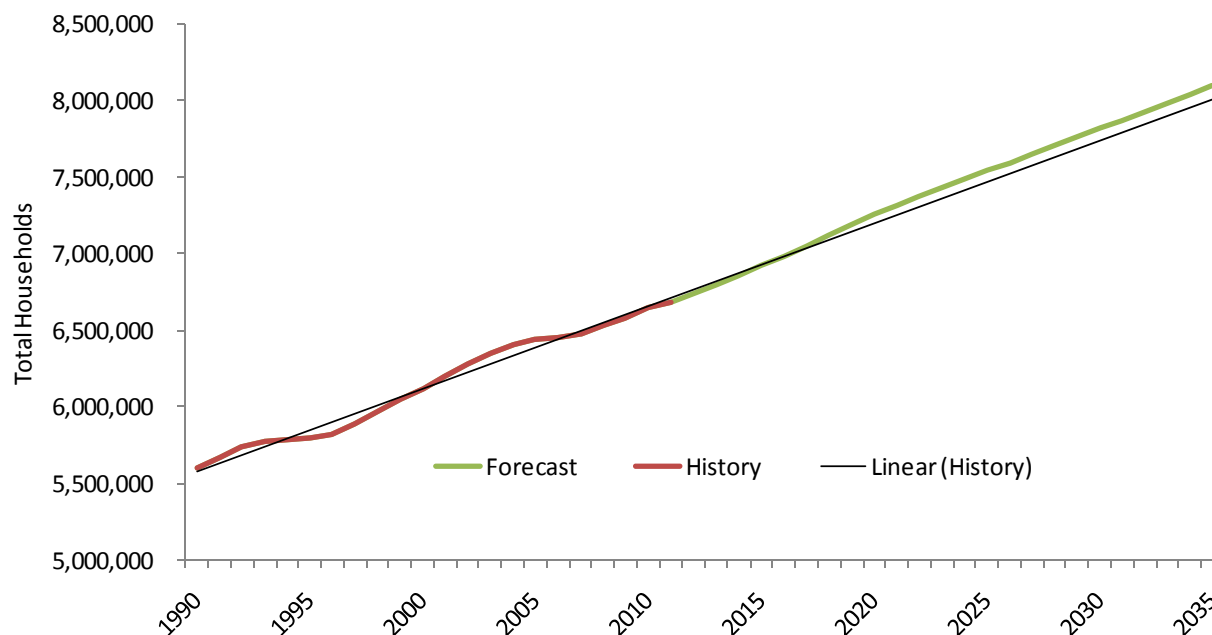
Overall, household formations reflect a higher number of employed persons per household in Orange, San Diego, and Los Angeles counties due to the higher proportion of dual income households and the daily in-migration of workers from surrounding counties. **Table 4-2** shows historical and forecast jobs per household by county in the Study Area. As seen in the table, the average number of jobs per household fell sharply between 2005 and 2010, reflecting the effect of the recession on employment in the Study Area. Employment per household is expected to climb gradually over the Forecast Period, and reach levels closer to pre-recession levels over the 2030 to 2035 period.

Table 4-2: Jobs per Household by County

Jobs/HH	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035
Los Angeles	1.38	1.24	1.30	1.25	1.16	1.20	1.20	1.21	1.21	1.21
Orange	1.41	1.32	1.48	1.54	1.36	1.41	1.44	1.47	1.49	1.52
San Bernardino	0.83	0.85	0.99	1.05	0.96	0.98	1.01	1.03	1.04	1.04
Riverside	0.78	0.77	0.91	0.97	0.78	0.75	0.76	0.76	0.76	0.76
San Diego	1.08	1.05	1.20	1.24	1.12	1.15	1.17	1.18	1.20	1.23
Study Area Average	1.10	1.05	1.17	1.21	1.08	1.10	1.11	1.13	1.14	1.15

Figure 4-4 shows the historical trend of household growth in the Study Area compared to the Base Case forecast. It is expected that household growth in the region will continue mostly along the same trend-line as historical growth. An initial level of higher growth is forecast as the recovery from the recession takes hold in the region between 2015 and 2020.

Figure 4-4: Historical and Base Case Household Forecasts



Residential growth will continue in the most desirable (generally higher priced) locations with strong market conditions for rental apartments. Reduced credit availability in recent years has resulted in strong demand for apartments, in what is currently a tight market. During the housing boom, apartment development declined below historical levels, and many renters temporarily shifted to ownership. After the housing market collapsed, there was a strong shift back to renting, and short supply due to lack of building. As a result of this increased demand and reduced supply, there are relatively low vacancies and increasing rents in most markets.

Since 2012, the market for for-sale product has also improved, due to a combination of limited supply and pent-up demand. As a result, many large scale projects that have begun actively selling units over the past year, such as Rancho Mission Viejo and Great Park, have experienced strong initial sales paces. Later sections of this chapter discuss the success of specific projects in central portions of Orange County including Irvine, Tustin, Aliso Viejo, and others.

In the short term, demand is likely to continue to be strongest in coastal areas, however, in the long term, the bulk of household formations will occur in the western portions of the Inland Empire where price points are lower than most Orange and Los Angeles county markets. This trend will also be supported by increasingly efficient commutes to Orange and Los Angeles job centers, given current and planned expansion of tolled express lane options on SR-91 which links to the Inland Empire communities to the Foothill Eastern toll road and central Orange County employment centers.

A significant component of residential growth in coastal areas during the latter years of the Forecast Period (especially Los Angeles County and northern portions of Orange County) will be through redevelopment of older obsolete industrial properties and small infill projects.

4.2 FORECAST METHODOLOGY

Forecasts were developed using both the Riverside County Transportation Analysis Model (RivTAM) and the San Diego Association of Governments (SANDAG) traffic model. The combination of these two models includes the Study Area and Ventura and Imperial Counties, which, as noted earlier, are not expected to impact Orange County highway traffic in a material way. The Study Area forecast discussed above is the aggregation of 5,531 individual traffic analysis zone (TAZ) forecasts for the RivTAM region, as well as an additional 4,682 TAZs in San Diego County⁴. The disaggregated TAZ forecasts can be aggregated by county, city, or Focus Area to aid in the analysis. The term "Focus Areas" refers to aggregations of TAZs assembled by PB that represent major projects or development areas that received additional attention in the modeling process due to their expected impact on the TCA's toll road traffic. **Figure 4-5** is a map of the Study Area, showing the core of the five counties represented.

⁴ Traffic analysis zones are geographical areas, subsets of Census Tracts, established based on traffic levels and generally bound by roadways.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Figure 4-5: Map of the Study Area



The forecast provides the socioeconomic inputs for 2,243 TAZs in Los Angeles County, 666 TAZs in Orange County, 1,900 TAZs in Riverside County, 402 TAZs in San Bernardino County, and 4,682 TAZs in San Diego County. Together, the area comprising these 10,213 TAZs is referred to as the “Study Area” and is represented by the shaded areas in **Figure 4-5**.

The specific analytical steps taken to complete the Base Case Forecasts were:

- Reviewed Metropolitan Planning Organization (MPO) demographic forecasts including Western Riverside County Council of Governments (WRCOG), Center for Demographic Research (CDR) Orange County Projections (OCP), Southern California Association of Governments (SCAG), San Diego Association of Governments (SANDAG), and other regional local planning agency forecasts to understand how each of those agencies expect growth to occur.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

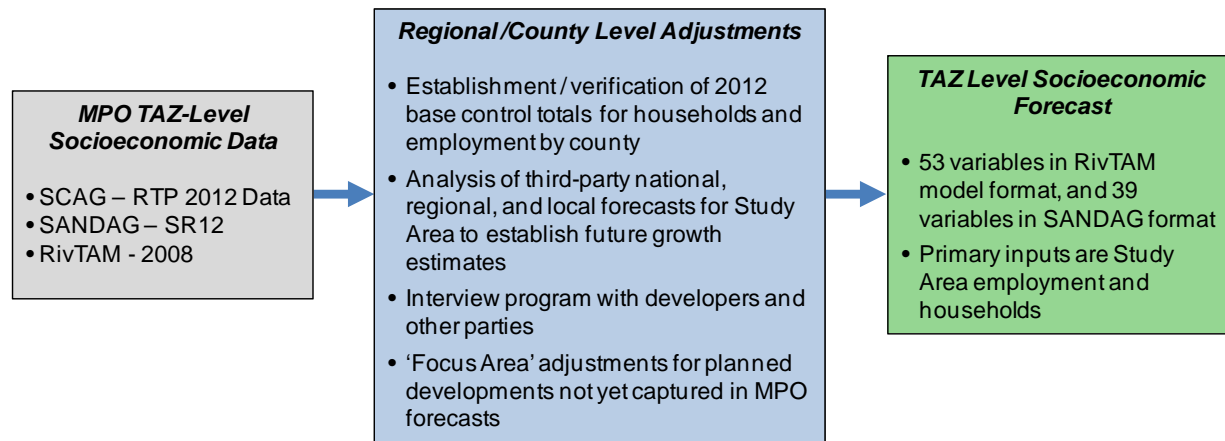
4.0 Socio-economic variables and land use

August 22, 2014

- Incorporated the Base Case Forecasts into the RivTAM / SANDAG TAZ structure for use by Stantec, and performed tests to ensure that socioeconomic model outputs flowed seamlessly into the traffic model.
- Reviewed economic reports and forecasts from the Los Angeles Economic Development Corporation (LAEDC), UCLA Anderson School, Chapman University, California State University (Fullerton), California Department of Finance, Woods & Poole, Moody's Economy.com, and other third party data sources to understand current National, State, and local trends in the critical trip production and attraction variables of households and at-place employment.
- Reviewed 2012 values for the 53 socioeconomic data model parameters at the TAZ level for use by Stantec in calibrating the traffic model. This process was also performed for the 39 variables in the SANDAG model.
- Conducted interviews with local land owners, developers, real estate brokers, planning agencies and associations, and real estate development advisors active in the SJH Corridor. This interview program guided the land use team in uncovering issues that would impact future development in the Study Area, and confirmed Focus Area development potential.
- Conducted field investigations of critical Focus Areas to update information on potential development capacity and progress, inventories, and constraints to development. These investigations supported adjustments to TAZ level allocations of new jobs and households.
- Developed projected Study Area, county, and Focus Area employment and household growth rates for the Forecast Period based on a review of historical trends, national and regional forecasts, economic reports, and first-hand information gathered through the interview process.
- Using information generated through the preceding steps, prepared a Base Case forecast for the required variables (mainly households, jobs, and variations thereof) at the TAZ-level.

Figure 4-6 presents an overview of the PB land use model.

Figure 4-6: Illustration of the PB Land Use Forecast Model Methodology



The Base Case Forecast assumes no major additions to the highway system in Orange County, aside from the proposed Tesoro Extension. Additionally, no major east-west corridor between Orange County and the Inland Empire, such as an elevated highway in the SR 91 corridor or tunnel of similar capacity, is assumed to be built within the Forecast Period. Adding capacity between Orange County and the Inland Empire would have a dampening effect on the growth of new jobs and households in certain parts of the Orange County and would significantly impact travel patterns on the highway system.

The Base Case does assume RCTC and OCTA approved improvements to SR 91 as well as other network improvements included in the Stantec traffic model.

As stated above, the Base Case has been developed using the RivTAM/TransCAD model structure and provides inputs to the traffic model for all 53 socioeconomic parameters. For San Diego County, the Base Case was developed using the SANDAG model structure. Some forecast parameters are directly related to, and were therefore derived from, the primary forecast parameters (total at-place employment and households) while others were adopted from the MPO base data. **Table 4-3** and **Table 4-4** below present each variable and the methodology used to determine its ultimate value for the RivTAM and SANDAG models.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Table 4-3: RivTAM Forecast Variable Methodology

<i>Population Variables (7)</i>		<i>Forecast Methodology</i>	
Total Population	= Residential population + group quarter population		
Group Quarter Population	= Values adopted from MPO data		
Residential Population	= Base Case households * household size		
Population by Age (4 Categories)	= Total population * % by age category adopted from MPO data		
<i>Household Variables (18)</i>		<i>Forecast Methodology</i>	
Total Number of Households	= Base Case Household Forecast		
Households by Household Size (5 Categories)	= Base Case Households * share of households by category adopted from MPO data		
Households by Age of Household Head (4 Categories)	= Base Case Households * share of households by category adopted from MPO data		
Households by Number of Workers (4 Categories)	= Base Case Households * share of households by category adopted from MPO data		
Households by Household Income (4 Variables)	= Base Case Households * share of households by category adopted from MPO data		
<i>School Enrollment (2)</i>		<i>Forecast Methodology</i>	
K-12 School Enrollment	= % of population ages 5-17 enrolled in K-12 adopted from MPO data * new age 5-17 population		
College / University Enrollment	= % of population ages 18-24 enrolled in college adopted from MPO data * new age 18-24 population		
<i>Household Income (5)</i>		<i>Forecast Methodology</i>	
Median Household Income	= Real median household income growth as validated by third party forecasts		
Median Household Income by Income Categories (4 Categories)	= Population growth * share of population adopted from MPO data		
<i>Workers (4)</i>		<i>Forecast Methodology</i>	
Total Workers	= Total workers adopted from MPO data and adjusted to conform with long-term employment forecast trends		
Workers by Earnings (3 Categories)	= Total workers * share of workers in each earnings category adopted from MPO data		



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

<i>Employment Variables (17)</i>	<i>Forecast Methodology</i>
Total Employment	= Base Case Employment Forecast
Employment by Industry (13 Categories)	= Base Case Employment * share of employment by industry adopted from MPO data
Employment by Wage (3 Categories)	= Base Case Employment * share of employment by category adopted from MPO data

Table 4-4: SANDAG Forecast Variable Methodology

<i>Population Variables (4)</i>	<i>Forecast Methodology</i>
Total Population	= Household population + civilian group quarters population + military group quarters population
Civilian Group Quarter Population	= Values adopted from MPO data
Military Group Quarter Population	= Values adopted from MPO data
Household Population	= Total households * household size adopted from MPO forecast
<i>Household Variables (18)</i>	<i>Forecast Methodology</i>
Total Number of Households	= Base Case Household Forecast
Housing Units by Type / Total (4 Categories)	= Base Case Household Forecast * share of units by category adopted from MPO data
Households by Type (Single Family, Multi Family, Mobile) Family (3 Categories)	= Base Case Household Forecast * share of units by category adopted from MPO data
Households by Income (10 Categories)	= Base Case Household Forecast * share of units by category adopted from MPO data
<i>Employment Variables (17)</i>	<i>Forecast Methodology</i>
Total Employment	= Sum of nonfarm employment, military employment, farm employment, and self employed
Nonfarm Employment (13)	= Base Case Employment Forecast * share of employment by industry adopted from MPO data
Other Employment (3 Categories)	= Forecast of farm, military, and self employed * TAZ share of total County employment



4.3 HISTORICAL DATA AND TRENDS IN THE STUDY AREA

4.3.1 Historical Study Area Employment Trends

Employment in the Study Area grew from 7.0 million in 1990 to 7.5 million in 2010, corresponding to an average of 22,750 new jobs per year and a compound annual growth rate of 0.3%. The endpoint of this historical period takes place in the depths of the Great Recession prior to the recovery that followed, and therefore paints a modest picture of the Study Area's employment growth and relative performance over the past 20 years. Some portions of the Study Area, specifically Los Angeles County and parts of Orange County, are more mature job markets that have experienced little growth (especially Los Angeles County) in recent decades; but overall, the Study Area has exhibited resiliency in post recessionary periods, with the redevelopment of obsolete properties in mature areas and steady growth in emerging submarkets.

Removing the 2005 to 2010 period from the historical average tells a very different story of the Study Area's performance in (arguably) normal economic times. Between 1990 and 2005, the Study Area's employment base grew by about 68,000 jobs per year with the strongest growth in the 1995 to 2000 time period when the economy was expanding after the recession that occurred in the early 1990s.

Table 4-5 shows that the vast majority of job growth during this time period occurred in the Inland Empire, San Diego, and Orange counties. Los Angeles County, the most mature county in the Study Area, remained relatively steady at about 4.0 million jobs during this period despite significant job losses during the recessionary period of 1990 to 1995.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Table 4-5: Total Employment Growth by County, 1990 to 2005

County	1990	1995	2000	2005
Los Angeles	4,149,467	3,754,517	4,079,758	4,031,558
Period	1990-95	1995-00	2000-05	1990-05
Incremental Growth	(394,950)	325,242	(48,200)	(117,908)
Average Annual Growth	(78,990)	65,048	(9,640)	(7,861)
CAGR	-1.98%	1.68%	-0.24%	-0.19%
Orange	1,178,992	1,157,967	1,396,492	1,496,508
Period	1990-95	1995-00	2000-05	1990-05
Incremental Growth	(21,025)	238,525	100,017	317,517
Average Annual Growth	(4,205)	47,705	20,003	21,168
CAGR	-0.36%	3.82%	1.39%	1.60%
San Bernardino	413,433	446,350	543,592	647,142
Period	1990-95	1995-00	2000-05	1990-05
Incremental Growth	32,917	97,242	103,550	233,708
Average Annual Growth	6,583	19,448	20,710	15,581
CAGR	1.54%	4.02%	3.55%	3.03%
Riverside	321,733	355,342	466,525	593,108
Period	1990-95	1995-00	2000-05	1990-05
Incremental Growth	33,608	111,183	126,583	271,375
Average Annual Growth	6,722	22,237	25,317	18,092
CAGR	2.01%	5.60%	4.92%	4.16%
San Diego	977,408	989,500	1,205,742	1,292,817
Period	1990-95	1995-00	2000-05	1990-05
Incremental Growth	12,092	216,242	87,075	315,408
Average Annual Growth	2,418	43,248	17,415	21,027
CAGR	0.25%	4.03%	1.40%	1.88%
Study Area	7,041,033	6,703,675	7,692,108	8,061,133
Period	1990-95	1995-00	2000-05	1990-05
Incremental Growth	(337,358)	988,433	369,025	1,020,100
Average Annual Growth	(67,472)	197,687	73,805	68,007
CAGR	-0.98%	2.79%	0.94%	0.91%

While job growth in Orange County has been healthy for the past 20 years, the county is a maturing job center and is expected to grow more slowly than in the past. As the county continues to be built out, denser, infill development and redevelopment of underutilized land will support increased job concentrations in certain portions of the county such as the Irvine Business Complex. Other employment concentrations will be focused in carefully planned, potentially transit-oriented developments in central Orange County, on the limited amount of remaining vacant land in Irvine, Tustin, and other areas serviced by the TCA's toll roads.

The coastal areas make Orange County one of the most sought after places to live in Southern California, resulting in strong demand and relatively high costs. With many business owners and managers wishing to work near where they live, coupled with the presence of Santa Ana Airport, certain industry sectors have clustered around central and coastal Orange County, including

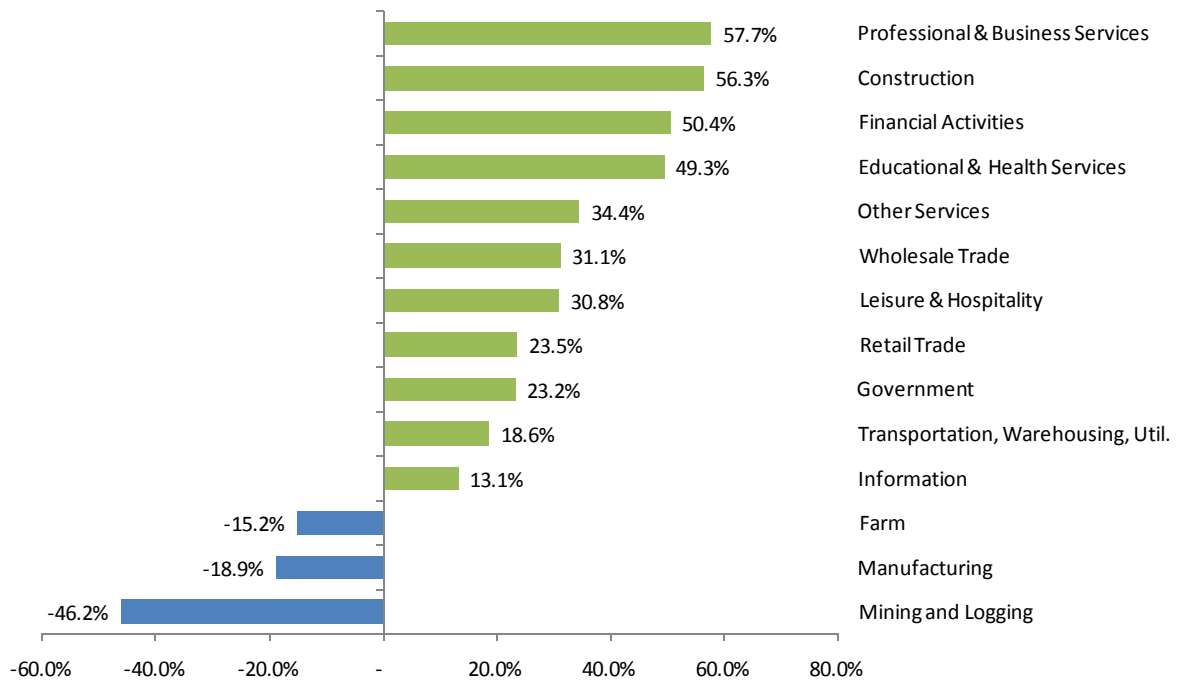


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

many business services, financial services, education and health services, and leisure and hospitality services. These four industries grew by 226,200 jobs between 1990 and 2005, representing around 63% of job growth in Orange County.

Figure 4-7: Orange County Job Growth/Loss by Industry, 1990 to 2005



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

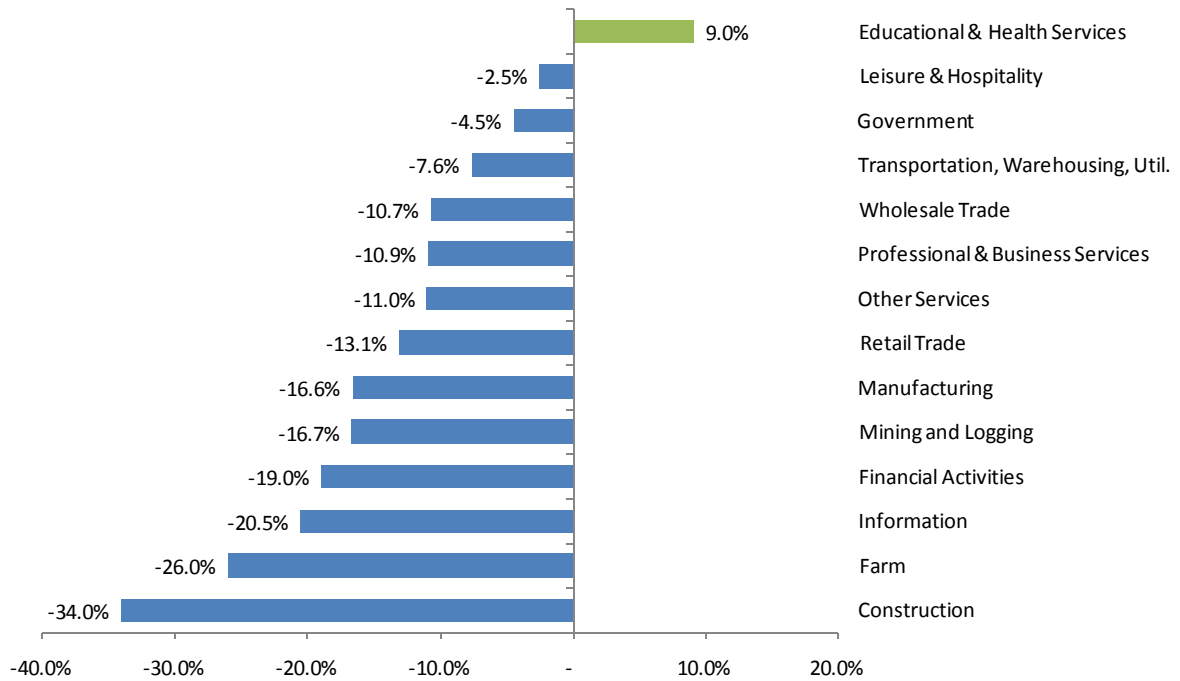
Table 4-6: Orange County Job Growth/Loss by Industry, 1990 to 2005

Jobs Growth by Industry	1990	1995	2000	2005	1990 2005 Growth	1990 2005 Growth %
Professional & Business Service	167,600	181,200	247,500	264,300	96,700	57.7%
Construction	63,900	51,300	76,600	99,900	36,000	56.3%
Financial Activities	92,000	84,500	100,900	138,400	46,400	50.4%
Educational & Health Services	89,400	98,300	112,100	133,500	44,100	49.3%
Other Services	36,000	37,400	43,900	48,400	12,400	34.4%
Wholesale Trade	63,300	68,400	80,800	83,000	19,700	31.1%
Leisure & Hospitality	126,100	122,800	145,900	165,000	38,900	30.8%
Retail Trade	128,000	129,800	147,000	158,100	30,100	23.5%
Government	126,100	128,200	146,600	155,300	29,200	23.2%
Transportation, Warehousing, L	24,200	30,800	30,300	28,700	4,500	18.6%
Information	29,000	28,600	41,200	32,800	3,800	13.1%
Farm	6,600	6,300	7,600	5,600	(1,000)	-15.2%
Manufacturing	225,400	189,600	215,500	182,900	(42,500)	-18.9%
Mining and Logging	1,300	700	600	700	(600)	-46.2%
Total	1,178,900	1,157,900	1,396,500	1,496,600	317,700	26.9%

Source: California Employment Development Department / Labor Market Information Division
Annual Averages

The Great Recession was focused in real estate related industries but had far reaching impacts across numerous sectors, as outlined above. **Figure 4-8** shows the percentage change by employment category during the recession. As seen in the figure, the only employment category that grew during the recession was Educational & Health Services, with a gain of 9.0%. Construction and farm employment fared the worst, with job losses of 34.0% and 26.0%, respectively, during the recession.

Figure 4-8: Orange County Job Growth/Loss by Industry, 2007 to 2010



The most significant job losses by number in Orange County between 2007 and 2010 were in the construction (-35,100 jobs), manufacturing (-30,000 jobs), financial activities (-24,200 jobs), and professional and business services (-28,600 jobs). These four industries accounted for 75% of job losses in Orange County during this time period. **Table 4-7** shows annual job gains and losses by industry in Orange County between 2007 and 2010.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Table 4-7: Orange County Job Growth/Loss by Industry, 2007 to 2010

Jobs Growth by Industry	2007	2008	2009	2010	2007 10 Growth	2007 10 Growth %
Professional & Business Services	273,300	266,900	240,900	244,700	(28,600)	-10.5%
Construction	103,100	91,200	74,200	68,000	(35,100)	-34.0%
Financial Activities	127,700	113,100	105,100	103,500	(24,200)	-19.0%
Educational & Health Services	148,100	157,900	161,300	165,500	17,400	11.7%
Other Services	47,400	46,500	42,600	42,200	(5,200)	-11.0%
Wholesale Trade	86,900	86,700	79,400	77,600	(9,300)	-10.7%
Leisure & Hospitality	172,900	176,400	169,100	168,600	(4,300)	-2.5%
Retail Trade	161,200	155,900	143,000	141,300	(19,900)	-12.3%
Government	159,400	160,800	156,600	152,300	(7,100)	-4.5%
Transportation, Warehousing, U	28,900	29,300	27,800	26,700	(2,200)	-7.6%
Information	31,200	30,100	27,300	24,800	(6,400)	-20.5%
Farm	5,000	4,600	3,800	3,700	(1,300)	-26.0%
Manufacturing	180,400	174,100	154,800	150,400	(30,000)	-16.6%
Mining & Logging	600	600	500	500	(100)	-16.7%
Total	1,526,100	1,494,100	1,386,400	1,369,800	(156,300)	-10.2%

Source: California Employment Development Department / Labor Market Information Division Annual Averages

As noted above, across the board construction employment declines were expected due to the nature of the Great Recession. Orange County also lost jobs in the business & professional and financial services industries combined, illustrating again that many higher paying jobs housed in office space were located and lost there. Many of these jobs were related to the residential real estate market collapse but also to general business and investment services and linked to the general business climate of the region.

Table 4-8 presents data on annual employment growth between 2010 and 2014, representing the recovery period. The table shows that some industries are recovering better than others, including leisure & hospitality, educational and health services, and professional and business services. Construction employment has grown substantially as well. Percentage growth is illustrated in **Figure 4-9**.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Figure 4-9: Orange County Job Growth/Loss by Industry, 2010 to 2014

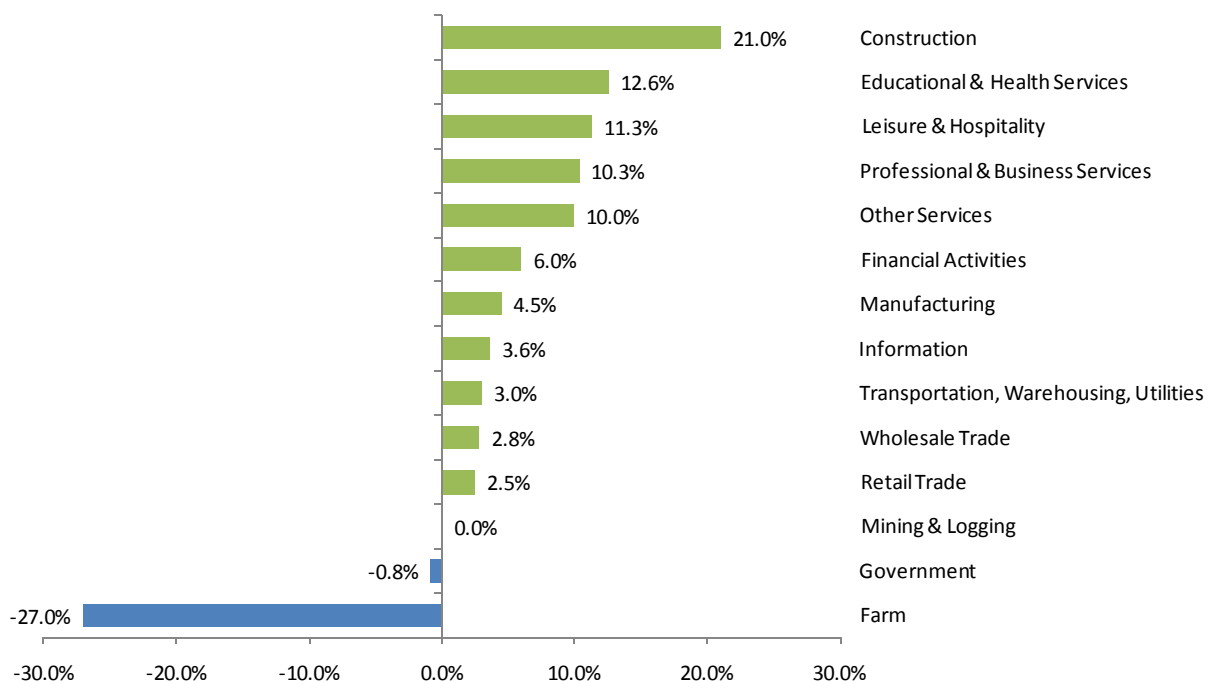


Table 4-8: Orange County Job Growth/Loss by Industry, 2010 to 2014

Jobs Growth by Industry	2010	2011	2012	2013	2014*	2010 14 Growth
Professional & Business Services	244,700	247,300	259,900	264,500	270,000	25,300
Construction	68,000	69,200	71,400	77,300	82,300	14,300
Financial Activities	103,500	104,700	108,200	112,500	109,700	6,200
Educational & Health Services	165,500	168,000	173,800	181,900	186,300	20,800
Other Services	42,200	43,200	44,600	45,500	46,400	4,200
Wholesale Trade	77,600	77,000	76,900	79,200	79,800	2,200
Leisure & Hospitality	168,600	174,000	180,600	187,800	187,700	19,100
Retail Trade	141,300	142,500	143,900	145,700	144,800	3,500
Government	152,300	149,300	147,900	148,300	151,100	(1,200)
Transportation, Warehousing, Util	26,700	27,500	28,000	27,900	27,500	800
Information	24,800	23,800	24,300	25,400	25,700	900
Farm	3,700	3,200	2,800	3,000	2,700	(1,000)
Manufacturing	150,400	154,200	158,200	157,900	157,100	6,700
Mining & Logging	500	500	500	500	500	-
Total	1,369,800	1,384,400	1,421,000	1,457,400	1,471,600	101,800

* Through April 2014

Source: California Employment Development Department / Labor Market Information Division Annual Averages



4.3.2 Historical Study Area Household Trends

Historical residential building permit data from between 1995 and 2010 is shown in **Table 4-9**. Between 1995 and 2011 the Study Area averaged approximately 56,000 permit issuances per year, with around 40% of these permits issued in the Inland Empire counties, 27% in Los Angeles County, 15% in Orange County, and the remaining 12% of activity occurring in San Diego County.

Residential permit issuance grew significantly each year between 1995 and 2004, even during the early 2000s when the short tech bubble-related recession occurred. Permit issuance in the Study Area peaked in 2004 and 2005 with close to 100,000 permits issued in each of the two years. During each of these two years over half the building permits issued were in Riverside and San Bernardino counties.

The surge in housing production between 2002 and 2006, especially in Riverside and San Bernardino counties, was in large part attributable to favorable lending terms, reflected by historically low mortgage rates. After peaking in 1981, the average annual 30-year mortgage rate trended downward until reaching a 30 year low in 2003 at under 5.5%. This borrowing environment made homes more affordable despite robust annual price increases during the late 1990's through mid-2000's.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Table 4-9: Growth of Total Residential Building Permits in the Study Area

Year	Los Angeles	Orange	Riverside	San Bernardino	San Diego	Total	Y.O.Y. % Change
1995	7,763	8,193	6,806	3,892	6,633	33,287	-
1996	7,731	10,173	7,540	4,822	6,848	37,114	11.5%
1997	9,829	12,261	9,747	5,448	11,139	48,424	30.5%
1998	11,226	9,704	12,527	6,127	11,891	51,475	6.3%
1999	14,060	12,239	14,154	6,767	16,295	63,515	23.4%
2000	16,968	12,520	15,025	6,471	15,592	66,576	4.8%
2001	18,294	8,611	19,012	8,405	15,405	69,727	4.7%
2002	16,454	11,796	22,255	10,219	13,684	74,408	6.7%
2003	20,903	9,248	30,353	11,899	18,031	90,434	21.5%
2004	26,529	9,256	33,446	18,017	15,587	102,835	13.7%
2005	23,948	7,143	34,373	16,635	14,306	96,405	-6.3%
2006	25,202	8,303	24,765	13,324	9,191	80,785	-16.2%
2007	19,244	7,372	12,334	7,752	7,435	54,137	-33.0%
2008	11,810	3,235	5,763	3,183	5,357	29,348	-45.8%
2009	5,138	2,143	4,072	2,263	2,946	16,562	-43.6%
2010	7,260	3,134	4,547	1,789	3,494	20,224	22.1%
2011	9,895	4,352	3,264	1,472	5,370	24,353	20.4%
2012	11,365	6,082	4,052	1,897	5,666	29,062	19.3%
2013	14,776	10,422	5,924	3,424	8,264	42,810	47.3%
2014*	19,927	10,968	5,077	2,864	10,014	48,850	14.1%
Total	298,322	167,155	275,036	136,670	203,148	1,080,331	

* Annualized based on first two months of available data

Source: U.S. Census Bureau

Annual permit issuance in the Study Area between 1995 and 2006 averaged about 68,000, but declined significantly beginning in 2007, falling below the 1995 to 2006 average in each of the subsequent years through 2013. The annualized figure for 2014 shown above was estimated based only on two months of data, but given trends in the Inland Empire uncovered during our field investigations, we believe an estimate in the 50,000 dwelling unit range is likely.

New home production in many parts of the Study Area, but particularly in the Inland Empire, is still somewhat stagnant, although continued reductions in inventory suggest that the worst hit areas are beginning to stabilize. Demand will be driven primarily by job growth, which has been weak in the Inland Empire but relatively strong in the Coastal Areas served by the SJH toll road.

Trends in single and multifamily product types reflect the relative levels of maturity of each county, with more mature areas that are fully developed and space-constrained limited to higher density development. The split between single family detached and multifamily units built between 1995 and 2011 in the Study Area was approximately 70%/30% respectively. Single family detached homes represented approximately 85% of the homes built in Riverside and San Bernardino counties, an area with a relative abundance of developable greenfield land.



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Orange County, which is running out of vacant land for development, falls between Los Angeles and the Inland Empire counties with approximately 60% of new homes built as detached units.

Figure 4-10: Study Area Residential Building Permit Issuance, 2005 to 2013

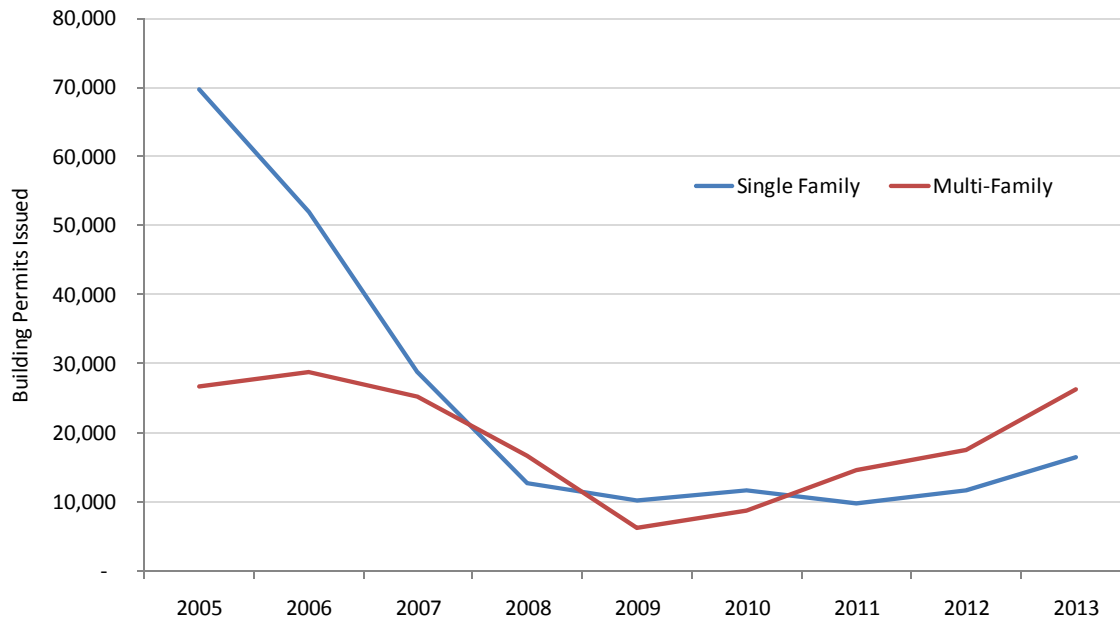


Table 4-10 presents annual residential building permit data from between 2005 and 2013. The table shows annualized data for the first two months of 2014 that indicate a strong rebound in residential construction. Interestingly, **Table 4-10** shows a more gradual decline in multifamily unit permits in 2007 and 2008 relative to single family units. This trend, among other reasons, is likely a result of builders being unable to halt the production of a large multifamily project as quickly as a detached unit project. In many cases developers carried multifamily projects forward but converted condominium projects to apartments, for which there remained a relatively healthy market.

Table 4-10: Annual Building Permits Issued in the Five-County Area, 2005 to 2014

County	2007	2008	2009	2010	2011	2012	2013	2014*
Los Angeles								
Single Family	7,102	3,249	2,268	2,384	2,275	2,675	3,839	5,417
Multi-Family	12,142	8,561	2,870	4,876	7,620	8,690	10,937	14,510
Total	19,244	11,810	5,138	7,260	9,895	11,365	14,776	19,927
Orange								
Single Family	2,279	1,330	1,341	1,624	1,822	2,271	3,670	3,756
Multi-Family	5,093	1,905	802	1,510	2,530	3,811	6,752	7,213
Total	7,372	3,235	2,143	3,134	4,352	6,082	10,422	10,968
Riverside								
Single Family	9,717	3,820	3,406	4,027	2,275	3,107	4,432	4,221
Multi-Family	2,617	1,943	666	520	989	945	1,492	856
Total	12,334	5,763	4,072	4,547	3,264	4,052	5,924	5,077
San Bernardino								
Single Family	6,302	1,976	1,481	1,260	1,103	1,381	2,040	1,490
Multi-Family	1,450	1,207	782	529	369	516	1,384	1,374
Total	7,752	3,183	2,263	1,789	1,472	1,897	3,424	2,864
San Diego								
Single Family	3,422	2,361	1,778	2,270	2,245	2,197	2,565	2,920
Multi-Family	4,013	2,996	1,168	1,224	3,125	3,469	5,699	7,094
Total	7,435	5,357	2,946	3,494	5,370	5,666	8,264	10,014
Study Area								
Single Family	28,822	12,736	10,274	11,565	9,720	11,631	16,546	17,803
Multi-Family	25,315	16,612	6,288	8,659	14,633	17,431	26,264	31,046
Total	54,137	29,348	16,562	20,224	24,353	29,062	42,810	48,850

* Annualized based on first two months of available data

Source: U.S. Census Bureau

4.4 BASE YEAR 2012 ESTIMATES

The California EDD maintains data on historical at-place employment by county. These data, both annual and monthly through 2011, along with third party forecasts, were used to establish an actual 2012 base year employment numbers for each county. For each county, the actual 2010 to 2011 EDD data were used to establish an actual base level of employment by county, which was then adjusted to 2012 based on a factor applied to the most recent EDD data.

Establishing and validating current employment counts for 2012 was critical because the adopted MPO forecasts are normally not updated frequently enough to be relied upon at all times. **Table 4-11** shows the derivation of 2012 base year model totals from 2010 / 2011 actual employment data available for each county.

Table 4-11: 2010 to 2012 Derivation of Base Year Total Jobs (000s)

Employment	2010	2011	2012
Los Angeles	3,779	3,800	3,835
% Growth		0.54%	0.92%
Orange	1,357	1,371	1,394
% Growth		1.02%	1.67%
Riverside	537	538	547
% Growth		0.31%	1.70%
San Bernardino	589	590	600
% Growth		0.11%	1.70%
San Diego	1,223	1,231	1,254
% Growth		0.68%	1.88%

Source: California Employment Development Department / PB Analysis

Table 4-12 shows a similar analysis for households. Household counts were taken from Moody's Economy.com counts, which were verified with the 2010 United States Census. 2011 and 2012 were estimated using third party / Base Case annual growth rates applied to actual 2010 counts of households in the Study Area.

Table 4-12: 2010 to 2012 Derivation of Base Year Total Households (000s)

Households	2010	2011	2012
Los Angeles	3,249	3,251	3,265
% Growth		0.06%	0.45%
Orange	996	1,000	1,009
% Growth		0.36%	0.90%
Riverside	692	707	726
% Growth		2.16%	2.60%
San Bernardino	615	620	627
% Growth		0.84%	1.16%
San Diego	1,092	1,101	1,114
% Growth		0.88%	1.19%

Source: Moody's Economy.com / US Census / PB Analysis

4.5 EMPLOYMENT FORECASTS

This section provides detailed information on the Base Case Forecasts developed as inputs to the RivTAM model for the Tesoro Extension traffic and revenue forecasting effort. As outlined in the methodology section above, PB uses third party forecasts to assist in developing its long-term forecasts at the county-level. A presentation of these forecasts is provided first, along with commentary on current economic trends and expectations that resulted in the Base Case forecast.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

While household and population counts are somewhat standard across forecasting platforms, most of the forecasts reviewed have varying “definitions” of employment that are not directly comparable. As such, we offer the following terminology to help clarify the dialogue that follows:

- **Wage & Salary:** A widely used definition of employment used by the Bureau of Labor Statistics (BLS) which reports payroll employment counts based on insurance claims.
- **Proprietors:** Persons who own businesses but are paid by distributions from business revenue, and are not part of the payroll.
- **Self Employed:** Persons who are contract employees operate businesses as individuals or partners and are therefore not part of company payrolls. May be some overlap with Proprietors.

Because of the differences in employment definitions and when the individual forecasts were developed, compound annual growth rates (CAGR) are displayed in the data tables to facilitate direct comparison of each forecast.

4.5.1 Comparative Third Party Forecasts: Long-Term

Woods & Poole: Woods & Poole provides economic and demographic forecasts for every county in the United States. Parsons Brinckerhoff obtained historical and forecast data through 2040 at the county level for total employment, households and population. Employment data measures both full- and part-time at-place employment from the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). The BEA survey typically reports higher employment totals than other sources including the Bureau of Labor Statistics (BLS) due to its inclusion of agricultural, military, proprietors, household workers and miscellaneous employment.

The W&P employment forecast for the Study Area reports 10.7 million jobs in 2010 and forecasts employment to increase to 15.6 million jobs by 2035, a 1.52% compound annual growth rate. The forecast predicts relatively stable growth over the forecast period, which is substantially more robust than the other third party forecasts surveyed.

California Department of Transportation (Caltrans): Caltrans provides long-term forecasts for various socio-economic variables. The primary data gathering source for employment is the California EDD Labor Market Information (LMI), and for households and population, the California Department of Finance Demographic Research Unit.

The Caltrans employment forecast for the Study Area totals 7.4 million jobs in 2010 and forecasts employment to increase to 9.95 million jobs by 2035, a 1.15% compound annual growth rate. The forecast predicts the strongest growth to occur between 2010 and 2015 at 1.96% growth, tapering off over the last 20 years of the forecast period, reaching a low of 0.81% between 2030 and 2035.



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Moody's Economy.com: Moody's provides independent economic and demographic projections through 2040. Moody's gathers data from the U.S. Bureau of Labor Statistics. The same BLS / CES program is used as a base for Moody's forecasts, as well as the Quarterly Census of Employment and Wages (QCEW) produced by the BLS.

The Moody's employment forecast for the Study Area reports 7.6 million jobs in 2010 and forecasts employment to increase to 9.6 million jobs by 2035, a 0.91% compound annual growth rate. The forecast predicts the strongest growth to occur between 2010 and 2015 at 2.0% followed by periods of substantially lower growth ranging from 0.42% to 0.82%.

Table 4-13 shows each of the employment forecasts described above along with the Base Case Forecast for the Study Area.

Table 4-13: Comparisons of Long-Term Employment Projections (000s)

Employment	2010	2015	2020	2025	2030	2035
Woods & Poole	10,698	11,520	12,442	13,430	14,487	15,618
Caltrans	7,472	8,232	8,770	9,143	9,557	9,952
Moody's	7,634	8,434	8,750	8,934	9,198	9,582
Base Case	7,496	8,150	8,612	9,040	9,460	9,871
Incremental Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Woods & Poole	822	922	988	1,057	1,131	4,920
Caltrans	760	538	373	414	395	2,480
Moody's	800	316	184	264	384	1,948
Base Case	654	462	428	421	411	2,375
Average Annual Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Woods & Poole	274	184	198	211	226	197
Caltrans	253	108	75	83	79	99
Moody's	267	63	37	53	77	78
Base Case	218	92	86	84	82	95
CAGR	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Woods & Poole	1.49%	1.55%	1.54%	1.53%	1.52%	1.52%
Caltrans	1.96%	1.27%	0.84%	0.89%	0.81%	1.15%
Moody's	2.01%	0.74%	0.42%	0.58%	0.82%	0.91%
Base Case	1.69%	1.11%	0.97%	0.91%	0.85%	1.11%

Notes: Caltrans includes farm employment. Woods & Poole includes estimates of self employed and are only comparable on a percent increase basis.

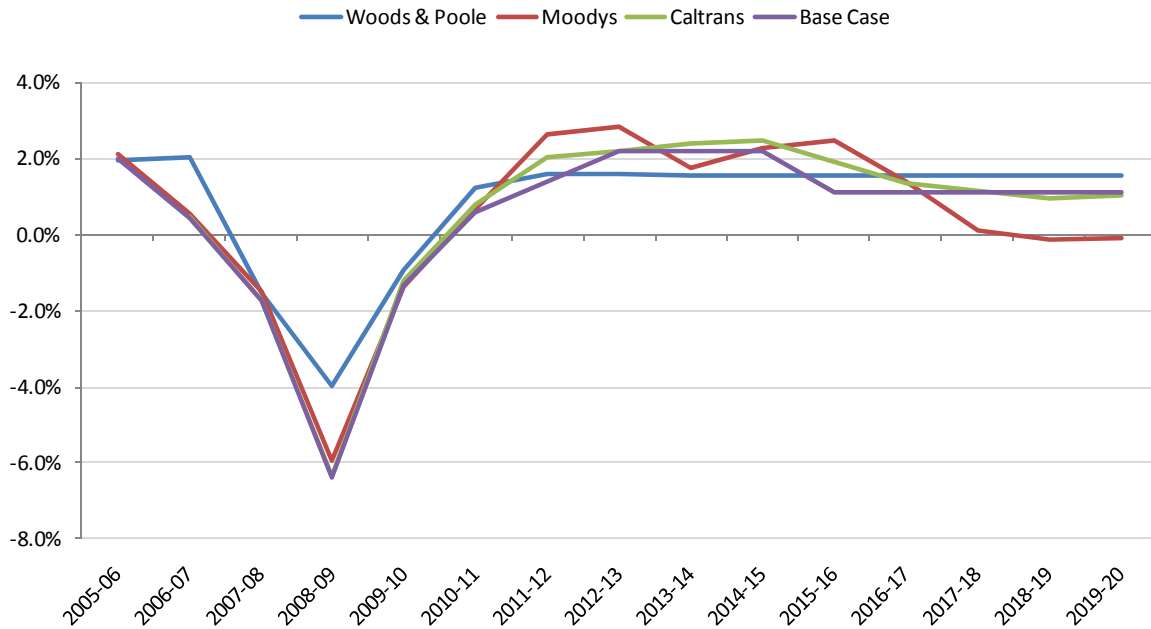
4.5.2 Comparative Forecasts: Short-Term

The third party sources listed above also provided detailed annual forecasts for the near-term. This perspective is especially important because the timing of the economy's recovery in the next five years will impact all future years of the forecast. **Figure 4-11** compares the third party forecasts' growth rates between 2005 and 2020 with the Base Case Forecast. The exhibit shows the substantial job losses between 2008 and 2010 followed by a period of recovery (each forecast maintains different base years and actual years, resulting in the variation prior to 2014).



The Base Case and Caltrans forecasts (green and purple lines) are similar, and represent a moderate recovery and return to an annual growth rate in the 1.5 to 2.0% range by 2018.

Figure 4-11: Comparison of Short-Term Employment Forecasts (CAGR)



4.5.3 Study Area Employment Forecast

Total employment growth in the Study Area between 2010 and 2035 is projected to be 2.4 million jobs or an average of approximately 95,000 jobs per year (1.1% CAGR). **Table 4-14** breaks this growth down by county.

Orange County is expected to see moderate growth, adding 16,400 jobs per year on average between 2010 and 2035. This represents a 23% slower pace than the average annual increases of 21,170 that were seen between 1990 and 2005. This level of employment growth reflects access constraints (i.e. transportation, land costs, etc.) to the county and jurisdictional development and entitlement caps on potential development activity.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

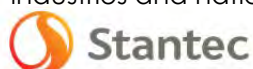
Table 4-14: Base Case Employment Forecast by County (000s)

Employment	2010	2015	2020	2025	2030	2035
Los Angeles	3,779	4,094	4,199	4,330	4,464	4,603
Orange	1,357	1,479	1,569	1,641	1,707	1,768
San Bernardino	589	643	710	775	833	885
Riverside	537	598	700	776	852	927
San Diego	1,233	1,336	1,434	1,518	1,604	1,688
Study Area	7,496	8,150	8,612	9,040	9,460	9,871
Incremental Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Los Angeles	315	105	131	135	139	824
Orange	122	90	72	66	61	411
San Bernardino	54	67	65	58	52	296
Riverside	61	102	76	76	75	390
San Diego	103	98	84	86	84	455
Study Area	654	462	428	421	411	2,375
Average Annual Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Los Angeles	63	21	26	27	28	33
Orange	24	18	14	13	12	16
San Bernardino	11	13	13	12	10	12
Riverside	12	20	15	15	15	16
San Diego	21	20	17	17	17	18
Study Area	131	92	86	84	82	95
CAGR	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Los Angeles	1.61%	0.51%	0.61%	0.61%	0.61%	0.79%
Orange	1.73%	1.19%	0.90%	0.79%	0.70%	1.06%
San Bernardino	1.76%	2.00%	1.77%	1.45%	1.22%	1.64%
Riverside	2.19%	3.20%	2.08%	1.89%	1.70%	2.21%
San Diego	1.61%	1.43%	1.15%	1.11%	1.03%	1.26%
Study Area	1.69%	1.11%	0.97%	0.91%	0.85%	1.11%

The Inland Empire will experience the highest growth in jobs with compound annual growth rates of 1.64% and 2.21% over the 25 year period for San Bernardino and Riverside counties, respectively. The Inland Empire counties are expected to add approximately 28,000 new jobs annually between 2010 and 2035. This is about 6,000 fewer jobs annually than the average annual growth experienced between 1990 and 2005. Between 1990 and 2005, the Inland Empire counties experienced employment growth of approximately 33,700 jobs per year.

Los Angeles County will add approximately 33,000 jobs per year, though it will grow at the slowest rate of the five counties in the Study Area, less than 0.8% annually. Between 1990 and 2010, Los Angeles county job growth was cyclical but lost jobs on an annual average basis. With more diversity in its job base and major investments in transportation infrastructure, specifically transit, positive but moderate job growth is expected in the future.

The lack of developable land in Los Angeles County will limit the rate of job growth there, though it will continue to have the largest employment base in the region due to the established industries and national headquarters, airport and port facilities, location relative to the coast,



and diverse housing stock. Developers will continue to seek out underutilized sites to redevelop into higher density properties, both residential and commercial. Transit oriented development around the rapidly developing transit system, as noted in the sidebar, is a relatively new trend in Los Angeles that will house a significant percentage of new development. Still, some Los Angeles County residents are expected to migrate east to Riverside or San Bernardino counties seeking lower costs of living. The strongest growth industries in Los Angeles are expected to be educational and professional services, as well as arts and entertainment.

Orange County will see most of its long-term job growth in the same three industry categories as Los Angeles County but the fourth largest industry will be Finance, Investment, and Real Estate services (FIRE). Redevelopment of older residential and industrial properties in Orange County will be geared towards new higher density residential space and reuse of industrial buildings as hybrid spaces for light manufacturing and office. Higher density office space will be developed in the medium and long-term. There is a notable movement towards shared office space and working from home which will further temper the demand for office space in Orange County and other parts of the Study Area.

**SCAG's COMPASS BLUEPRINT
DEVELOPMENT PLANNING INITIATIVE-**

In 2000, SCAG introduced the Compass Blueprint planning program to guide development in a more sustainable fashion. The program encourages focusing growth in existing or emerging growth centers and transit access points as opposed to allowing unconstrained automobile-dependent sprawl. This general principle allows for more mixed use development that is pedestrian friendly and preserves open space.

Development and redevelopment plans throughout the Study Area now commonly follow the Compass Blueprint guidelines, which will aid in sustaining job and household growth in urban parts of the Study Area such as Los Angeles and portions of Orange County.

During the forecast period, a significant share of Orange County employment is forecast to be concentrated in the Irvine Business Complex and other commercial nodes to the southeast in Irvine, within close proximity to SR-73. These areas continue to be some of the most desirable locations for high-tech manufacturing, business services, and finance and real estate employment, paying some of the highest wages in the Study Area. Much of the traffic on the San Joaquin Hills toll road feeds directly into the Irvine Business Complex and other Irvine job centers to the southeast.

4.6 HOUSEHOLD FORECAST

4.6.1 Study Area Comparative Forecasts

As in the employment forecast section, information on third party forecasts examined by PB to help guide its long-term county-level forecasts is presented first, followed by details of the Base Case Forecast. The same three third party forecasts, Woods & Poole, Moodys, and Caltrans, which were surveyed for employment, were also surveyed for household forecasting purposes. **Table 4-15** compares the growth rates from each source with the Base Case Forecast from 2010 to 2035.



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

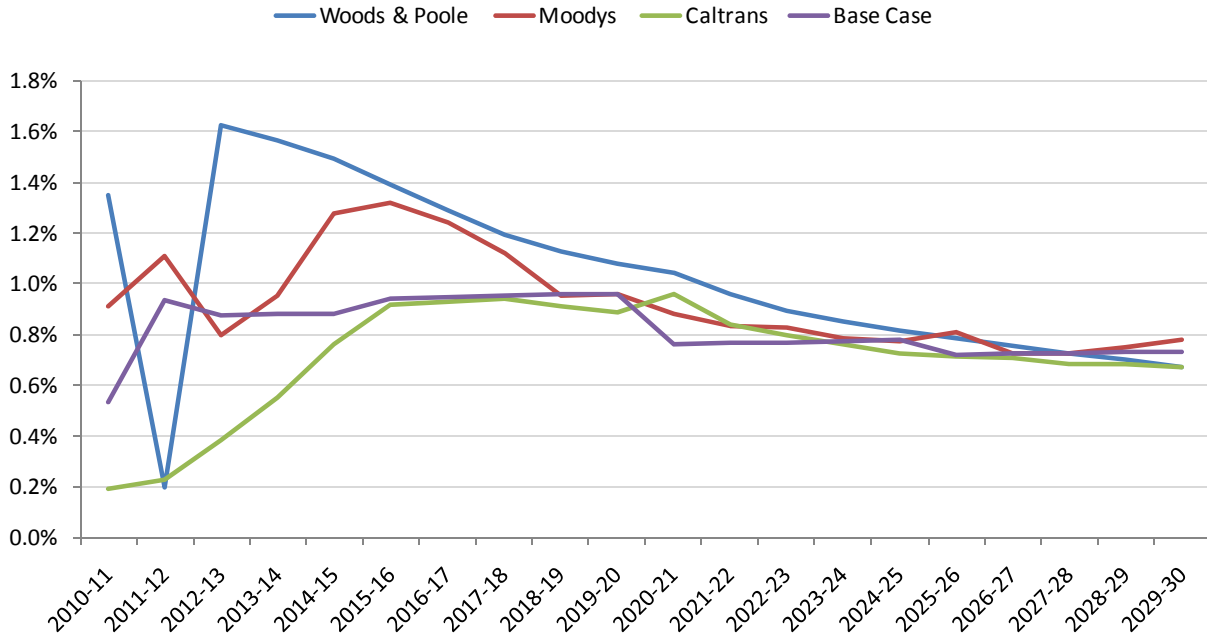
4.0 Socio-economic variables and land use
August 22, 2014

Table 4-15: Comparison of Long-Term Household Projections (000s)

Households	2010	2015	2020	2025	2030	2035
Woods & Poole	6,634	7,057	7,498	7,846	8,136	8,393
Caltrans	6,617	6,759	7,075	7,365	7,624	7,870
Moody's	6,643	6,986	7,386	7,694	7,991	8,301
Base Case	6,643	6,921	7,257	7,541	7,819	8,093
Incremental Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Woods & Poole	423	440	349	290	257	1,759
Caltrans	141	316	290	259	246	1,253
Moody's	343	400	308	297	310	1,658
Base Case	278	336	284	279	274	1,450
Average Annual Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Woods & Poole	141	88	70	58	51	70
Caltrans	47	63	58	52	49	50
Moody's	114	80	62	59	62	66
Base Case	93	67	57	56	55	58
CAGR	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Woods & Poole	1.25%	1.22%	0.91%	0.73%	0.62%	0.95%
Caltrans	0.42%	0.92%	0.81%	0.69%	0.64%	0.70%
Moody's	1.01%	1.12%	0.82%	0.76%	0.77%	0.89%
Base Case	0.82%	0.95%	0.77%	0.73%	0.69%	0.79%

All of the forecasts reflect similar long-term annual growth rates over the Forecast Period, ranging from 0.70% to 0.95%, however, slight variations between five-year periods are apparent. For instance, the W&P view is one of strong early growth that tapers off more substantially than the other forecasts. Moody's expects a similar recovery to that envisioned by W&P, but with higher sustained growth in the latter part of the forecast. Caltrans predicts a later recovery in their household growth forecasts, with Caltrans the strongest period of growth predicted to be between 2015 and 2020, deviating from the view of all other sources. **Figure 4-12** further illustrates this data comparison, showing the Base Case Forecast expectations for a recovery of household growth in the near term, and the fastest growth of the Forecast Period occurring between 2010 and 2015.

Figure 4-12: Comparison of Long-Term Household Growth Rates, 2010 to 2030



The recent recession was caused in large part by the overbuilding of residential real estate and speculative lending practices that together resulted in large inventories of empty new and resold homes. As is typical with economic models, when inventories build and demand declines, prices fall, as has happened in the Study Area over the past three years. The median single family home price in Orange County increased substantially in the early and mid-2000s to a peak of over \$747,000 in 2006, but declined sharply between 2007 and 2009 as a result of the 2008 recession. Home prices across the Study Area behaved similarly, though the most substantial percentage declines were realized in the Inland Empire, as shown in **Table 4-16**.

Table 4-16: Historical Study Area Median Home Prices

Median Home Price	2007	2008	2009	2010	2011	2012	2013	2014
Los Angeles	591,741	386,403	286,657	310,871	301,300	315,390	403,760	435,950
Orange	775,424	563,959	522,750	566,508	534,680	567,910	661,740	696,680
San Bernardino	416,084	269,213	178,919	214,335	202,910	219,850	298,470	321,840
Riverside	328,469	204,586	123,141	141,895	129,570	138,110	174,650	202,420
San Diego	619,181	418,829	362,647	397,911	377,550	388,100	483,330	531,350
Growth Rate	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2007-2014
Los Angeles	-35%	-26%	8%	-3%	5%	28%	8%	-26%
Orange	-27%	-7%	8%	-6%	6%	17%	5%	-10%
San Bernardino	-35%	-34%	20%	-5%	8%	36%	8%	-23%
Riverside	-38%	-40%	15%	-9%	7%	26%	16%	-38%
San Diego	-32%	-13%	10%	-5%	3%	25%	10%	-14%

Source: California Association of Realtors median single family prices (June)

As a result of this residential inventory overhang, construction activity halted during and immediately following the recession. At the same time, apartment market fundamentals began to dramatically improve due to a combination of supply and demand factors as well. During the housing boom, a historically low level of rental units were delivered, and many renters shifted to homeownership. Following the collapse of the for-sale housing market, an increasing share of residential demand shifted back to rental apartments, due to a variety of factors, including economic necessity of many unemployed and underemployed households, homeowners forced to sell due to unsustainable adjustable rate mortgage payments, and increasingly conservative mortgage lending requirements. Since 2012, for-sale conditions have improved, inventory levels have stabilized, and in some cases, the slowdown in construction that took place has resulted in undersupply in some of the most desirable residential destinations, resulting in healthy price appreciation. Homebuilders have since responded, and many new, large-scale planned communities have begun actively selling units with reports of robust sales paces.

Many families in the Study Area have been, and will continue to be, priced out of the Orange County market and are expected to seek more affordable living arrangements in other places such as the Inland Empire. This trend is expected to continue despite the price moderation that began in the 2007 to 2009 period for all counties.

4.6.2 Study Area Household Forecasts

Table 4-17 presents the Base Case Forecast of households. The Study Area is expected to add close to 1.5 million new households between 2010 and 2035, a compound annual rate of 0.79% over the Forecast Period.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Table 4-17: Base Case Household Forecast by County (000s)

Households	2010	2015	2020	2025	2030	2035
Los Angeles	3,249	3,406	3,483	3,540	3,597	3,656
Orange	996	1,036	1,080	1,108	1,133	1,158
San Bernardino	615	629	675	726	776	828
Riverside	692	722	825	921	1,017	1,113
San Diego	1,092	1,128	1,194	1,246	1,296	1,338
Study Area	6,643	6,921	7,257	7,541	7,819	8,093
Incremental Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Los Angeles	157	77	57	58	59	407
Orange	40	44	28	25	25	162
San Bernardino	14	46	51	50	52	213
Riverside	30	103	96	96	96	421
San Diego	36	66	52	50	42	246
Study Area	278	336	284	279	274	1,450
Average Annual Growth	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Los Angeles	31	15	11	12	12	16
Orange	8	9	6	5	5	6
San Bernardino	3	9	10	10	10	9
Riverside	6	21	19	19	19	17
San Diego	7	13	10	10	8	10
Study Area	56	67	57	56	55	58
CAGR	2010 15	2015 20	2020 25	2025 30	2030 35	2010 35
Los Angeles	0.95%	0.45%	0.32%	0.32%	0.32%	0.47%
Orange	0.79%	0.84%	0.51%	0.45%	0.44%	0.60%
San Bernardino	0.46%	1.42%	1.47%	1.34%	1.31%	1.20%
Riverside	0.85%	2.70%	2.23%	2.00%	1.82%	1.92%
San Diego	0.66%	1.14%	0.86%	0.79%	0.64%	0.82%
Study Area	0.82%	0.95%	0.77%	0.73%	0.69%	0.79%

About 53% of the new dwelling units forecast to be built in the Study Area will be located in the Inland Empire. These 634,000 new units represent close to 1.6 million people. Workers not employed in San Bernardino or Riverside counties will face heavy traffic while commuting to job centers outside the Inland Empire, choosing to commute in exchange for less expensive housing. Local development experts suggest that 1.5 to 2 hours is the maximum that commuters will regularly drive each way to get to work. This limits the area in the Inland Empire that can reasonably serve the Orange County job markets to the western portions in the vicinity of Corona, Chino Hills, Ontario, and Riverside, depending on the use of tolled lanes. For instance, the drive from Irvine to Corona takes about 35 minutes using the toll roads or during low traffic times of the day, but during rush hour, this drive takes about 1 hour and 50 minutes. Faced with this tradeoff, many Orange County workers, especially those with higher incomes, will continue to seek housing options in Orange County, despite the higher cost.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use

August 22, 2014

The number of households within Orange County will grow at a compound annual rate of 0.6% during the Forecast Period. Because of the historic imbalance between residential and non-residential property development in Orange County, home prices have been driven up, as discussed above. This, coupled with the shortage of developable land in Orange County, will cause developers to build more multifamily structures and smaller detached units. Ventura County does not have the same constraints as Orange County and will see the majority of new residential development in single family structures.

Following this continuum, Los Angeles County, the most developed of the five Study Area counties, should see the vast majority of the 407,000 dwelling units forecast to be built there between 2010 and 2035 in high density multifamily structures, generally at infill and redevelopment sites.

San Diego County is forecast to add approximately 246,000 households over the Forecast Period. This additional growth represents approximately 10,000 households per year, or a compound annual growth rate of 0.79% per year over the 25 year Forecast Period. While a significant number, these households are at least 30 miles south of where the SJH toll road interchanges with I-5, on the south side of Camp Pendleton. It is unlikely that a large portion of workers in these homes will regularly commute to central Orange County job centers because of the extreme congestion on I-5 during peak periods.

4.6.3 Study Area Median Household Income Forecasts

Median household incomes for Study Area counties were calculated using the Global Insight median household income and Consumer Price Index (CPI) forecasts. PB deflated the median household income forecasts using the CPI forecast to establish a forecast of real median household income growth by county. These growth rates were then applied to the TAZ-level median household income data from SCAG / RivTAM to arrive at new projections for median household income. **Table 4-18** provides the county-level median household income forecast including growth rates applied to each year in the forecast period. Incomes for input into the Stantec model were forecast by TAZ, but a weighted average by county is presented in the below table.

Table 4-18: Base Case Median Household Income Forecast (Real 2010 \$)

Median Household Income	2010	2015	2020	2025	2030	2035
Los Angeles	\$45,000	\$50,900	\$54,500	\$58,900	\$63,200	\$67,000
Orange	\$59,800	\$67,900	\$73,100	\$79,000	\$84,700	\$90,400
San Bernardino	\$43,700	\$48,900	\$51,900	\$55,000	\$58,000	\$61,500
Riverside	\$43,400	\$48,600	\$49,800	\$52,800	\$55,700	\$57,700
CAGR	2010 2015	2015 2020	2020 2025	2025 2030	2030 2035	2010 2035
Los Angeles	2.49%	1.38%	1.56%	1.42%	1.17%	1.60%
Orange	2.57%	1.49%	1.56%	1.40%	1.31%	1.67%
San Bernardino	2.27%	1.20%	1.17%	1.07%	1.18%	1.38%
Riverside	2.29%	0.49%	1.18%	1.08%	0.71%	1.15%

Note: SANDAG model does not have a median household income input

The table shows that median household income growth is expected to exhibit relatively strong growth during the 2010 to 2015 period as a result of the recovery of the recession. The strongest growth over the forecast period is expected in Orange County, with a compound annual growth rate of 1.67%. Los Angeles is also expected to exhibit relatively strong growth at 1.60% per year over the Forecast Period. The inland Empire is expected to experience weaker than average income growth compared to the coastal regions of Orange and Los Angeles counties.

4.7 KEY DEVELOPMENTS IN THE STUDY AREA

In June of 2014, PB conducted field research on developments in Orange, San Diego, Riverside and San Bernardino counties to obtain the most current plans for real estate projects that would impact traffic on the Toll Roads. Developers, commercial real estate brokers, major land owners, and city and county officials were interviewed and official documents and plans for the major development areas within proximity of the Toll Roads were obtained. Using this data, Focus Areas, representing projects, groups of projects or potential redevelopment areas were identified.

The data obtained for each Focus Area varied and in some cases was scarce or incomplete. To further categorize the review process, the following five designations and examples are offered to characterize our field research.

- Actual Plans – In some cases actual development plans (quantities and types of development) by project area or TAZ were provided by developers along with expected timing of construction. This was the goal of each interview, but few projects had this level of data available, especially given current market uncertainties.
- Partial or Dated Plans – For many of the projects surveyed, especially residential projects that had to some degree been put on hold due to the market downturn,

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

current plans were not available. Rather, build-out period estimates and approximate locations were the best data available.

- Professional Judgment – In some cases, no development plans were available for parcels that, because of their location and eligibility for development, were expected to be developed in the future. In these cases, the MPO forecasts for the underlying TAZs were considered and in some instances modified based on insights from sources secondary to the project or professional judgment alone.
- MPO Forecast Adoption – As with most of the TAZs in the Study Area, PB adopted the development allocations of some Focus Areas. In many cases, the MPO forecasts matched the data obtained in the field. However, there were instances where projects were planned or proposed but because limited information was available, no confirmation of the MPO's accuracy could be obtained. If the forecasts for these areas did not seem unreasonable, they were not adjusted.
- Redevelopment Areas – In the long-term, certain areas of Orange County that currently contain older, lower density industrial or commercial space are expected to be redeveloped as the owners of that land move the remaining operations to lower cost locations. These areas are anticipated to accommodate growth in jobs and households, after the remaining vacant, developable land is absorbed. Development scenarios were calculated for these areas based on professional judgment (taking into account the recent moves by the California legislature to abolish Redevelopment Agencies) and allocated in the later years of the forecasts accordingly.

Considering the levels of development review outlined above, details of certain Focus Areas as they relate to the SJHTC and F/ETC, respectively are presented in the following sections. These project descriptions present the most probable project outcomes given the available data and understanding of development economics in the Study Area.

San Joaquin Hills Toll Corridor (SJHTC)

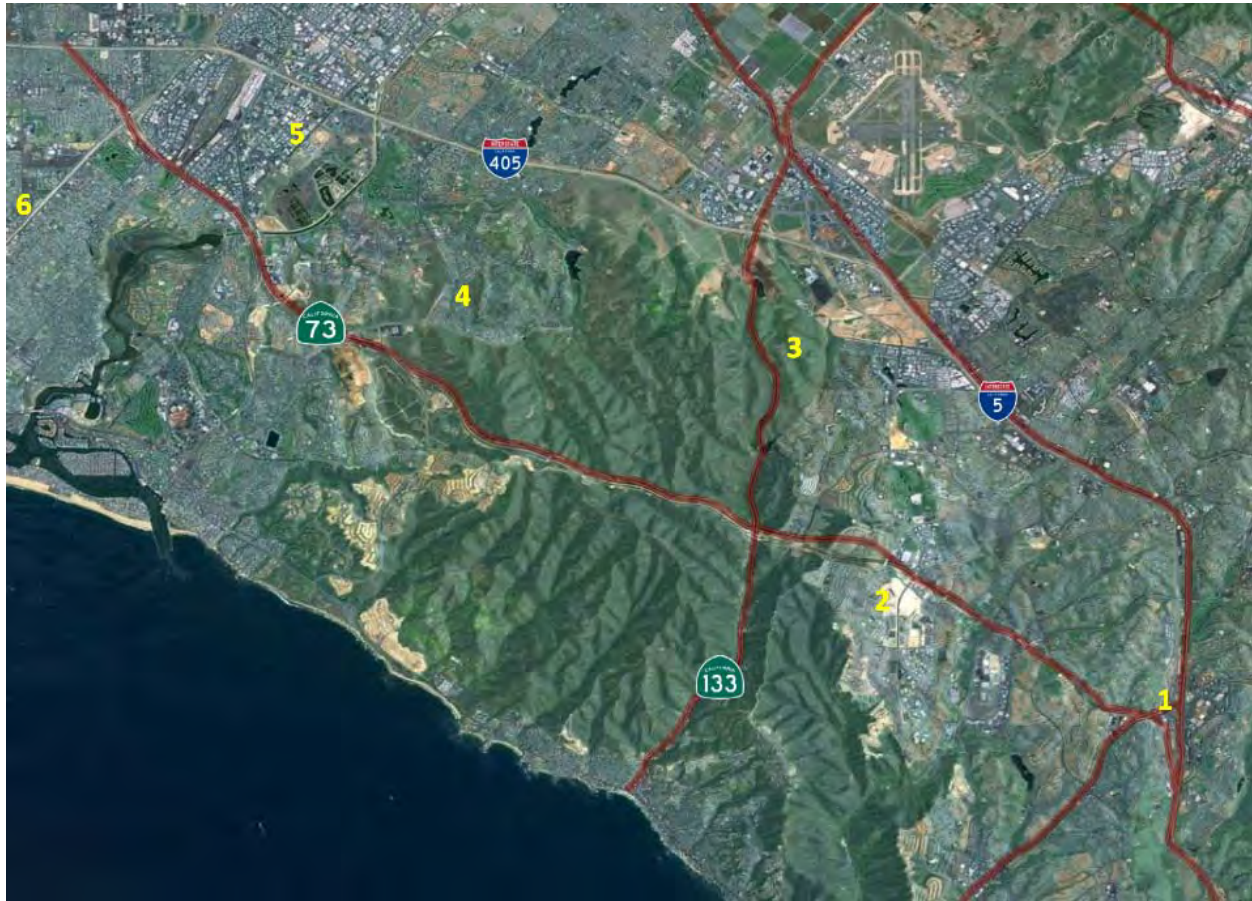
The review of the SJHTC is organized from east to west from where SR-73 begins in the City of San Juan Capistrano, to where it terminates in the City of Costa Mesa.

The largest residential and non-residential real estate projects that will have the most direct effect on traffic on the highway system are presented. Additionally, areas that PB feels will likely undergo some redevelopment to higher densities are discussed. **Figure 4-13** presents the focus areas in the SJHTC and their approximate orientation to the toll road. Where possible, the amount of new employees and households forecast in each focus area is listed.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Figure 4-13: Focus Areas in the San Joaquin Hills Corridor



The SJHTC directly serves parts of unincorporated Orange County and several cities including San Clemente, San Juan Capistrano, Dana Point, Mission Viejo, Laguna Niguel, Laguna Hills, Aliso Viejo, Laguna Woods, Laguna Beach, Irvine, Newport Beach and Costa Mesa.

A significant portion of the morning traffic on SR-73 originates at the primarily residential southeastern end of the road and ends at the commercially oriented northwestern end of the road or the job centers in central Irvine that can be reached via SR-133. Some traffic originates in San Diego County and terminates at job centers along SR-73 or is “through” traffic to areas north of John Wayne Airport. The following key real estate projects are located in the vicinity of the SJHTC:

1. Laguna Niguel Gateway Redevelopment: The City of Laguna Niguel has redevelopment plans for the 300-acre area at the northern corner of the interchange of I-5 and SR-73. The Specific Plan Amendment includes capacity for 3,000 residential units, 350,000 square feet of retail, 1.1 million square feet of office, a 400,000 square foot business park, 350 hotel rooms, and 190,000 square feet of automobile sales. There is currently 1.3 million square feet of existing commercial space that is anticipated to be redeveloped in

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use

August 22, 2014

the process. As such, the 2.2 million square feet of new development will result in a net gain of 900,000 square feet of commercial space taking into account the demolition of existing uses. Local planners expect approximately 1,000 residential units to be delivered by 2020 with the balance delivered thereafter. Of the 3,000 units zoned for the area, 777 units in three different apartment projects are now approved and/or under construction. Career Lofts, a 142-unit project was approved in the summer of 2012 and is currently under construction. The 284-unit Crown Apartments was approved shortly thereafter and is also under construction. The third apartment community, Gateway Village, was approved in the summer of 2013 and will include 351 units.

2. **Vantis:** Vantis is a 700,000 square foot multi-use office park with 300 condominiums located on approximately 40 acres. The first two phases totaling over 250,000 square feet were completed in 2003 and 2007. Successive phases of the project, including two additional office buildings and 102 condominium units, were initially expected to absorb the remaining acreage by 2009, although construction was delayed during the recession. Shea Properties is the developer and manager of the property, which is located to the west of the SJHTC where it crosses Laguna Hills Drive. In 2012, Shea was in the process of applying for a general plan amendment that would allow the replacement of the remaining office buildings with a 150-room hotel and the replacement of the condominium product with a 450-unit apartment project. Since that time, Shea succeeded in getting approval for the plan change to develop the remaining 10 acres as hotel and apartments in late 2013. The hotel will be a 129-room Homewood Suites and the apartment project will consist of 435 units.
3. **The Irvine Company Spectrum 5:** The Irvine Company has several projects planned for the area southwest of the interchange between Interstates 405 and 5, collectively known as Spectrum 5. This area, which was mostly vacant or used for agricultural and recreational purposes, has excellent highway exposure and is intended for a mix of higher-density residential and commercial development. The majority of new residential development is planned for rental apartment units. As of early 2014, approximately 1,600 of 1,750 planned apartment units had been completed as part of the first phase of multifamily construction in the area, known as Los Olivos Apartment Village. The second phase will consist of an additional 1,950 apartment units to be completed by 2025. These large-scale residential developments will result in total buildout of approximately 4,500 units by 2025. Non-residential buildout is anticipated for completion by 2030 and is likely to house approximately 3,000 additional employees in the area.
4. **Turtle Ridge and Quail Hill Commercial:** The Irvine Company completed the residential components of these projects in 2007, however, planned commercial development at each will result in approximately 3,300 new employees during the course of the study period, the majority of which will take place in the Quail Hill area. New commercial development housing 1,800 new employees is expected by 2020. In addition to these plans, the Irvine Company was in the process of applying to reallocate additional development intensity from the Irvine Spectrum planning area to the Quail Hill area. The



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use

August 22, 2014

plans included transferring 600,000 square feet of commercial development rights to attract a large single user / corporate headquarters in the Quail Hill area, which is considered well positioned to attract such a user. However, the Irvine Company withdrew this request in May 2014, citing market dynamics and focus on development in other areas. This transfer could be applied for again in the future if market conditions change.

5. John Wayne Airport/Irvine Business Complex: The area to the south and east of John Wayne Airport, known as the Irvine Business Complex (IBC), has developed into a major center for business over the past few decades, with approximately 105,000 employees. This area is expected to add close to 26,000 new jobs by 2035, which will be housed in a mixture of high density office buildings redeveloped from low density light industrial structures and a variety of infill opportunities. Additionally, as many as 11,000 high density residential units can be expected to be built in this area during the Study Period, with as many as 6,700 planned for delivery between 2014 and 2020, including a 1,600-unit apartment project known as Elements.
6. Costa Mesa Redevelopments: The City of Costa Mesa, located near the northwestern terminus of SR-73, is a relatively established area with few large-scale, greenfield development opportunities. However, there are numerous infill redevelopment projects planned, approved, and under construction throughout the area. There are currently over 1,200 units approved and another 800 units in the approvals process. In the longer term, an older industrial area located to the southwest of the South Coast Metro submarket will likely undergo redevelopment because of its underutilized land uses and its strategic location within close proximity to the coast, the South Coast Plaza retail district, and the I-405 freeway. Approximately 2,100 multifamily units and 1,300 new employees are expected to be added to this 800-acre area between 2020 and 2035 under a redevelopment scenario.

Foothill/Eastern Toll Corridor (F/ETC)

The discussion of this corridor is presented in two sections corresponding to maps highlighting the northern portion of SR-241 combined with SR-261 and the southern section of 241 (where the Tesoro Extension is proposed) combined with the SR-133 corridor. Areas that PB feels will likely undergo some redevelopment to higher densities are also discussed. Where possible, the amount of new employees and households forecasted in each focus area is listed.

Foothill/Eastern: North State Route 241 and State Route 261

SR-241 is the longest of three legs of the F/ETC. It intersects SR-91 in eastern Anaheim and runs south for approximately 13 miles through a large unincorporated area of Orange County to where SR-261 and SR-133 split off to the southwest. SR-261 begins where SR-241 crosses Santiago Canyon Road, and extends southwest for approximately 7 miles through an unincorporated area of Orange County, into the City of Irvine, ending approximately at the former Tustin Marine

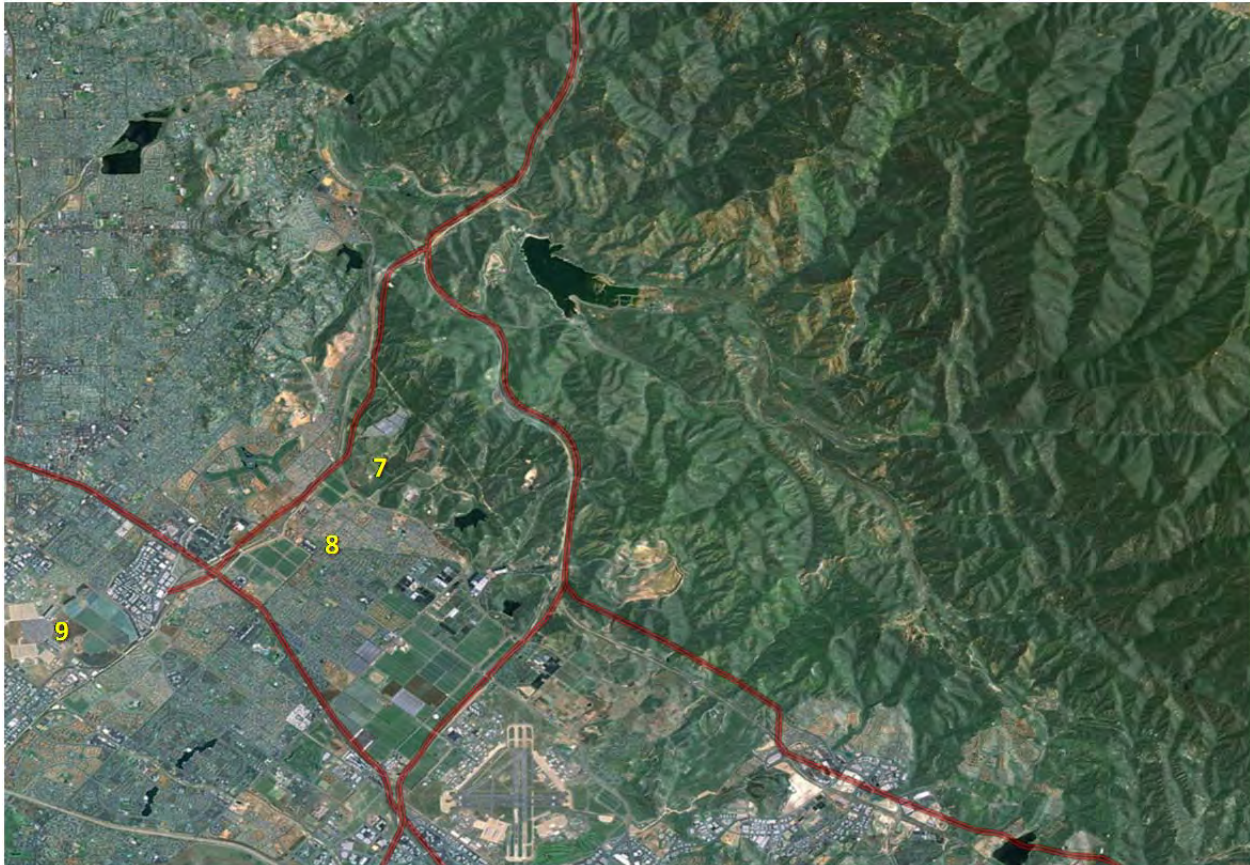


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

Corps Air Station (MCAS). This corridor is expected to undergo heavy development with several large projects sponsored by the Irvine Company (TIC), the City of Tustin and its partners at MCAS Tustin. **Figure 4-14** highlights the focus areas discussed further in this section.

Figure 4-14: Focus Areas in the F/ETC – North SR 241 and SR 261



The following key real estate projects are located in the vicinity of SR-261:

7. Orchard Hills: Orchard Hills, referred to as TIC Planning Area 1 in previous reports, is planned for a build-out of 3,600 residential units between 2015 and 2035, with the majority of development taking place by 2025. This Irvine Company land is located in the City of Irvine, east of the intersection of Portola Parkway and SR-261.
8. TIC Northwood / Woodbury: To the east of where SR-261 and Interstate 5 intersect, a collection of large Irvine Company projects have been under development, including Woodbury, Cypress Village, and Stonegate. Some of these communities are approaching buildout, with Woodbury's last unit sold in June 2014. It is anticipated that residential development in this area will be primarily built out by 2020, with 2,800 new units delivered between 2015 and 2020. Commercial development is anticipated to house thousands of new employees, although the non-residential portion is expected to be

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use
August 22, 2014

delivered at a slower pace than the residential units, with development continuing through 2035.

9. Tustin Legacy Project: The former 1,600-acre Tustin MCAS, which closed in 1999, is now the site of the Tustin Legacy project. The project is located to the west of where SR-261 terminates near the eastern border of Tustin and is expected to take 15-20 years for complete build-out. The reuse plan calls for residential development with a variety of densities, totaling approximately 5,400 units, of which 2,200 have been delivered. Various phases of development have been ongoing since 2006, when the first phase of residential development, Tustin Field, was completed. 750 apartment units in two separate projects are anticipated for completion in 2015 as well. In addition to the existing 1-million-square-foot District at Tustin Legacy lifestyle retail center and other civic and commercial uses, an additional 6.7 million square feet of non-residential space is planned. With residential, retail, and institutional uses ongoing, it was recently announced that 43 acres of undeveloped land will be marketed for office development, with an estimated start date of 2016 depending on market interest. Ongoing commercial and business development will continue construction through 2025-2030. 200 acres of land has been set aside for public uses such as schools and parks.

Foothill/Eastern: Southern State Route 241 and State Route 133

SR-241 veers to the east and continues through the cities of Lake Forest and Mission Viejo, terminating in Rancho Santa Margarita near the unincorporated community of Coto de Caza. The Tesoro Extension would be a continuation of SR-241 southward past its current terminus for approximately four miles to the vicinity of Ortega Highway.

SR-133 extends southwest from SR-241 (where it crosses the Bee Canyon Access Road) approximately five miles through an unincorporated portion of Orange County, ending in the City of Irvine. The toll portion of SR-133 ends at the interchange of I-5 although the free alignment continues south to Laguna Canyon Road providing access to Laguna Beach. **Figure 4-15** highlights the focus areas discussed further in this section.

Figure 4-15: Focus Areas in the F/ETC – South SR 241 and SR 133



The following key real estate projects are located in the vicinity of SR-133 and the southern portion of SR-241:

10. Great Park: Great Park, referred to in previous reports as Heritage Fields at El Toro, is the redevelopment of former MCAS El Toro, located on the northeast side of I-5 near where I-405 splits off to the west. Developer Fivepoint Communities Inc., an offshoot of Lennar, entered into an arrangement with the City of Irvine and the Navy to develop the land and the project began actively selling residential units in the fall of 2013. Current plans for the project include approximately 9,500 homes, although the developer is applying for an increase in total development that could increase total buildout to over 10,000 units. Residential development is anticipated to finish in 2025. In addition the residential plans, 6.1 million square feet of non-residential space is planned, and anticipated to be developed through 2035.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

4.0 Socio-economic variables and land use

August 22, 2014

11. TIC Spectrum 2 Redevelopment: This area, located on the south side of the former El Toro Marine Base consists of some underutilized industrial land uses and represents a longer term candidate for redevelopment / infill development. The area has the potential to house additional non-residential space amounting to approximately 10,000 new jobs by 2035.
12. TIC Irvine Center: The triangular area formed by Interstate 405, SR-133, and Interstate 5 has several sizable vacant parcels that are planned for commercial building by various parties, most notably the Irvine Company. There is currently a regional mall, a collection of office buildings, and a large quantity of rental residential development. An additional 1,350 apartment units are anticipated to be developed by 2020. In addition to this area, undeveloped areas west of SR-133, between I-5 and I-405 have been planned by the Irvine Company to house over 30,000 new employees by 2035. Total non-residential build-out is expected to be approximately 9 million square feet of office and light industrial space with some retail space. A significant amount of space has already been built and occupied.
13. Baker Ranch/Nakase Nursery: Baker Ranch is a planned residential development located within close proximity of Bake Parkway, to the south of SR-241 in Lake Forest. The project, which consists of 2,400 residential units and a small commercial element, began actively selling units in February 2014 and is anticipated to be fully built out by 2020. Immediately south of Shea Baker Ranch is Nakase Nursery, an area that is expected to be redeveloped into commercial uses at an undetermined time during the Forecast Period. No plan has been created for the area, although given the total land area, it could accommodate a large amount of commercial development.
14. Rancho Mission Viejo: Rancho Mission Viejo is 23,000 acres of land located between the southern border of Rancho Santa Margarita and the Orange County/San Diego County border. The area is approximately five miles due south of where SR-241 currently ends in Rancho Santa Margarita and would be served by the planned. Along with 17,000 acres of preserved open space, Rancho Mission Viejo is planned to include approximately 5.0 million square feet of non-residential development and 14,000 residential units, to be delivered between 2013 and 2035. The Rancho Mission Viejo development is currently staged into five planning areas, each of which will have a mix of residential and commercial uses.

The first planning area, Sendero will include 1,140 units (940 for-sale units and 200 apartments), and began sales/leasing in 2013. As of April 2014, 500 of the 940 for-sale units had been sold. Sendero will have only a small commercial component. Planning Area 2, located to the east of Sendero, will be bisected by the Tesoro Extension and is likely to have a more significant commercial component, taking advantage of the frontage along the toll road extension. It is estimated that close to 2,000 households will exist by 2020. The mix of development in the subsequent planning areas will be dictated by market demand, not exceeding the total entitlements noted above.



5.0 TRAVEL DEMAND MODEL

The objective of the travel demand modeling task was to develop a forecasting tool which utilizes the most current model platforms, inputs and assumptions to estimate future demand for the SJHTC. Using any single model platform precludes accurate representation of the route choice behavior of drivers utilizing the north/south alternatives between San Diego and Orange/Riverside counties because trips are already tied to a choice via external stations. To model this important behavior, an integrated model was developed which combines two modeling platforms – the Riverside County Traffic Analysis Model (RivTAM) and the San Diego Association of Governments (SANDAG) transportation model into a single unified model platform. The routines developed provide a permanent tool that enables the efficient merging of the RivTAM and SANDAG models and forecasting of demand in the study area. It should be noted that this model served as the platform for the investment grade study completed for the Foothill/Eastern Transportation Corridor re-financing efforts.

The underlying growth in the traffic model is driven by trip producers (in the model's case, households) in each Traffic Assignment Zone (TAZ) and trip attractions (employment) in each TAZ. Like most metropolitan models, households are the basic unit for trip end productions, primarily because the underlying trip generation data is formulated from household surveys. This is related to, but different from, the use of population by household size, but any focus of population as the primary source of interest will require that all the analysis be derived from households in any case. Trip producers and attractors are connected using a standard "gravity-based" formula throughout the region (that is, households and employment are more likely to be connected the closer they are and the attraction declines with distance and time). Thus the first foci are the household and employment growth in the study area.

It is also worth noting that the traffic demand model utilized for the study, like most regional traffic model, balances productions and attractions, in this case to productions; this means that any attempt to only vary employment in the input parameters will be thwarted, in that the model will automatically re-balance the trip tables back to the control totals of the productions.

5.1 MODEL EVALUATION

The current travel demand modeling landscape in southern California is centered on the Southern California Association of Governments' TransCAD-based regional transportation model. As part of recent work in the region, Stantec utilized RivTAM, a derivative of the SCAG model, to forecast demand for both the RCTC SR-91 Investment Grade Study and the Foothill/Eastern Transportation Corridor Investment Grade Study. Stantec also has extensive experience implementing the TranPlan-based OCTAM and VOCTAM models under contracts with both TCA and OCTA. In San Diego County, Stantec recently utilized the TransCAD-based SANDAG model to forecast toll traffic and revenue for the SR-125 corridor.

5.0 travel demand model
August 22, 2014

Stantec reviewed various model platforms before concluding that an integrated regional model combining the RivTAM and SANDAG platforms was the most appropriate approach. The SJHTC falls within many of the well-established regional modeling platforms maintained by a variety of planning organizations in the Southern California region.

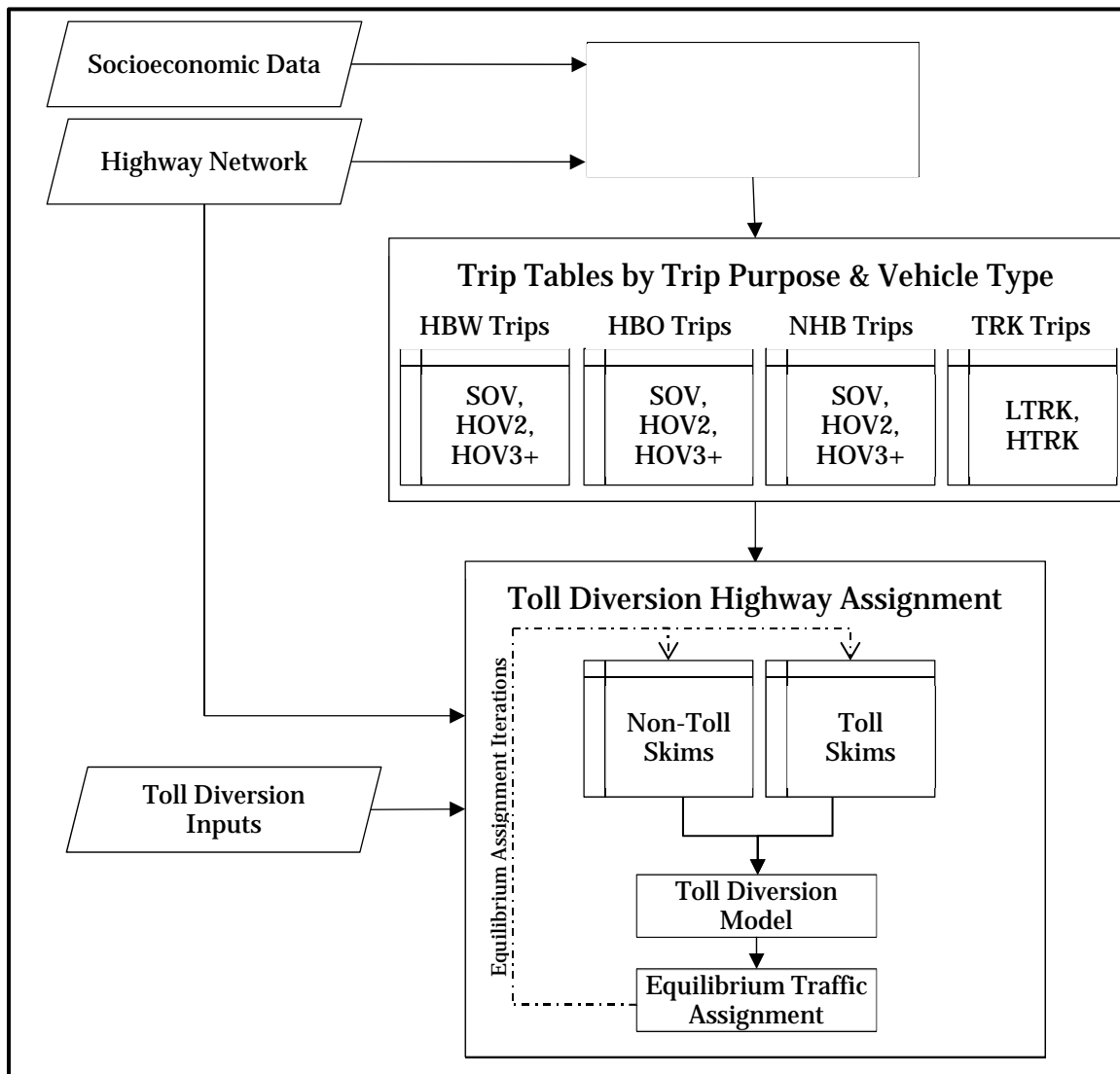
5.2 MODEL STRUCTURE AND DEVELOPMENT

Stantec developed a single unified modeling approach which leverages the existing RivTAM and SANDAG regional model platforms while at the same time provides the necessary route choice decisions for trips traversing the border of Orange/Riverside and San Diego counties and a robust toll diversion highway assignment model. The process involves applying the RivTAM and SANDAG regional models, converting highway networks and person trip tables to Cube Voyager format, applying a time-of-day model to convert person trips to vehicle trips, applying a subarea extraction procedure to reduce model runtime, weaving subarea networks and trip tables, and applying a toll diversion highway assignment model to forecast demand in the subarea. **Figure 5-1** provides an overview of the model structure.

The modeling process begins with the RivTAM and SANDAG modeling platforms. The two models run in the TransCAD software package and are based on the conventional four-step approach to travel demand forecasting, which estimates person-trips generated by land use in each zone, distributes these trips between zones, splits the trips among available modes of transportation, and finally assigns trips to the highway network. The process is then repeated (with each iteration utilizing estimated speeds from the previous iteration) until the difference in speeds between subsequent assignments is negligible. This outcome is generally referred to as a state of network equilibrium. In both the RivTAM and SANDAG models, this “speed feedback loop” is executed five times so that input speeds for trip distribution are in reasonable agreement with the highway speeds output from traffic assignment. These models are used primarily to predict demand on a regional level and are not directly focused on forecasting toll road demand. Applying the speed feedback loops built into each of the model platforms provides increased confidence in the resulting distribution of trips at the regional level.

Trip purpose is important for accurately modeling tolled facilities, as different trip purposes exhibit different values of time and therefore different levels of toll road usage. While each of the two regional models carries trip purpose through the mode choice step, the time-of-day and highway assignment steps do not retain trip purpose stratification. For this reason, person trip tables from the mode choice step of the final speed feedback iteration are intercepted and saved by peak/off-peak, trip purpose, and vehicle type (drive alone, shared ride, truck).

Figure 5-1: Model Structure with Toll Diversion Assignment Model



5.2.1 Conversion to Cube Voyager and Time-of-Day Model

The trip tables extracted from the two regional models are converted to the Cube Voyager format to facilitate application of the integrated model process. To convert the person trips by peak/off-peak to vehicle trips by time period, a time-of-day model is applied in Cube Voyager. This model is based on the time-of-day model within RivTAM but retains trip purpose stratification. Because RivTAM provides the vast majority of trips on the study area corridors it was determined the necessary parameters for the time-of-day model would be adopted from the RivTAM model.

In addition to converting the trip tables to the Cube Voyager format, highway networks must also be converted to the Cube Voyager format. To facilitate joining the networks to form an

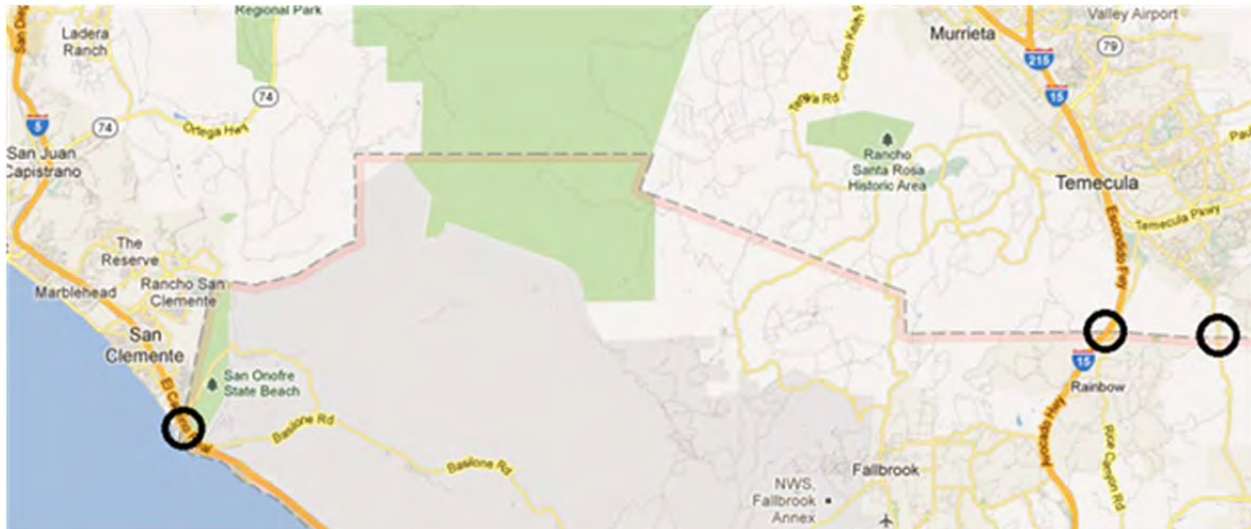
integrated network, many network attribute definitions including those for facility type and area type had to be mapped to a common definition. Because the RivTAM model provides coverage of the study area corridors, the RivTAM definitions were used unaltered wherever possible. The SANDAG model does not explicitly define area type. To accommodate the need for an area type variable in the SANDAG network, a linear regression model based on population density and employment density was developed and calibrated using RivTAM area type information. This model is applied to the SANDAG socioeconomic data to estimate area types in the SANDAG network.

5.2.2 SubArea Extraction

Integrating the networks and trip tables from the full regional models would produce an approximately 11,000 zone integrated model with unacceptably long run times. Because the study corridors lie near the border of the two regional models, it was determined that a large portion of each of the models could be removed without impacting travel within and around the study area. To accomplish this, a procedure which cuts the network and trip tables along a predetermined border is applied to the converted networks and trip tables from each of the models, while retaining all trips within and crossing this border. The procedure consists of a simplified highway assignment model which tracks all trips crossing the predetermined border and produces networks and trip tables with the same granularity as the full regional models, but containing only the highway network and trips within the subarea.

Figure 5-2 depicts the extents of the subarea defined for this project. In the RivTAM model, the subarea is bounded by the Pacific Ocean and I-605 to the west, SR-60 to the north and I-215 to the east, and San Diego to the south. In the SANDAG model, the subarea is bounded by the Pacific Ocean to the west, the Orange and Riverside counties to the north and I-15 to the east. The southern boundary of the subarea is approximately 5 miles south of SR-78 and includes the cities of Oceanside, Escondido and Carlsbad. Travel between I-5 and I-15 is facilitated through many local roads, as well as through the major east-west roadway SR-78. Combined, the two subareas encompass approximately 3,200 zones and cover a geographical area well beyond the limits of the study area. The major regional roadways contained in the subarea capture the significant movements that are of interest in evaluating the existing TCA toll roads. These roadways are either direct competitors or “feeder” routes to the toll roads and include the Pacific Coast Hwy (SR-1), I-5, I-405, SR-22, SR-55, SR-57, SR-74 and SR-91 within Orange County. In Riverside County travel on I-15, I-215, SR-71, SR-74 and SR-91 is modeled and in San Diego County travel on I-5, I-215 and SR-78 is modeled.

Figure 5-3: Common Border Locations



Joining the subarea trip tables requires a set of control total traffic volumes stratified by direction, time period, trip purpose and vehicle type at each external station along the common border of the two models. To develop these control total traffic volumes, external station volumes from the two models were analyzed along with data from various sources including the data collection effort for this project. **Table 5-1** shows the 2012 control total traffic volumes by time period and direction for the I-5 and I-15 common border locations.

Table 5-1: 2012 Control Total Traffic Volumes

Location	Direction	AM	MD	PM	NT	Daily
I-5	NB	10,557	22,250	18,689	9,584	61,080
	SB	10,881	21,653	18,920	11,168	62,621
I-15	NB	7,198	20,001	28,799	11,586	67,584
	SB	18,121	20,021	14,155	13,188	65,485
TOTAL	NB	17,755	42,251	47,488	21,170	128,664
	SB	29,002	41,674	33,074	24,356	128,106

5.2.4 Toll Diversion Highway Assignment

A toll diversion highway assignment process is applied to the integrated subarea networks and trip tables. The toll diversion model used for this project is based on a toll diversion modeling process utilizing a logit-based route choice model embedded within an equilibrium traffic assignment routine. The process iteratively calculates the percentage of tolled trips for a given origin/destination interchange and can be stratified as necessary. A similar approach has been applied successfully in numerous projects in the southern California region, including the

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

5.0 travel demand model
August 22, 2014

VOCTAM model developed for TCA. The structure of the toll diversion model is defined as follows:

$$\text{Toll Share} = 1 / (1 + e^U)$$

Toll Share = Probability of selecting a toll road
 e = Base of natural logarithm (ln)
 U = "Utility of Tolled Route"
 $= \alpha * (\text{Time}_{TR} - \text{Time}_{FR}) + \beta * \text{Cost} + \text{CTR} + \text{CETC}$
 Time_{TR} = Tolled route travel time (min)
 Time_{FR} = Non-tolled route travel time (min)
 Cost = Toll (dollars)
 α = Time Coefficient
 β = Cost Coefficient
 CTR = Constant for toll road bias
 CETC = Constant for ETC bias

The toll diversion model is stratified to accommodate three auto trip purposes: Home-Based Work (HBW), Home-Based Other (HBO) and Non Home-Based (NHB). Truck trips are stratified into 2 trip purposes: light trucks (LTRK) and heavy trucks (HTRK). As part of multiple studies over the past ten years, Stantec has developed and refined toll diversion coefficients in the southern California region based on regional income data and revealed preference data on the existing toll roads in the Southern California region. **Table 5-2** summarizes the coefficients used for this study.

Table 5-2: Toll Diversion Coefficients

Trip Purpose	α , Time Coeff. (min)	β , Cost Coeff. (dollars)	VOT (\$/hour)	C_{TR} , Toll Bias	C_{ETC} , ETC Bias	Toll Bias Equiv. Time (min)	ETC Bias Equiv. Time (min)
HBW	0.1053	0.2872	\$22.00	0.0000	-0.2960	0.00	-2.8
HBO	0.0574	0.2305	\$14.94	0.1741	-0.1936	3.0	-3.4
NHB	0.0981	0.3286	\$17.92	0.2582	-0.3068	2.6	-3.1
LTRK	0.0981	0.3286	\$17.92	0.2582	-0.3068	2.6	-3.1
HTRK	0.0884	0.1029	\$51.53	0.3375	0.0000	3.8	0.00

To accommodate HOV policies and toll payment types within the study area, each of the three auto trip purposes is further stratified into drive alone and shared ride trips and all trip purposes are stratified by three toll payment methods: cash, electronic toll collection (ETC) and video. Stratification by toll payment type is applied during highway assignment and is dynamically altered for each origin/destination pair as the availability of different payment methods is determined.



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

5.0 travel demand model
August 22, 2014

Figure 5-4 through Figure 5-7 below show the final toll shares as a function of time savings for a \$2 toll for each auto trip purpose and light truck trips and a \$6 toll for heavy truck trips. Each graph shows the toll share for the cash and ETC payment methods, except for the heavy trucks, for which there is no ETC bias and the cash and ETC shares are equal.

Figure 5-4: Toll Diversion for Home-Based Work Auto Trips

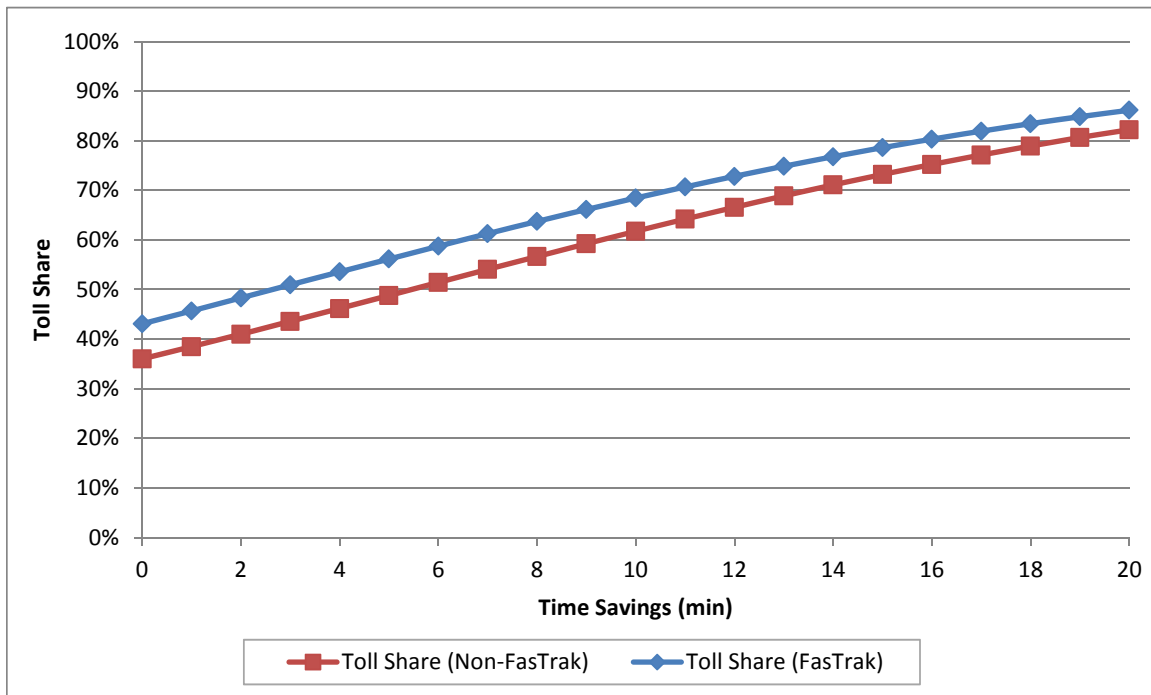


Figure 5-5: Toll Diversion for Home-Based Other Auto Trips

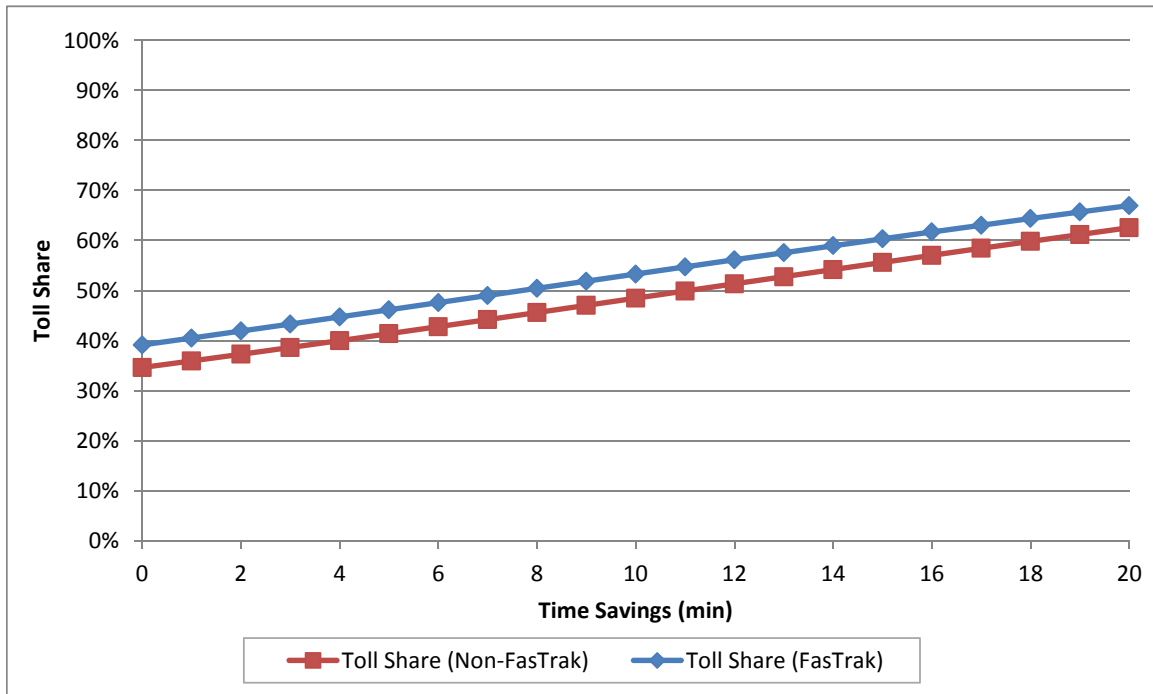


Figure 5-6: Toll Diversion for Non-Home Based Auto and Light Truck Trips

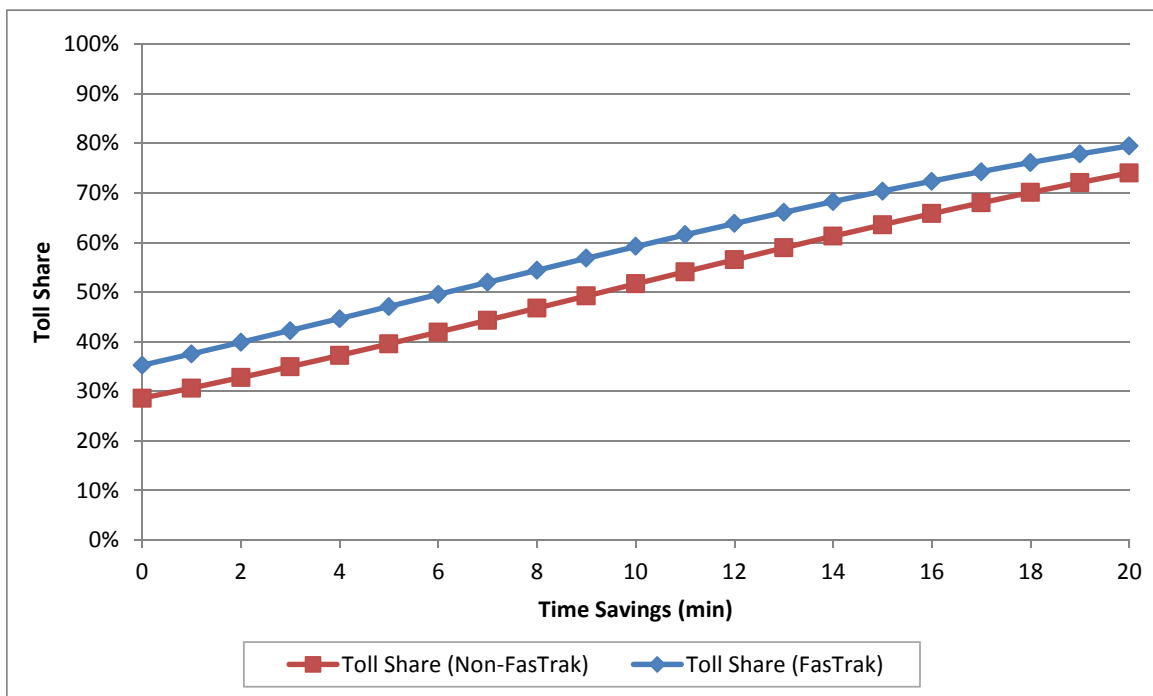
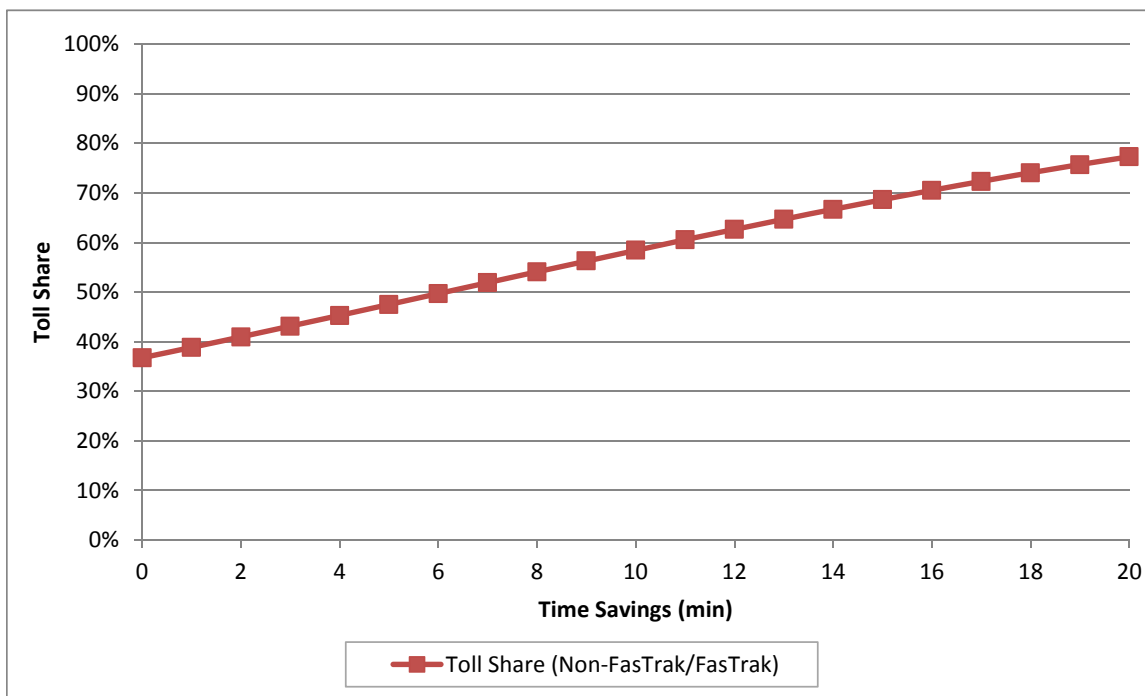


Figure 5-7: Toll Diversion for Heavy Truck Trips



Equilibrium assignment relies on a volume-delay function to determine congested speeds based on roadway characteristics and the number of vehicles utilizing a segment. For this model, a version of the Akcelik function identical to that used in the RivTAM model was implemented. The volume delay function was further refined as described in the model calibration section below.

5.3 CALIBRATION OF THE INTEGRATED REGIONAL MODEL

A significant component of the model development effort was the collection, collation and summarization of data representing existing conditions to compare against predictions from the model. This process, called calibration, focused on reasonably replicating 2012 demand in and around the study corridor. Calibration was performed solely on the integrated model highway assignment process. No calibration adjustments were made to the individual regional models.

The initial focus of the calibration effort was to adjust the assignment procedures to ensure that estimated speeds in both the peak and off-peak periods were adequately replicating the observed speed data collected for the project. The assumed free flow speeds were adjusted as necessary to replicate the off-peak speeds which reflect generally uncongested conditions. Peak speeds were adjusted in an iterative process to ensure that estimated congested speeds replicated the observed values and that the overall traffic assigned to the roadways replicated the observed volumes on a daily basis.



After the speed calibration analysis was completed, the calibration of traffic within the TCA corridors was performed. This process included the replication of traffic by screenline total and by individual roadways. This analysis included the use of an in-house trip table adjustment routine to ensure that the aggregate travel across each screenline replicated the observed traffic.

5.3.1 Speed Calibration

As part of the speed calibration effort Stantec collected observed speed data on several corridors across the study region as detailed in Chapter 3. The speed data were collected for both directions across four different time-of-day periods.

Early model runs revealed the model did a poor job of replicating off-peak speeds on both the TCA facilities and the major interstates in Orange County. Stantec first tested the effect of increasing the free flow speed on all freeways from 65 mph to 70 mph. Minor improvements were achieved. The second set of calibration tests involved using the standard Akcelik volume delay function in combination with the increased free flow speed on freeways. Results from this were moderately better. The final speed calibration adjustment employed a “hybrid” application of the volume delay function in combination with the 70 mph speed change.

Time of day results of the speed calibration are presented in **Table 5-3** and **Table 5-4**. The estimated speed replicated the observed speed reasonably well in the off-peak periods. While the replication of speeds for the TCA facilities was good in the peak periods, there were a few corridors within the study area where the difference between estimated and observed speeds was 10 mph or higher.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

5.0 travel demand model
August 22, 2014

Table 5-3: Travel Time Runs – TCA Facilities

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
SR-241 NB	Oso Parkway	Antonio Pkwy off Ramp	3.0	2.8	71	60	71	61	70	61	71	61
SR-241 NB	Antonio Pkwy off Ramp	Portola Pkwy. (South) Off Ramp	4.1	4.1	72	75	71	75	71	75	71	75
SR-241 NB	Portola Pkwy. (South) Off Ramp	SR133 SB off Ramp	5.0	5.0	73	74	72	75	72	75	72	75
SR-241 NB	SR133 SB off Ramp	SR 261 NB On ramp	6.5	6.7	72	75	72	75	70	74	74	75
SR-241 NB	SR 261 NB On ramp	SR91	5.6	5.4	72	75	70	75	63	74	72	75
SR-241 SB	SR91	SR261 SB off Ramp	5.8	5.7	70	72	71	75	73	75	70	75
SR-241 SB	SR261 SB off Ramp	SR133 SB off Ramp	5.3	5.3	68	73	67	75	67	75	67	75
SR-241 SB	SR133 SB off Ramp	Portola Pkwy. (North) Off Ramp	2.2	2.4	68	74	70	75	68	74	71	75
SR-241 SB	Portola Pkwy. (North) Off Ramp	Alton Pkwy off Ramp	1.7	1.5	71	74	69	75	69	74	69	75
SR-241 SB	Alton Pkwy. Off Ramp	Oso Parkway	9.2	9.4	71	70	71	71	68	69	73	71

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
SR-261 NB	Walnut on Ramp	Portola off Ramp	2.3	2.0	71	75	67	75	71	75	71	75
SR-261 NB	Portola off Ramp	SR 241 NB merge	3.8	4.1	65	75	67	75	62	75	66	75
SR-261 SB	SR 241 SB diverge	Portola off Ramp	3.1	3.1	70	74	67	75	71	75	70	75
SR-261 SB	Portola off Ramp	Walnut on Ramp	2.7	2.8	68	74	67	75	71	75	69	75

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
SR-133 NB	I-5 SB on Ramp	SR-241 NB Merge	3.4	3.3	73	75	73	75	74	74	71	75
SR-133 SB	SR-241 SB Diverge	I-5 SB on Ramp	3.0	3.2	70	74	70	75	71	75	72	75

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
SR-73 NB	I-5 NB Diverge	Aliso Creek off Ramp	3.8	3.8	68	72	73	73	72	73	74	73
SR-73 NB	Aliso Creek off Ramp	Laguna Canyon/EI Toro on Ramp	3.5	3.4	70	74	70	75	70	75	71	75
SR-73 NB	Laguna Canyon/EI Toro on Ramp	Newport Coast off Ramp	3.9	3.7	69	74	73	75	72	75	73	75
SR-73 NB	Newport Coast on Ramp	Bison off Ramp	2.0	2.1	70	74	70	75	70	75	72	75
SR-73 NB	Bison off Ramp	SR-55 NB off Ramp	2.9	3.1	68	69	69	71	68	70	62	71
SR-73 SB	SR-55 SB on Ramp	Bison off Ramp	2.1	2.5	68	68	69	69	69	68	68	70
SR-73 SB	Bison off Ramp	Newport Coast off Ramp	2.1	2.2	69	75	68	75	70	74	69	75
SR-73 SB	Newport Coast off Ramp	Laguna Canyon/EI Toro on Ramp	6.1	6.1	70	75	69	75	71	74	68	75
SR-73 SB	Laguna Canyon/EI Toro on Ramp	Aliso Creek off Ramp	0.8	0.8	70	75	69	75	70	74	71	75
SR-73 SB	Aliso Creek off Ramp	I-5 Merge	4.5	4.8	71	73	70	73	70	73	72	73

Table 5-4: Travel Time Runs – Major Freeways

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
I-5 NB	SR-78 WB	Cristiantos- 72	21.1	20.9	67	67	65	68	71	69	67	69
I-5 NB	Cristiantos- 72	Ortega - 82	9.7	9.6	59	63	65	67	70	65	66	69
I-5 NB	Ortega - 82	SR73-85A	2.9	2.9	71	63	64	68	70	67	67	69
I-5 NB	SR73-85A	I405 NB - 94A	8.5	8.6	45	42	62	58	68	61	64	68
I-5 NB	I405 NB - 94A	133 - 95	2.2	2.1	68	65	68	66	74	65	68	69
I-5 NB	133 - 95	Jamboree- 100	4.4	4.3	68	63	65	67	32	64	70	69
I-5 NB	Jamboree- 100	55 FWY - 103A	2.8	2.9	49	47	63	60	22	53	69	68
I-5 NB	55 FWY - 103A	SR57 North- 107A	4.0	3.9	57	50	63	62	26	46	66	65
I-5 SB	La Vela Ave. -107A	Fourth St./First St.-104A	3.2	3.1	41	43	60	64	61	55	67	65
I-5 SB	Fourth St./First St.-104A	Jamboree-100	3.5	3.4	56	62	61	66	65	60	69	66
I-5 SB	Jamboree-100	133 S - 95	4.5	4.6	59	62	69	68	68	65	69	68
I-5 SB	133 S - 95	5 ByPass- 92	1.5	1.5	58	63	68	68	58	65	67	68
I-5 SB	5 ByPass- 92	Crown Valley- 86	7.9	7.8	68	63	60	63	49	53	65	66
I-5 SB	Crown Valley- 86	Ortega (SR 74)- 82	4.1	4.2	69	67	62	68	61	62	64	69
I-5 SB	Ortega (SR 74)- 82	Christianos- 72	9.6	9.7	67	67	64	68	67	63	65	69
I-5 SB	Christianos- 72	SR78-51B	21.3	21.2	72	69	64	68	70	68	64	69

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
I-405 NB	I-5 NB	SR133 South-2	2.0	1.9	21	65	61	68	60	66	68	69
I-405 NB	SR133 South-2	Jamboree-7	5.0	4.9	37	58	62	66	39	64	67	69
I-405 NB	Jamboree-7	SR55-9A	1.7	1.6	65	66	66	69	27	66	69	69
I-405 NB	SR55-9A	Bristol-9B	0.7	1.0	61	68	69	69	25	65	71	69
I-405 SB	Bristol-9B	SR55 NB-9A	0.7	0.8	37	67	59	69	63	68	60	69
I-405 SB	SR55 NB-9A	Jamboree-7	1.9	1.9	48	66	72	69	58	67	71	69
I-405 SB	Jamboree-7	SR133 South-2	4.9	4.9	41	63	70	66	42	52	70	68
I-405 SB	SR133 South-2	Lake Forest-1A	2.0	2.3	63	67	71	68	62	61	70	69

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
SR-55 NB	I-5NB off ramp	22 Fwy	2.4	2.3	64	44	66	44	40	41	68	49
SR-55 NB	22 Fwy	91 N	4.7	4.6	69	66	68	65	62	43	69	68
SR-55 SB	SR 91 EB	22 W	4.6	4.7	41	38	69	55	59	52	72	63
SR-55 SB	22 W	5 South	2.3	2.2	17	60	64	66	60	63	69	69

Road	From	To	Distance (miles)		AM Speed (mph)		MD Speed (mph)		PM Speed (mph)		NT Speed (mph)	
			Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated	Observed	Estimated
SR-57 NB	SR57 North- 107A	91 East	4.8	4.7	62	50	57	53	27	46	69	53
SR-57 SB	Katella-2	I-5 South Ramp	1.7	1.8	46	41	65	56	58	49	70	60



5.3.2 Screenline Calibration

Screenline calibration was performed to ensure that the aggregate demand within each Transportation Corridor replicated the observed traffic. As part of this calibration, an in-house routine was applied to minimize variation between estimated and observed demand across each of the screenlines. The adjustment provides a matrix of 'base year' trip changes (either increases or reductions) that is then retained for application in each of the horizon years. Since these trips are stored as a matrix, these additional trips are not tied to specific roadways and can be diverted to different routes in exactly the same manner as the trips estimated directly by the model. As a result of the screenline calibration, for origin-destination zonal pairs where trip changes were provided by the adjustment routine, the net change in trips was less than 1 percent. Note that since the magnitude of the additional trips is held constant for all future years, their contribution to the overall assignment results are further minimized in each successive horizon year as the underlying model trip tables continue to increase due to growth in the region's population and employment.

Early calibration results revealed the model tended to overestimate the number of trips using HOV lanes. To bring aggregate HOV lane volume/count ratios closer to acceptable levels, a two minute time penalty was applied to represent the additional impedance associated with weaving in and out of the HOV lanes.

A series of screenlines were developed to intersect the TCA facilities and similar locations on the adjacent non-tolled roads. Two additional screenlines were created to quantify demand in the southern portion of the study area (screenline D) as well as to understand the traffic volumes coming to/from San Diego (screenline G). The screenline calibration results are shown in **Table 5-5**. The total estimated traffic for each screenline is within reasonable and acceptable tolerance of the total counts.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

5.0 travel demand model
August 22, 2014

Figure 5-8: Screenline Locations

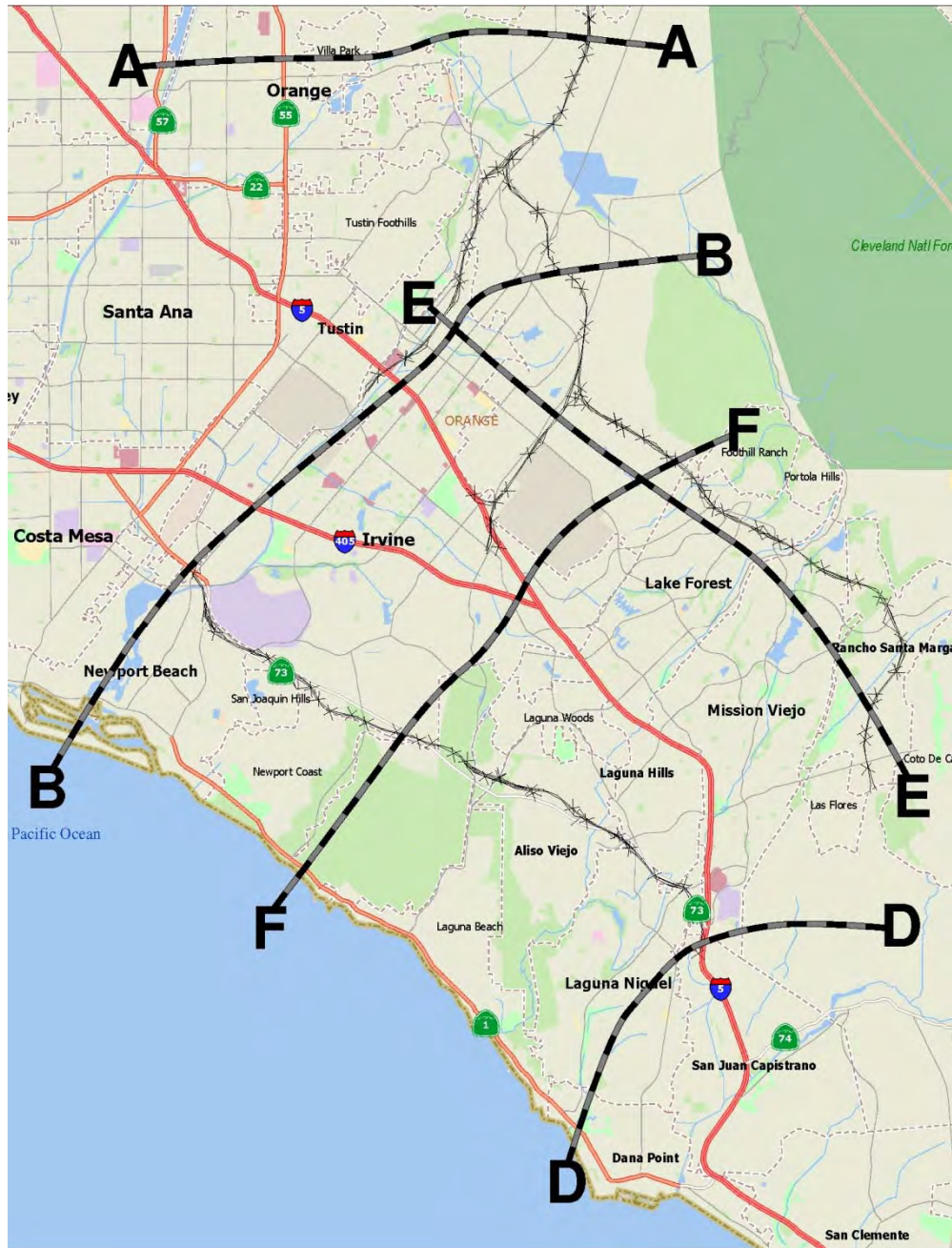


Table 5-5: Screenline Calibration Results

	Daily		
	Observed	Estimated	% Diff
Screenline A			
Northbound Total	268,737	271,611	1%
Southbound Total	276,431	287,650	4%
Screenline B			
Northbound / Westbound Total	510,884	495,887	-3%
Southbound / Eastbound Total	521,785	496,488	-5%
Screenline D			
Northbound / Westbound Total	168,738	157,542	-7%
Southbound / Eastbound Total	162,830	158,398	-3%
Screenline E			
Northbound Total	153,853	150,921	-2%
Southbound Total	148,585	154,839	4%
Screenline F			
Northbound / Westbound Total	325,364	327,744	1%
Southbound / Eastbound Total	319,674	315,882	-1%
Screenline G			
Northbound Total	128,664	132,626	3%
Southbound Total	128,106	128,577	0%

5.4 PREPARATION OF HIGHWAY NETWORKS

Regional networks for both the RivTAM and SANDAG model platforms were developed for 2012, 2020 and 2035. Each set of networks was reviewed for accuracy and proper connectivity. Refinements to the highway networks were the result of discussions with representatives from TCA, OCTA, RCTC and SANDAG. Projects contained in the adopted 2012 Regional Transportation Plan (RTP), produced by the Southern California Association of Governments, formed the basis for many of the updates to the RivTAM roadway networks. Projects contained in the 2050 Regional Transportation Plan, prepared by the San Diego Council of Governments, was the primary source of highway improvements for the SANDAG networks.

5.0 travel demand model
August 22, 2014

5.4.1 Base Year Network Changes (2012)

The base year for model calibration/validation was 2012. The base year networks pivoted off of existing 2010 roadway networks previously prepared by Stantec. As a result only minor changes were required. All of the TCA toll facilities were reviewed against aerial images for accuracy. Projects in the base year networks include:

- Widening of Ortega Highway from 2 lanes to 4 lanes between the County/City of San Juan Capistrano to east of La Pata/Ortega Hwy intersection (RTP Id ORA120506 & ORA120507)
- Addition of northbound lane on San Joaquin Hills toll road from Glenwood Drive to MacArthur Blvd (RTP Ids 29 and 10254)
- Addition of eastbound general purpose lane on SR 91 between SR 241 and SR 71 (RTP Id ORA120336)
- Widening of Crown Valley Parkway from Puerta Real to City Limits (RTP Id ORA000163)
- Correction to network to include a missing ramp from southbound Jamboree Rd to northbound I-5
- Addition of I-15 express lanes from the SR 163 to SR 78 in San Diego

5.4.2 Future Year Network Changes (2020 / 2035)

The two forecast years selected for the project were 2020 and 2035. Non-tolled interchanges are assumed to open by 2020 on SR 133 at Trabuco Road and on SR 241 at Weir Canyon Road. Tolled direct connectors between SR 241 and the express lanes on SR 91 are included as part of the RivTAM 2020 network.

Improvements to the I-5 and I-405 corridors parallel to the SR 73, scheduled to open in 2023, have a significant impact on transaction and revenue growth on the toll road. If these improvements, currently funded and included as part of the M2020 program, are delayed or not constructed, the traffic and revenue potential on the SR 73 would increase.

Table 5-6 presents the significant network improvements expected to occur between 2013 and 2020. **Table 5-7** presents the significant network improvements expected to occur between 2021 and 2035.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

5.0 travel demand model
August 22, 2014

Table 5-6: Key Network Changes: 2013-2020

RTP ID	TCA Toll Road Network Change:	Improvement
ORA120514	SR 133 at Trabuco Rd	Add on/off ramps (non tolled)
	SR 241 at Weir Canyon Rd	Add on/off ramps (non tolled)
10254	SR 73	Widen SB to 4 lanes from I-5 to MacArthur Blvd
ORA050	ETC (SR 241/261/133)	From SR 91 to I-5/Jamboree widen to 4 lanes/direction From Chapman to SR 133 add a 3rd lane/dir + aux
ORA051	FTC-N	From Oso Pkwy to ETC add 2 lanes/dir + aux
ORA052	SR 241 Tesoro Extension	From Oso Pkwy to Cow Camp Rd
ORA111207/2T01135	SR 241/SR 91 Direct Connectors	Add tolled direct connectors: NB 241 to EB 91 & WB 91 to SB 241
Non Tolled Network Changes		
2A0804/ORA082401	Cow Camp Road	From Antonio Pkwy to future I Street - add 1 lane/dir From future I st to Ortega - 2 lane/dir
RMV Plan	J Street	Add as 4 lane undivided secondary arterial
RMV Plan	F Street	Add as 4 lane undivided secondary arterial
ORA120326/ORA000152	I-5 interchange at SR 74	Reconstruct/Widen
ORA120505/ORA990919 *	Alton Pkwy Extension & Gap Closure	Add roadway between Irvine Blvd & Towne Centre Dr
2A0801	Oso Pkwy	Widen from 3 to 4 lanes
ORA48	Jeffrey Rd	Widen from 4 to 6 lanes from Irvine Center to Walnut
ORA120504	La Pata Ave Widening, Extension & Camino del Rio Extension	Widen existing road from 3 to 5 lanes south of Ortega Hwy to terminus Add 4 lane road to close the gap betw terminus & Calle Saluda; Extend Camino del Rio to intersect with La Pata Ave
2A0803/ORA082406	Antonio Pkwy	Widen from 4 to 6 lanes between Ladera Ranch and Ortega Hwy
2M0718	I-5 & Marguerite Pkwy	Add interchange
2H0703	I-5 between SR 55 & SR 57	Add 2nd carpool lane/direction
2H01143	I-5 between Dana Point & Avenida P	Add 1 carpool lane/direction
ORA000122	I-5 at La Paz	Expand LaPaz from 4 to 6 lanes
ORA000193	SR 22; I-405; I-605	Add HOV Connectors between Seal Beach Blvd & Valley View Dr
ORA030605 (Alt 1)	I-405 from SR-73 to I-605	Add 1 MF lane/dir (Combined with ORA045, ORA151 & ORA120310)
RIV071250	SR 91	Add 1 MF lane betw SR 71 & I-15; Add HOT lane from Riverside Co line to I-15; Add tolled DCs between SR 91 HOT and I-15 HOT lanes
RIV070308	SR 91/ SR 71 junction	Replace EB 91/NB 71 connector with direct connector and reconstruct Green River Rd EB on ramp
RIV071267	I-15	From SBD CL to Hidden Valley Pkwy add HOT lanes (2/dir); From Hidden Valley Pkwy to Cajalco Rd add HOT lanes (1/dir); From Cajalco Rd to SR 74 add HOT lanes (2/dir); From SR 74 to Jct I-15/I-215 add 1 HOV lane/dir; From SBD CL to SR 74 add 1 MF lane/dir
San Diego	SR 78 HOV Lanes	From I-5 to I-15
San Diego	I-805 Managed Lanes	From Palomar St to I-15 merge & SR 52 to I-5

* This project was not completed in its entirety until June 2012 so was therefore not included in base year network



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

5.0 travel demand model
August 22, 2014

Table 5-7: Key Network Changes: 2021-2035

RTP ID	TCA Toll Road Network Changes	Improvement
2M0726	SR 73 at Glenwood Dr	Add NB off and SB on ramps
F/ETCA Near-Term Proj # 8	SR 241 at Jeffrey Rd	Add on/off ramps (non tolled)
ORA051	FTC	From Bake Pkwy to Santa Margarita add 3rd lane SB only
RMV Plan	K Street	Construct & include interchange w/Tesoro Ext (non tolled)
Non Tolled Network Changes		
2M0730	I-5 from SR 73 to El Toro Rd	Add additional GP lane from SR 73 to Alicia Pkwy Add a 2nd carpool lane from El Toro Rd to Alicia Pkwy
2M0728	I-405 from I-5 to SR 55	Add 1 MF lane/dir
2M0733	SR-55 from I-405 to 91	Add 1 MF lane/dir
	Cow Camp Rd	Widen to 3 lanes/dir from Antonio Pkwy to I St
RMV Plan	I Street	Construct from Cow Camp Rd to G St
2T04128	SR 91	Add interchange with Fairmont Blvd (GP lanes)
2M0736	SR 91	Add 1 GP lane from SR 57 to SR 55
RIV03129	I-15	From I-215 to Winchester Rd add 1 HOV lane/dir & widen to 6 MF lanes/dir. From Winchester Rd to San County Line add 1 HOV lane/dir & widen to 5 MF lanes/dir
RIV03129	I-215	From Newport Rd to I-15 widen to 1 HOV lane/dir & 4 MF lanes/dir
3C01MA01	I-15	Add new east-west transportation corridor betw I-15 and I-215
San Diego	I-15 Express Lanes	From I-8 to SR 163
San Diego	I-5 Managed Lanes	From Palomar to 24th St; From Nobel to SR 76 (new)
San Diego	SR 78 Managed Lanes	Convert HOV to ML betw I-5 and I-15
San Diego	I-805 Managed Lanes	From SR 905 to SR 52

6.0 TRAFFIC AND REVENUE PROJECTIONS

The traffic models provide traffic projections for each of the two future analysis years for which land use information and highway networks were developed: 2020 and 2035. Model traffic at the toll plazas was adjusted using a calibration factor and gross toll revenues were calculated by multiplying each year's adjusted traffic by the effective toll structure for that year. Factors are applied to the revenue to account for trucks, which pay higher tolls, and to expand the average weekday traffic to a full year.

A screenline analysis was also performed to determine whether toll road traffic levels were reasonable compared to nearby, parallel roadways.

It should be noted that all future year traffic volumes and revenue projections represent fiscal years. Thus, the 2020 model year represents July 2019 through June 2020 average weekday traffic (or fiscal year 2020).

6.1 MODEL POST-PROCESSING

As it is impossible to match the model-assigned traffic exactly with the existing traffic, necessary post-processing adjustments were made. After the forecast models were run, the assigned volumes on each toll link were compared to actual average weekday transaction data for FY 2012. Transactions were summarized by payment type (AVI and cash) and time-of-day (for plazas with peak period toll rates). Revenue estimates for unadjusted model results were compared to actual FY 2012 revenues to determine the percentage of revenue attributable to truck traffic. These plaza-by-plaza adjustment factors were then applied to future year model volumes to more accurately reflect toll transactional patterns.

Socio-economic forecasts were reviewed in five year periods to determine the magnitude of short-term versus long-term growth. This analysis helped to guide the tailoring of the traffic and revenue forecast between FY 2015 and FY 2020 and between FY 2020 and FY 2035.

Traffic volumes after 2035 were assumed to grow gradually at 0.5 percent per year.

6.2 ASSUMED TOLL SCHEDULE

Table 6-1 presents the proposed toll schedule through FY 2050. The toll schedules for future fiscal years presented in this study have not been approved by the Board of the Agency. We have assumed for the purposes of the study that the aggregate percentage toll rate increases during the forecast period will approximate the toll increases used in prior forecasts for the same period. However, we have modified the assumed rate structures from prior forecasts to reflect the actual tolls in place and Board toll policy (such as FasTrak/non-FasTrak differentials and peak/off-peak differentials.) The toll schedules further reflect future modifications based on model results of "optimal" toll rates, that is the rates that are below the maximum revenue that

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

can be achieved if pushed to each toll location's limits. Toll rate increases during the forecast period average 2.5 percent over time, roughly mirroring the value of inflation.

We believe that the revenue projections contained in this study are reasonable, assuming that the projected toll rate increases and toll rate structure assumed in the study are in fact implemented by the Agency. Because the Agency has not approved any future toll rates assumed in this study, the actual revenues may be different from the projections in this study, based upon what future toll rates are approved by the Agency.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

Table 6-1: Assumed Toll Rate Schedule (FY 2015 – FY 2050)

FISCAL YEAR ENDING JUNE 30		2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	
SAN JOAQUIN HILLS																			
La Paz	Non-FasTrak	\$ 2.34	\$ 2.37	\$ 2.41	\$ 2.44	\$ 2.48	\$ 2.51	\$ 2.55	\$ 2.59	\$ 2.63	\$ 2.67	\$ 2.71	\$ 2.76	\$ 2.80	\$ 2.85	\$ 2.89	\$ 2.94	\$ 2.99	
	FasTrak	\$ 1.34	\$ 1.37	\$ 1.41	\$ 1.44	\$ 1.48	\$ 1.51	\$ 1.55	\$ 1.59	\$ 1.63	\$ 1.67	\$ 1.71	\$ 1.76	\$ 1.80	\$ 1.85	\$ 1.89	\$ 1.94	\$ 1.99	
Aliso Creek	Non-FasTrak	\$ 2.91	\$ 2.95	\$ 3.00	\$ 3.05	\$ 3.10	\$ 3.16	\$ 3.21	\$ 3.27	\$ 3.32	\$ 3.38	\$ 3.44	\$ 3.50	\$ 3.56	\$ 3.63	\$ 3.69	\$ 3.76	\$ 3.83	
	FasTrak	\$ 1.91	\$ 1.95	\$ 2.00	\$ 2.05	\$ 2.10	\$ 2.16	\$ 2.21	\$ 2.27	\$ 2.32	\$ 2.38	\$ 2.44	\$ 2.50	\$ 2.56	\$ 2.63	\$ 2.69	\$ 2.76	\$ 2.83	
Glenwood	Non-FasTrak	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	FasTrak	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
El Tero	Non-FasTrak	\$ 3.52	\$ 3.58	\$ 3.65	\$ 3.71	\$ 3.78	\$ 3.85	\$ 3.92	\$ 4.00	\$ 4.07	\$ 4.15	\$ 4.23	\$ 4.31	\$ 4.39	\$ 4.47	\$ 4.56	\$ 4.65	\$ 4.74	
	FasTrak	\$ 2.52	\$ 2.58	\$ 2.65	\$ 2.71	\$ 2.78	\$ 2.85	\$ 2.92	\$ 3.00	\$ 3.07	\$ 3.15	\$ 3.23	\$ 3.31	\$ 3.39	\$ 3.47	\$ 3.56	\$ 3.65	\$ 3.74	
Catalina View ML	ExpressAccount Non-Peak	\$ 6.15	\$ 6.28	\$ 6.41	\$ 6.55	\$ 6.69	\$ 6.83	\$ 6.97	\$ 7.12	\$ 7.28	\$ 7.43	\$ 7.59	\$ 7.76	\$ 7.93	\$ 8.10	\$ 8.28	\$ 8.46	\$ 8.65	
	FasTrak Non-Peak	\$ 5.15	\$ 5.28	\$ 5.41	\$ 5.55	\$ 5.69	\$ 5.83	\$ 5.97	\$ 6.12	\$ 6.28	\$ 6.43	\$ 6.59	\$ 6.76	\$ 6.93	\$ 7.10	\$ 7.28	\$ 7.46	\$ 7.65	
	One-Time Toll™ Non-Peak	\$ 7.35	\$ 7.51	\$ 7.67	\$ 7.84	\$ 8.01	\$ 8.18	\$ 8.36	\$ 8.55	\$ 8.74	\$ 8.93	\$ 9.13	\$ 9.33	\$ 9.54	\$ 9.75	\$ 9.97	\$ 10.20	\$ 10.43	
	ExpressAccount Peak	\$ 7.65	\$ 7.82	\$ 7.99	\$ 8.16	\$ 8.34	\$ 8.52	\$ 8.71	\$ 8.90	\$ 9.10	\$ 9.30	\$ 9.51	\$ 9.73	\$ 9.94	\$ 10.17	\$ 10.40	\$ 10.63	\$ 10.87	
	FasTrak Peak	\$ 6.65	\$ 6.82	\$ 6.99	\$ 7.16	\$ 7.34	\$ 7.52	\$ 7.71	\$ 7.90	\$ 8.10	\$ 8.30	\$ 8.51	\$ 8.73	\$ 8.94	\$ 9.17	\$ 9.40	\$ 9.63	\$ 9.87	
	One-Time Toll™ Peak	\$ 7.65	\$ 7.82	\$ 7.99	\$ 8.16	\$ 8.34	\$ 8.52	\$ 8.71	\$ 8.90	\$ 9.10	\$ 9.30	\$ 9.51	\$ 9.73	\$ 9.94	\$ 10.17	\$ 10.40	\$ 10.63	\$ 10.87	
	ExpressAccount Pre-/Post-Peak	\$ 7.35	\$ 7.51	\$ 7.67	\$ 7.84	\$ 8.01	\$ 8.18	\$ 8.36	\$ 8.55	\$ 8.74	\$ 8.93	\$ 9.13	\$ 9.33	\$ 9.54	\$ 9.75	\$ 9.97	\$ 10.20	\$ 10.43	
	FasTrak Pre-/Post-Peak	\$ 6.35	\$ 6.51	\$ 6.67	\$ 6.84	\$ 7.01	\$ 7.18	\$ 7.36	\$ 7.55	\$ 7.74	\$ 7.93	\$ 8.13	\$ 8.33	\$ 8.54	\$ 8.75	\$ 8.97	\$ 9.20	\$ 9.43	
	One-Time Toll™ Pre-/Post-Peak	\$ 7.35	\$ 7.51	\$ 7.67	\$ 7.84	\$ 8.01	\$ 8.18	\$ 8.36	\$ 8.55	\$ 8.74	\$ 8.93	\$ 9.13	\$ 9.33	\$ 9.54	\$ 9.75	\$ 9.97	\$ 10.20	\$ 10.43	
	Weekend ExpressAccount	\$ 8.35	\$ 8.56	\$ 8.77	\$ 8.99	\$ 9.22	\$ 9.45	\$ 9.68	\$ 9.93	\$ 10.17	\$ 10.43	\$ 10.69	\$ 10.96	\$ 11.23	\$ 11.51	\$ 11.80	\$ 12.09	\$ 12.40	
	Weekend FasTrak	\$ 4.90	\$ 5.02	\$ 5.15	\$ 5.28	\$ 5.41	\$ 5.54	\$ 5.68	\$ 5.82	\$ 5.97	\$ 6.12	\$ 6.27	\$ 6.43	\$ 6.59	\$ 6.75	\$ 6.92	\$ 7.10	\$ 7.27	
	Weekend One-Time Toll™	\$ 7.35	\$ 7.51	\$ 7.67	\$ 7.84	\$ 8.01	\$ 8.18	\$ 8.36	\$ 8.55	\$ 8.74	\$ 8.93	\$ 9.13	\$ 9.33	\$ 9.54	\$ 9.75	\$ 9.97	\$ 10.20	\$ 10.43	
Newport Coast	Non-FasTrak	\$ 3.26	\$ 3.31	\$ 3.37	\$ 3.43	\$ 3.49	\$ 3.55	\$ 3.62	\$ 3.68	\$ 3.75	\$ 3.82	\$ 3.89	\$ 3.96	\$ 4.04	\$ 4.11	\$ 4.19	\$ 4.27	\$ 4.35	
	FasTrak	\$ 2.26	\$ 2.31	\$ 2.37	\$ 2.43	\$ 2.49	\$ 2.55	\$ 2.62	\$ 2.68	\$ 2.75	\$ 2.82	\$ 2.89	\$ 2.96	\$ 3.04	\$ 3.11	\$ 3.19	\$ 3.27	\$ 3.35	
Bonita Canyon	Non-FasTrak	\$ 2.00	\$ 2.02	\$ 2.05	\$ 2.07	\$ 2.10	\$ 2.13	\$ 2.16	\$ 2.19	\$ 2.22	\$ 2.25	\$ 2.28	\$ 2.31	\$ 2.34	\$ 2.38	\$ 2.41	\$ 2.44	\$ 2.48	
	FasTrak	\$ 1.00	\$ 1.02	\$ 1.05	\$ 1.07	\$ 1.10	\$ 1.13	\$ 1.16	\$ 1.19	\$ 1.22	\$ 1.25	\$ 1.28	\$ 1.31	\$ 1.34	\$ 1.38	\$ 1.41	\$ 1.44	\$ 1.48	

FISCAL YEAR ENDING JUNE 30		2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
SAN JOAQUIN HILLS																				
La Paz	Non-FasTrak	\$ 3.04	\$ 3.09	\$ 3.14	\$ 3.19	\$ 3.25	\$ 3.31	\$ 3.36	\$ 3.42	\$ 3.48	\$ 3.54	\$ 3.61	\$ 3.67	\$ 3.74	\$ 3.81	\$ 3.88	\$ 3.95	\$ 4.02	\$ 4.10	\$ 4.18
	FasTrak	\$ 2.04	\$ 2.09	\$ 2.14	\$ 2.19	\$ 2.25	\$ 2.31	\$ 2.36	\$ 2.42	\$ 2.48	\$ 2.54	\$ 2.61	\$ 2.67	\$ 2.74	\$ 2.81	\$ 2.88	\$ 2.95	\$ 3.02	\$ 3.10	\$ 3.18
Aliso Creek	Non-FasTrak	\$ 3.90	\$ 3.97	\$ 4.05	\$ 4.12	\$ 4.20	\$ 4.28	\$ 4.36	\$ 4.45	\$ 4.53	\$ 4.62	\$ 4.71	\$ 4.80	\$ 4.90	\$ 5.00	\$ 5.10	\$ 5.20	\$ 5.30	\$ 5.41	\$ 5.52
	FasTrak	\$ 2.90	\$ 2.97	\$ 3.05	\$ 3.12	\$ 3.20	\$ 3.28	\$ 3.36	\$ 3.45	\$ 3.53	\$ 3.62	\$ 3.71	\$ 3.80	\$ 3.90	\$ 4.00	\$ 4.10	\$ 4.20	\$ 4.30	\$ 4.41	\$ 4.52
Glenwood	Non-FasTrak	\$ -	\$ -	\$ -	\$ 4.63	\$ 4.72	\$ 4.81	\$ 4.90	\$ 5.00	\$ 5.10	\$ 5.20	\$ 5.31	\$ 5.42	\$ 5.53	\$ 5.64	\$ 5.76	\$ 5.88	\$ 6.00	\$ 6.12	\$ 6.25
	FasTrak	\$ -	\$ -	\$ -	\$ 3.63	\$ 3.72	\$ 3.81	\$ 3.90	\$ 4.00	\$ 4.10	\$ 4.20	\$ 4.31	\$ 4.42	\$ 4.53	\$ 4.64	\$ 4.76	\$ 4.88	\$ 5.00	\$ 5.12	\$ 5.25
El Tero	Non-FasTrak	\$ 4.83	\$ 4.93	\$ 5.03	\$ 5.13	\$ 5.23	\$ 5.34	\$ 5.45	\$ 5.56	\$ 5.67	\$ 5.79	\$ 5.91	\$ 6.03	\$ 6.16	\$ 6.29	\$ 6.42	\$ 6.55	\$ 6.69	\$ 6.83	\$ 6.98
	FasTrak	\$ 3.83	\$ 3.93	\$ 4.03	\$ 4.13	\$ 4.23	\$ 4.34	\$ 4.45	\$ 4.56	\$ 4.67	\$ 4.79	\$ 4.91	\$ 5.03	\$ 5.16	\$ 5.29	\$ 5.42	\$ 5.55	\$ 5.69	\$ 5.83	\$ 5.98
Catalina View ML	ExpressAccount Non-Peak	\$ 8.84	\$ 9.03	\$ 9.23	\$ 9.44	\$ 9.65	\$ 9.87	\$ 10.09	\$ 10.32	\$ 10.55	\$ 10.79	\$ 11.03	\$ 11.28	\$ 11.54	\$ 11.80	\$ 12.07	\$ 12.35	\$ 12.64	\$ 12.93	\$ 13.22
	FasTrak Non-Peak	\$ 7.84	\$ 8.03	\$ 8.23	\$ 8.44	\$ 8.65	\$ 8.87	\$ 9.09	\$ 9.32	\$ 9.55	\$ 9.79	\$ 10.03	\$ 10.28	\$ 10.54	\$ 10.80	\$ 11.07	\$ 11.35	\$ 11.64	\$ 11.93	\$ 12.22
	One-Time Toll™ Non-Peak	\$ 10.66	\$ 10.90	\$ 11.15	\$ 11.41	\$ 11.67	\$ 11.93	\$ 12.21	\$ 12.49	\$ 12.77	\$ 13.07	\$ 13.37	\$ 13.68	\$ 13.99	\$ 14.32	\$ 14.65	\$ 14.99	\$ 15.34	\$ 15.70	\$ 16.07
	ExpressAccount Peak	\$ 11.12	\$ 11.37	\$ 11.63	\$ 11.90	\$ 12.17	\$ 12.45	\$ 12.73	\$ 13.03	\$ 13.33	\$ 13.64	\$ 13.95	\$ 14.28	\$ 14.61	\$ 14.95	\$ 15.30	\$ 15.65	\$ 16.02	\$ 16.40	\$ 16.78
	FasTrak Peak	\$ 10.12	\$ 10.37	\$ 10.63	\$ 10.90	\$ 11.17	\$ 11.45	\$ 11.73	\$ 12.03	\$ 12.33	\$ 12.64	\$ 12.95	\$ 13.28	\$ 13.61	\$ 13.95	\$ 14.30	\$ 14.65	\$ 15.02	\$ 15.40	\$ 15.78
	One-Time Toll™ Peak	\$ 11.12	\$ 11.37	\$ 11.63	\$ 11.90	\$ 12.17	\$ 12.45	\$ 12.73	\$ 13.03	\$ 13.33	\$ 13.64	\$ 13.95	\$ 14.28	\$ 14.61	\$ 14.95	\$ 15.30	\$ 15.65	\$ 16.02	\$ 16.40	\$ 16.78
	ExpressAccount Pre-/Post-Peak	\$ 10.66	\$ 10.90	\$ 11.15	\$ 11.41	\$ 11.67	\$ 11.93	\$ 12.21	\$ 12.49	\$ 12.77	\$ 13.07	\$ 13.37	\$ 13.68	\$ 13.99	\$ 14.32	\$ 14.65	\$ 14.99	\$ 15.34	\$ 15.70	\$ 16.07
	FasTrak Pre-/Post-Peak	\$ 9.66	\$ 9.90	\$ 10.15	\$ 10.41	\$ 10.67	\$ 10.93	\$ 11.21	\$ 11.49	\$ 11.77	\$ 12.07	\$ 12.37	\$ 12.68	\$ 12.99	\$ 13.32	\$ 13.65	\$ 13.99	\$ 14.34	\$ 14.70	\$ 15.07
	One-Time Toll™ Pre-/Post-Peak	\$ 10.66	\$ 10.90	\$ 11.15	\$ 11.41	\$ 11.67	\$ 11.93	\$ 12.21	\$ 12.49	\$ 12.77	\$ 13.07	\$ 13.37	\$ 13.68	\$ 13.99	\$ 14.32	\$ 14.65	\$ 14.99	\$ 15.34	\$ 15.70	\$ 16.07
	Weekend ExpressAccount	\$ 12.71	\$ 13.02	\$ 13.35	\$ 13.68	\$ 14.02	\$ 14.38	\$ 14.73	\$ 15.10	\$ 15.48	\$ 15.87	\$ 16.26	\$ 16.67	\$ 17.09	\$ 17.51	\$ 17.95	\$ 18.40	\$ 18.86	\$ 19.33	\$ 19.82
	Weekend FasTrak	\$ 7.46	\$ 7.64	\$ 7.83	\$ 8.03	\$ 8.23	\$ 8.44	\$ 8.65	\$ 8.86	\$ 9.08	\$ 9.31	\$ 9.54	\$ 9.78	\$ 10.03	\$ 10.28	\$ 10.54	\$ 10.80	\$ 11.07	\$ 11.35	\$ 11.63
	Weekend One-Time Toll™	\$ 10.66	\$ 10.90	\$ 11.15	\$ 11.41	\$ 11.67	\$ 11.93	\$ 12.21	\$ 12.49	\$ 12.77	\$ 13.07	\$ 13.37	\$ 13.68	\$ 13.99	\$ 14.32	\$ 14.65	\$ 14.99	\$ 15.34	\$ 15.70	\$ 16.07
Newport Coast	Non-FasTrak	\$ 4.44	\$ 4.52	\$ 4.61	\$ 4.70	\$ 4.79	\$ 4.89	\$ 4.98	\$ 5.08	\$ 5.19	\$ 5.29	\$ 5.40	\$ 5.51	\$ 5.62	\$ 5.74	\$ 5.85	\$ 5.97	\$ 6.10	\$ 6.23	\$ 6.36
	FasTrak	\$ 3.44	\$ 3.52	\$ 3.61	\$ 3.70	\$ 3.79	\$ 3.89	\$ 3.98	\$ 4.08	\$ 4.19	\$ 4.29	\$ 4.40	\$ 4.51	\$ 4.62	\$ 4.74	\$ 4.85	\$ 4.97	\$ 5.10	\$ 5.23	\$ 5.36
Bonita Canyon	Non-FasTrak	\$ 2.52	\$ 2.56	\$ 2.59	\$ 2.63	\$ 2.68	\$ 2.72	\$ 2.76	\$ 2.80	\$ 2.85	\$ 2.90	\$ 2.94	\$ 2.99	\$ 3.04	\$ 3.09	\$ 3.14	\$ 3.20	\$ 3.25	\$ 3.31	\$ 3.37
	FasTrak	\$ 1.52	\$ 1.56	\$ 1.59	\$ 1.63	\$ 1.68	\$ 1.72	\$ 1.76	\$ 1.80	\$ 1.85	\$ 1.90	\$ 1.94	\$ 1.99	\$ 2.04	\$ 2.09	\$ 2.14	\$ 2.20	\$ 2.25	\$ 2.31	\$ 2.37



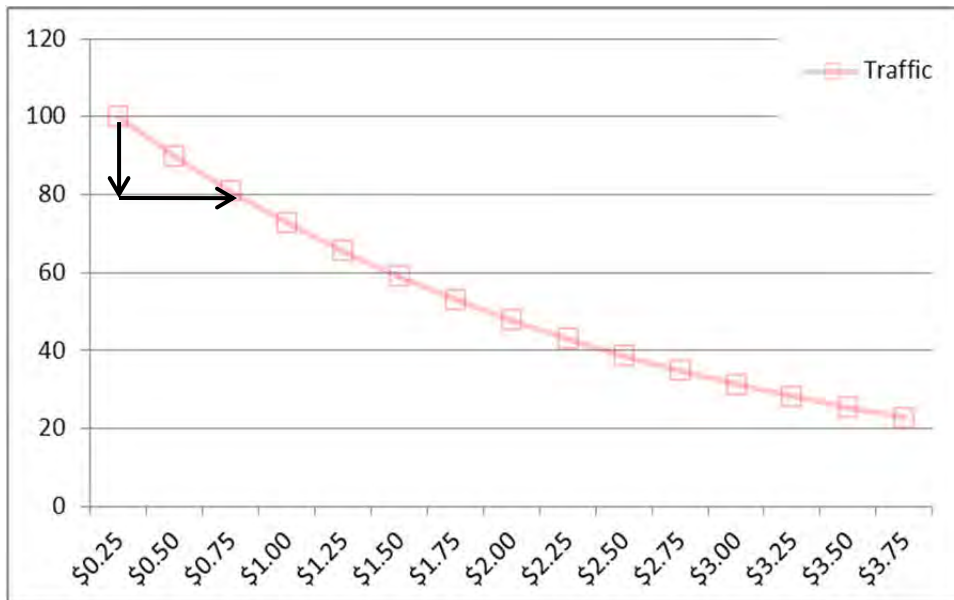
6.0 traffic and revenue projections
 August 22, 2014

6.3 TOLL ELASTICITY

The theory of toll pricing relates to the traditional supply-demand relationships seen elsewhere in economic literature. As prices rise, demand drops. At the critical price point, demand produces a maximum amount of potential revenue.

As shown in this example, traffic declines as prices rise in a continuous albeit non-linear fashion.

Figure 6-1: Traffic’s Response to Toll Increases



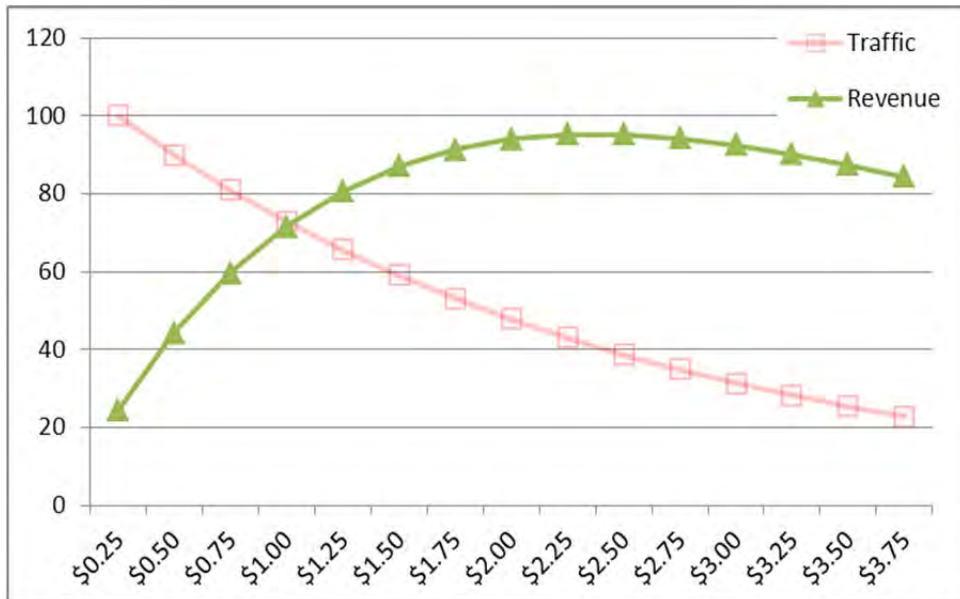
In this example, a toll rise from \$0.25 to \$0.75 produces a 20% decline in traffic demand.

At various points along this curve, the traffic multiplied times the toll rate produces the revenue for the policy.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
 August 22, 2014

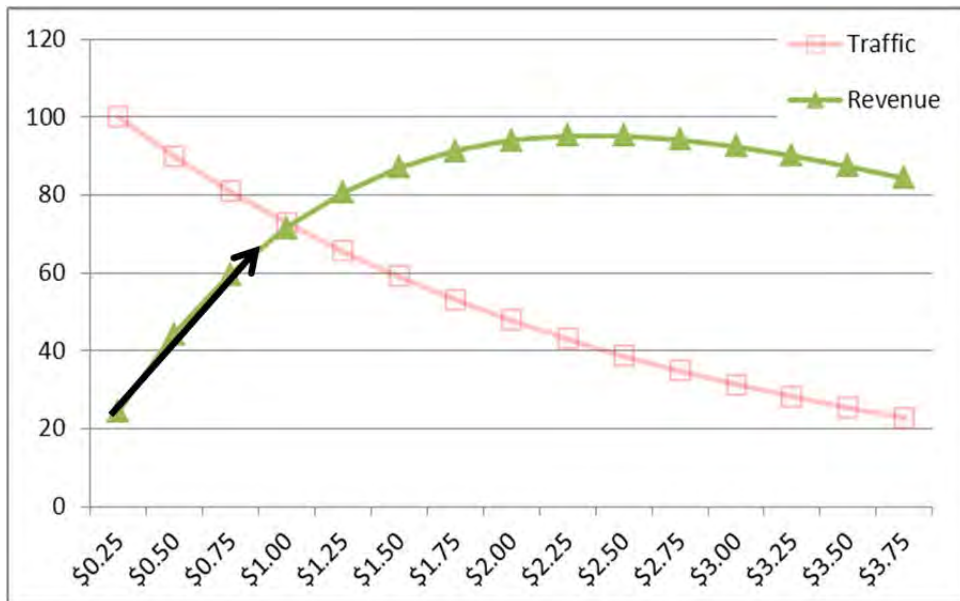
Figure 6-2: Typical Traffic vs. Revenue Curves



In this example, $\$0.25 * 100 = \25.00 , $\$1.00 * 72 = \72.00 and $\$2.00 * 46 = \92.00 .

At low end of the curve, revenue increases at nearly linear rates with increased toll rates.

Figure 6-3: Typical Traffic vs. Revenue Curves

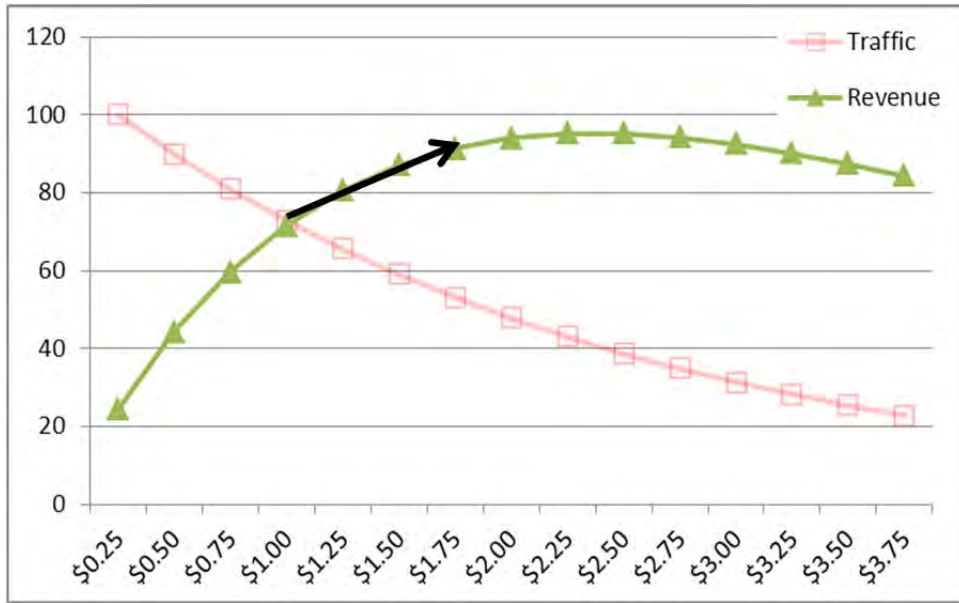


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

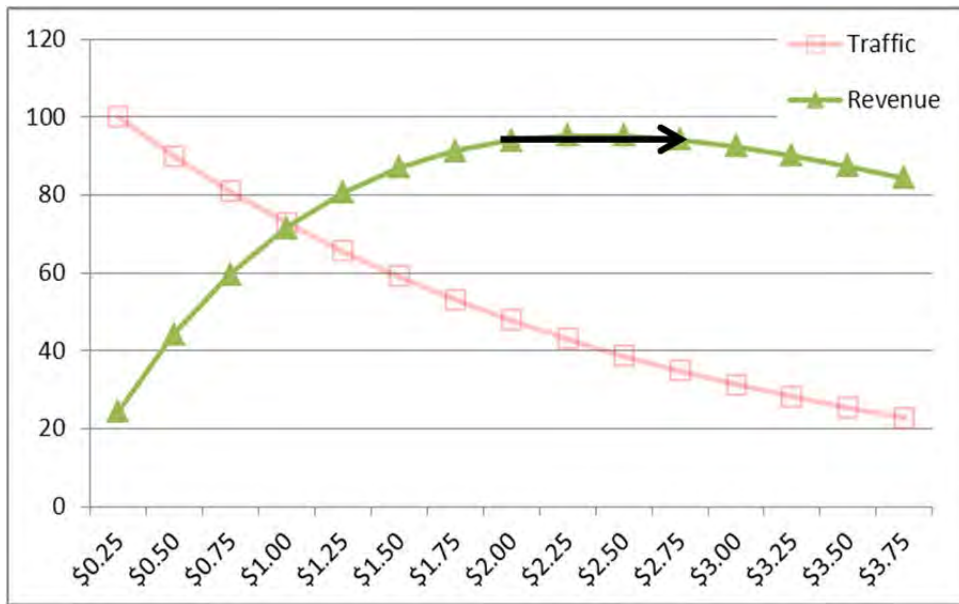
As rates increase, revenue increases begin to slow.

Figure 6-4: Typical Traffic vs. Revenue Curves



As rates approach optimal, revenue increases are nearly zero, and the curve become flat.

Figure 6-5: Typical Traffic vs. Revenue Curves

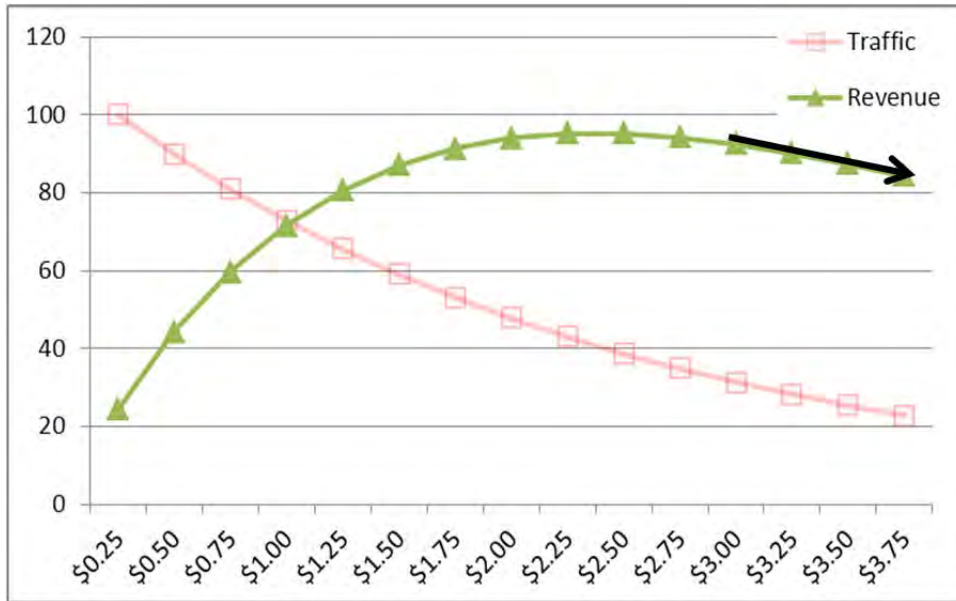


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

As rates go beyond optimal, revenues decline.

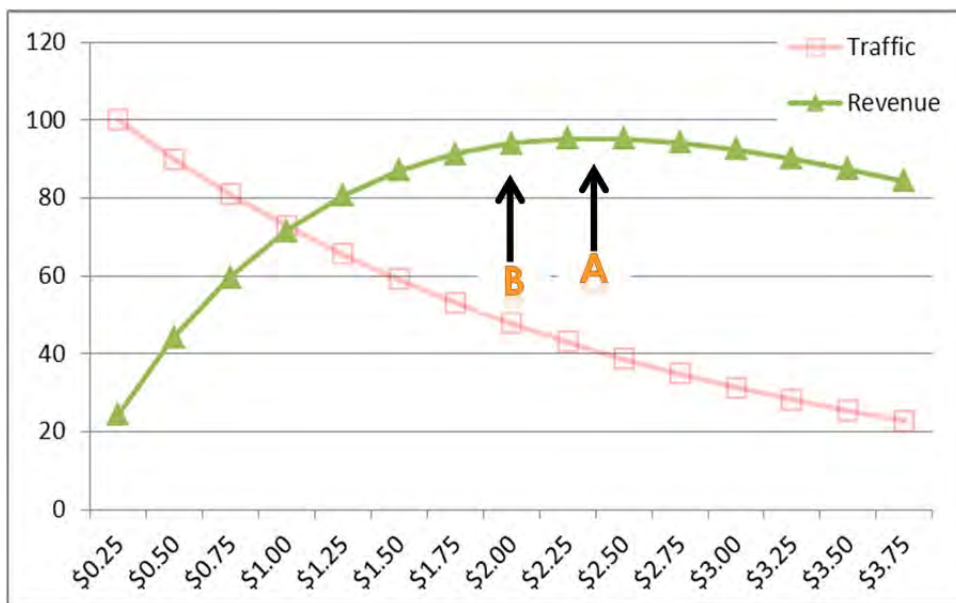
Figure 6-6: Typical Traffic vs. Revenue Curves



From a planning perspective, one may ask, where is the Optimal point on the revenue curve?

- A: Point of highest revenue, the maximum revenue point, or
- B: Optimal Toll, appoint slightly below the highest point which reflects the nature of the forecasting process and provides a "cushion" in the forecast.

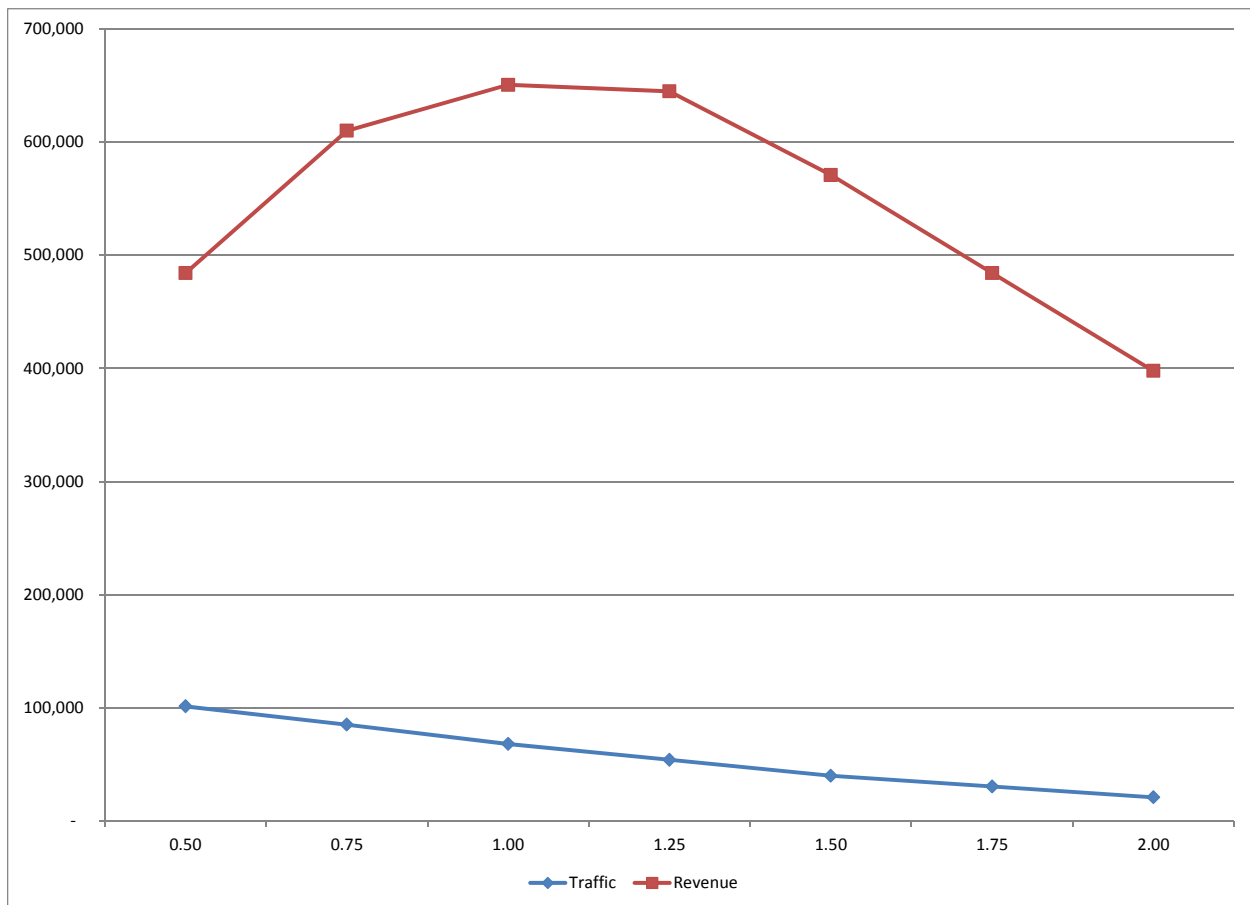
Figure 6-7: Typical Traffic vs. Revenue Curves



6.0 traffic and revenue projections
 August 22, 2014

As part of our analysis of the SJHTC system, the sensitivity of toll rates was tested and analyzed by multiplying the base toll rates by “multiples”. The multiples were applied to the Catalina View mainline plaza for each test, and the effects on traffic and revenue were observed for average weekday daily traffic and revenue. **Figure 6-8** shows the effects of the multiples on the Catalina View mainline toll plaza in 2035.

**Figure 6-8: Toll Elasticity at Catalina View Mainline Plaza
 Average Weekday – Both Directions**



6.4 SCREENLINE ANALYSIS

The five screenline locations analyzed are shown in **Figure 6-9**. Data was also collected along Screenline G, which traversed I-5 and I-15 south of the Orange County / San Diego County line. Screenline volumes were collected at both major freeways and minor arterials to assist in the calibration of the regional model (discussed in Chapter 5). In addition, screenline analysis is important to determine the increase (or decrease) in future traffic volumes on major and minor routes in the study area. **Figure 6-10** through **Figure 6-15** display the average weekday traffic

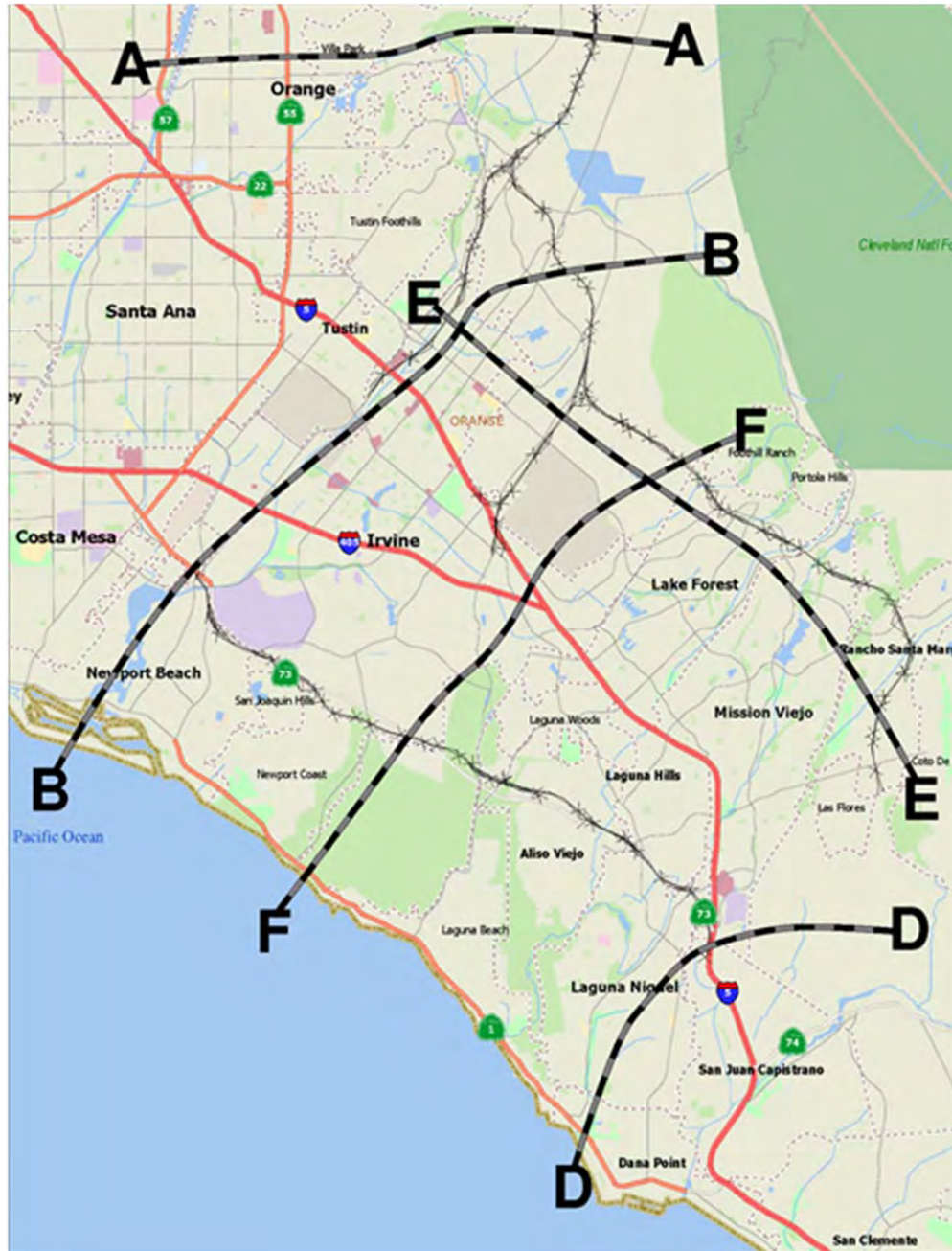


SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

volumes crossing the screenlines for the year 2012 traffic count data, and the 2020 and 2035 model results.

Figure 6-9: Screenline Locations



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections

August 22, 2014

Screenline A crosses the Eastern Toll Road (SR 241) at the Windy Ridge toll plaza, and runs westward from there, crossing Route 55 and 57 and a number of arterials. Today, SR 55 carries about 38 percent and SR 57 carries 44 percent of the screenline's total traffic. SR 241 carries 9 percent of the traffic in the year 2012, growing to 10 percent in the year 2020, and 13 percent in the year 2030. The total screenline volume grows about 11 percent between 2012 and 2020 and 19 percent between 2020 and 2035.

Screenline B runs east-west parallel and just south of SR 261 from the Pacific Coast Highway up through SR 241, passing through the San Joaquin Hills Transportation Corridor, I-405, I-5, and numerous arterials. Screenline B carries the most traffic of any screenline, with over 1,000,000 vehicles in 2012. Between 2012 and 2020, the total screenline B volume grows 8 percent and 17 percent between 2020 and 2035. Currently, I-5 and I-405 traffic makes up 28 percent and 25 percent of the total screenline traffic, respectively. Traffic on the Transportation Corridors (SR 73 and SR 241) comprises 14 percent of the total volume, split between SR 73 and SR 241 at 11 percent and 3 percent, respectively.

Screenline D runs east-west along the southern portion of the study area passing through the Pacific Coast Highway, I-5, and numerous arterials. Currently, almost 60 percent of trips on Screenline D travel on I-5. The total screenline D volume grows 8 percent between 2012 and 2020 and 15 percent between 2020 and 2035.

Screenline E runs north-south parallel to the Foothill Transportation Corridor crossing the SR 261 at the Irvine Ranch toll plaza, the SR 133, minor arterials, and the Oso Parkway toll plaza. Between 2012 and 2020, the total screenline E volume grows 10 percent. Between 2020 and 2035, volumes grow by 26 percent.

Screenline F runs from the Pacific Coast Highway up to Santiago Canyon Road, passing through the San Joaquin Hills Transportation Corridor at Catalina View, I-405, I-5, the Foothill Transportation Corridor (SR 241) at Tomato Springs, and numerous arterials. Between 2012 and 2020, the total screenline F volume grows 12 percent and 20 percent between 2020 and 2035. Currently, both I-5 and I-405 traffic makes up almost 30 percent each of the total screenline traffic while SR 73 traffic comprises 9 percent of the total volume. By 2035, SR 73 traffic has grown 24 percent, but still only comprises 8 percent of the screenline volume.

Screenline G crosses I-5 and I-15 in San Diego County as was analyzed to determine if there were any shifts in travel from I-15 to I-5. In 2012, 48 percent of the screenline uses I-5 while the remaining 52 percent use I-15. These percentages hold in both the 2020 and 2035 model years.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
 August 22, 2014

Figure 6-10: Screenline A Volumes

Route 57	Glassell St	Route 55	Cannon St	Route 241 Windy Ridge Toll Plaza	
 242,422 44%	 16,008 3%	 206,190 38%	 29,500 5%	 51,048 9%	Count Data 2012 Total: 545,169 Base
MODEL VOLUMES					
 262,592 43%	 14,718 2%	 242,747 40%	 27,577 5%	 59,666 10%	Model Year 2020 Total: 607,301 +11.4%
 298,881 41%	 16,195 2%	 284,811 40%	 29,683 4%	 90,987 13%	



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

Figure 6-11: Screenline B Volumes

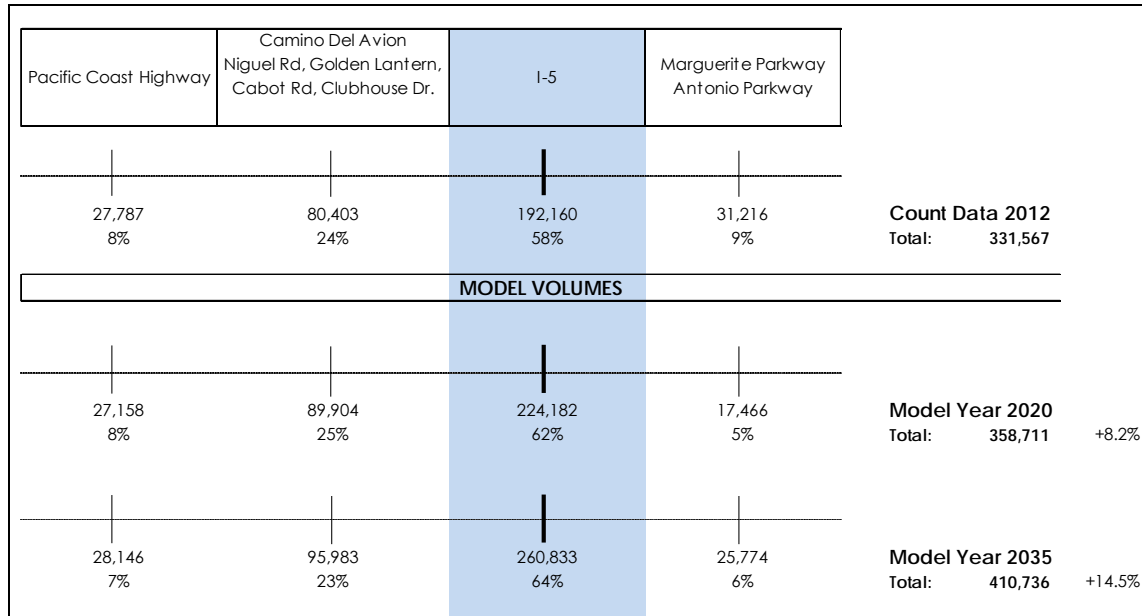
Pacific Coast Highway Jamboree	SR 73	MacArthur Blvd. Campus Drive Michelson	I-405	Main, Alton Parkway Barranca, Warner Ave, Irvine Center, Walnut Ave	I-5	Bryan Ave Irvine Blvd Portola Parkway	SR 241	
96,358 9%	111,888 11%	63,780 6%	256,237 25%	130,724 13%	287,951 28%	52,108 5%	33,622 3%	Count Data 2012 Total: 1,032,669 Base
MODEL VOLUMES								
105,949 10%	95,116 9%	37,906 3%	267,514 24%	142,025 13%	355,979 32%	65,291 6%	43,089 4%	Model Year 2020 Total: 1,112,869 +7.8%
114,523 9%	106,587 8%	46,619 4%	319,528 24%	161,812 12%	421,746 32%	67,942 5%	66,195 5%	Model Year 2035 Total: 1,304,953 +17.3%



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

Figure 6-12: Screenline D Volumes



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
 August 22, 2014

Figure 6-13: Screenline E Volumes

SR 261 Irvine Ranch Toll Plaza	Culver Drive Jeffrey Road Sand Canyon Ave	SR 133	Bake Parkway Lake Forest Blvd El Toro Road	Los Alisos Maurgerite Parkway Alicia Parkway	Olympiad Road Antonio Parkway	Oso Parkway Toll Plaza	
21,355 7%	29,245 10%	50,055 17%	79,345 26%	66,776 22%	48,720 16%	6,943 2%	Count Data 2012 Total: 302,438 Base
25,095 8%	57,591 18%	71,684 22%	59,082 18%	61,545 19%	44,316 13%	9,104 3%	Model Year 2020 Total: 328,416 +8.6%
34,014 8%	67,983 16%	96,497 23%	68,031 16%	66,949 16%	45,729 11%	10,349 2%	Model Year 2035 Total: 421,947 +28.5%



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
 August 22, 2014

Figure 6-14: Screenline F Volumes

Pacific Coast Highway	SR 73 Catalina View Toll Plaza	Laguna Canyon Rd Irvine Center Drive	I-405	I-5	Allton Parkway Barranca Parkway Irvine Blvd	SR 241 Tomato Springs Toll Plaza	Santiago Canyon Road	
32,969 5%	55,461 9%	66,906 10%	189,039 29%	193,933 30%	52,010 8%	43,736 7%	10,984 2%	Count Data 2012 Total: 645,039 Base
MODEL VOLUMES								
33,248 5%	54,739 8%	73,725 10%	178,338 25%	231,769 32%	71,592 10%	67,263 9%	14,309 2%	Model Year 2020 Total: 724,983 +12.4%
35,395 4%	68,996 8%	79,216 9%	212,715 24%	275,355 32%	82,581 9%	95,051 11%	21,856 3%	Model Year 2035 Total: 871,165 +20.2%



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
 August 22, 2014

Figure 6-15: Screenline G Volumes

I-5		I-15			
123,701 48%	133,069 52%	Count Data 2012		Total:	256,770 Base
MODEL VOLUMES					
156,558 48%	169,878 52%	Model Year 2020		Total:	326,435 +27.1%
205,452 48%	224,729 52%	Model Year 2035		Total:	430,182 +31.8%



6.5 FUTURE YEAR TRAFFIC FORECASTS

Figure 6-16, Figure 6-17, and Figure 6-18 present the forecasted average weekday traffic on the San Joaquin Hills Transportation Corridor for 2012, 2020 and 2035.

Future growth in SJHTC traffic will affect peak hours as well as other hours of the day, and may be expected to increase peak hour congestion on the SJHTC. This can be mitigated by increasing appropriate toll rates which would have the effect of reducing peak period volumes. These increases were not examined as part of this study.

6.6 FUTURE YEAR REVENUE FORECASTS

The revenue calculation was the product of average weekday traffic on the tolled links and the toll for each link, totaled for all toll links. Model results were differentiated by payment type and time-of-day (for the Catalina View mainline plaza with peak and off-peak toll rates). Table 6-2 presents, for each model year and toll schedule, the adjusted traffic and revenue by paypoint for an average weekday. It should be noted that “pre-“ and “post-peak” toll rates were introduced in FY 2015 and did not exist in FY 2012.

Annual traffic and toll revenues were calculated at 320 times the average weekday traffic and revenue for all future years. This factor of 320 was calculated based on FY 2012 average weekday versus total annual transactions on the San Joaquin Hills Transportation Corridors. Vehicles with greater than two axles are charged a higher toll than passenger cars, therefore an adjustment factor was calculated to convert the projected revenues based on all passenger car tolls to the true revenues reflecting a mix of vehicle types. From recent traffic data, this factor was calculated to be 1.006 on the SJHTC.

Table 6-3 presents the average annual weekday toll transactions and annual revenue forecasted from fiscal years 2015 through 2050. Total SJHTC average weekday transactions of 84,100 with revenues of \$145.3 million in FY 2020 and 94,200 average weekday transaction with revenues of \$232.8 million in FY 2035 are forecasted.

Improvements to the I-5 and I-405 corridors parallel to the SR 73, scheduled to open in 2023, have a significant impact on transaction and revenue growth on the toll road. If these improvements, currently funded and included as part of the M2020 program, are delayed or not constructed, the traffic and revenue potential on the SR 73 would increase.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

Figure 6-16: 2012 Average Weekday Volumes

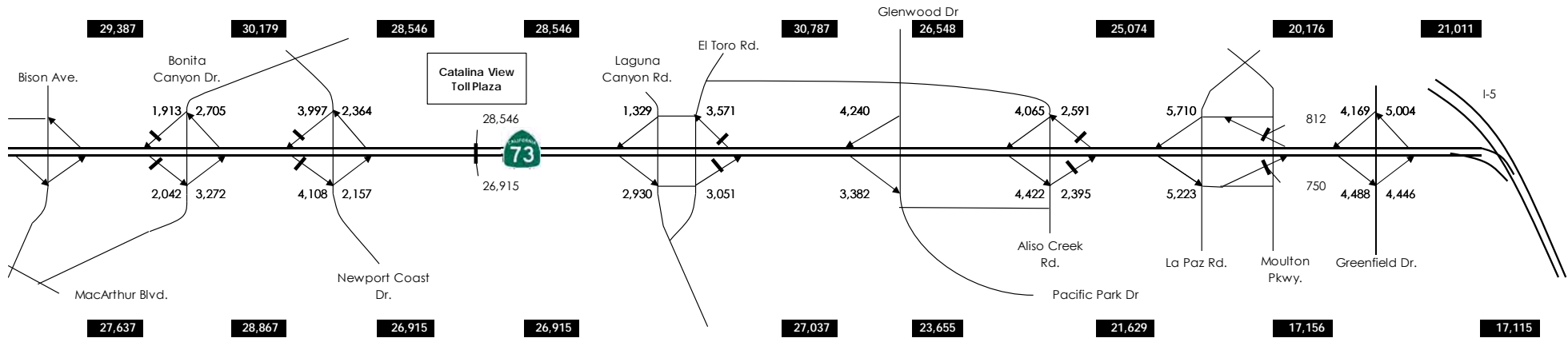
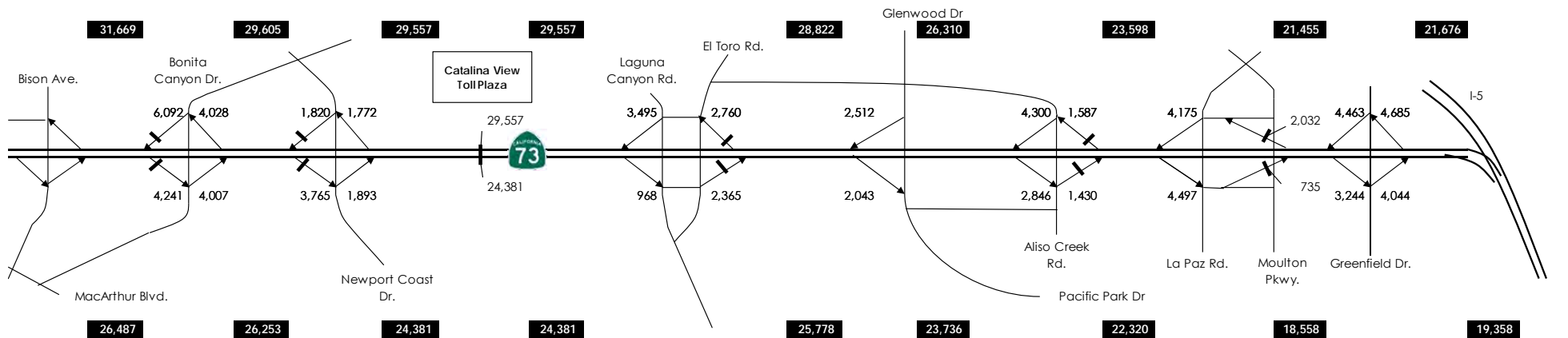


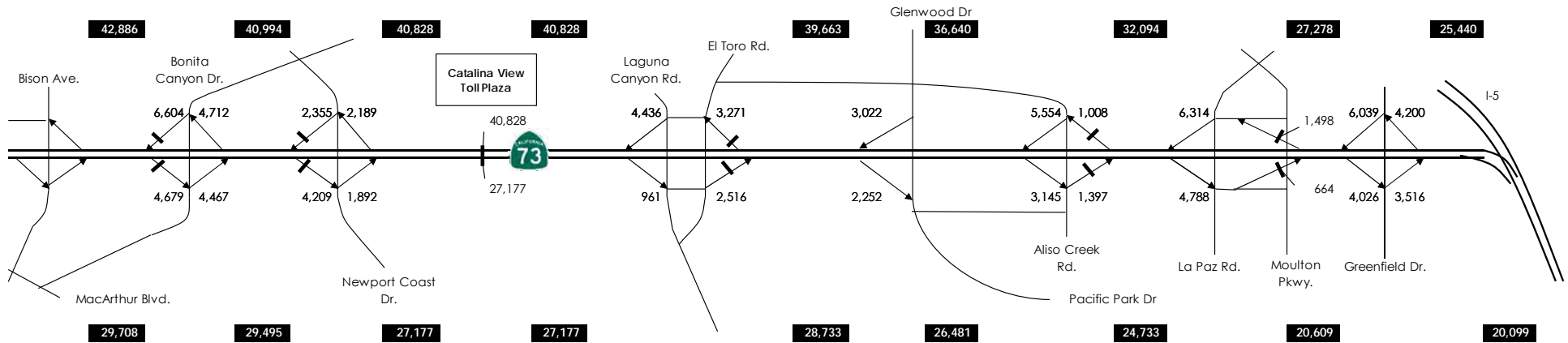
Figure 6-17: 2020 Average Weekday Volumes



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

Figure 6-18: 2035 Average Weekday Volumes



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

Table 6-2: Traffic and Revenue Projections by Paypoint

Toll Road	Toll Plaza		2012 Actual			2020 Adjusted			2035 Adjusted		
			Volume	Toll	Revenue	Volume	Toll	Revenue	Volume	Toll	Revenue
San Joaquin Hills	La Paz NB Off	Non-FasTrak	113	\$ 1.75	\$ 197	116	\$ 2.51	\$ 293	131	\$ 3.19	\$ 419
		FasTrak	695	\$ 1.30	\$ 904	749	\$ 1.51	\$ 1,135	917	\$ 2.19	\$ 2,011
Toll Road	La Paz SB On	Non-FasTrak	87	\$ 1.75	\$ 153	90	\$ 2.51	\$ 227	102	\$ 3.19	\$ 326
		FasTrak	636	\$ 1.30	\$ 827	674	\$ 1.51	\$ 1,021	798	\$ 2.19	\$ 1,750
	Aliso Creek NB Off	Non-FasTrak	281	\$ 2.00	\$ 562	235	\$ 3.16	\$ 740	178	\$ 4.12	\$ 733
		FasTrak	2,306	\$ 1.60	\$ 3,689	1,967	\$ 2.16	\$ 4,240	1,551	\$ 3.12	\$ 4,844
	Aliso Creek SB On	Non-FasTrak	240	\$ 2.00	\$ 480	226	\$ 3.16	\$ 713	214	\$ 4.12	\$ 882
		FasTrak	2,168	\$ 1.60	\$ 3,469	2,089	\$ 2.16	\$ 4,504	2,071	\$ 3.12	\$ 6,467
	El Toro NB Off	Non-FasTrak	357	\$ 2.50	\$ 894	366	\$ 3.85	\$ 1,410	407	\$ 5.13	\$ 2,088
		FasTrak	3,219	\$ 2.10	\$ 6,760	3,396	\$ 2.85	\$ 9,684	3,993	\$ 4.13	\$ 16,487
	El Toro SB On	Non-FasTrak	296	\$ 2.50	\$ 741	285	\$ 3.85	\$ 1,096	280	\$ 5.13	\$ 1,438
		FasTrak	2,733	\$ 2.10	\$ 5,740	2,712	\$ 2.85	\$ 7,733	2,843	\$ 4.13	\$ 11,739
	Catalina View NB ML	Non-FasTrak Peak	976	\$ 5.75	\$ 5,614	596	\$ 8.52	\$ 5,079	689	\$ 11.90	\$ 8,203
		FasTrak Peak	8,126	\$ 5.00	\$ 40,629	4,960	\$ 7.52	\$ 37,315	5,739	\$ 10.90	\$ 62,531
		Non-FasTrak Pre-/Post-Peak				798	\$ 8.19	\$ 6,534	945	\$ 11.41	\$ 10,777
		FasTrak Pre-/Post-Peak				6,643	\$ 7.19	\$ 47,742	7,862	\$ 10.41	\$ 81,839
		Non-FasTrak Off-Peak	4,109	\$ 5.00	\$ 20,547	4,257	\$ 6.83	\$ 29,065	5,108	\$ 9.44	\$ 48,226
		FasTrak Off-Peak	14,584	\$ 4.20	\$ 61,252	15,107	\$ 5.83	\$ 88,044	18,130	\$ 8.44	\$ 153,023
	Catalina View SB ML	Non-FasTrak Peak	1,494	\$ 5.75	\$ 8,589	615	\$ 8.52	\$ 5,244	636	\$ 11.90	\$ 7,571
		FasTrak Peak	9,787	\$ 5.00	\$ 48,934	4,031	\$ 7.52	\$ 30,328	4,170	\$ 10.90	\$ 45,436
		Non-FasTrak Pre-/Post-Peak				1,123	\$ 8.19	\$ 9,194	1,160	\$ 11.41	\$ 13,231
		FasTrak Pre-/Post-Peak				7,357	\$ 7.19	\$ 52,878	7,598	\$ 10.41	\$ 79,090
		Non-FasTrak Off-Peak	3,277	\$ 5.00	\$ 16,386	2,833	\$ 6.83	\$ 19,345	2,925	\$ 9.44	\$ 27,615
		FasTrak Off-Peak	12,039	\$ 4.20	\$ 50,565	10,408	\$ 5.83	\$ 60,658	10,746	\$ 8.44	\$ 90,704
	Newport Coast NB On	Non-FasTrak	480	\$ 2.25	\$ 1,081	497	\$ 3.55	\$ 1,767	564	\$ 4.70	\$ 2,649
		FasTrak	3,377	\$ 1.85	\$ 6,247	3,552	\$ 2.55	\$ 9,072	4,152	\$ 3.70	\$ 15,359
	Newport Coast SB Off	Non-FasTrak	526	\$ 2.25	\$ 1,184	534	\$ 3.55	\$ 1,900	585	\$ 4.70	\$ 2,748
		FasTrak	3,482	\$ 1.85	\$ 6,441	3,635	\$ 2.55	\$ 9,283	4,189	\$ 3.70	\$ 15,495
	Bonita Canyon NB On	Non-FasTrak	243	\$ 1.25	\$ 304	268	\$ 2.13	\$ 571	343	\$ 2.63	\$ 904
		FasTrak	1,620	\$ 0.80	\$ 1,296	1,917	\$ 1.13	\$ 2,163	2,794	\$ 1.63	\$ 4,567
	Bonita Canyon SB Off	Non-FasTrak	282	\$ 1.25	\$ 352	279	\$ 2.13	\$ 595	292	\$ 2.63	\$ 770
		FasTrak	1,733	\$ 0.80	\$ 1,387	1,823	\$ 1.13	\$ 2,058	2,132	\$ 1.63	\$ 3,485
San Joaquin Average Weekday Total			79,268	\$ 3.72	\$ 295,223	84,139	\$ 5.37	\$ 451,630	94,243	\$ 7.68	\$ 723,406



SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

6.0 traffic and revenue projections
August 22, 2014

Table 6-3: SJHTC Traffic and Revenue Projections

Fiscal Year	Average Weekday Transactions	Growth Over Previous Year	Average Toll Rate	Growth Over Previous Year	Annual Revenue (\$000s)	Growth Over Previous Year
1998	64,420		\$ 1.63		\$ 33,928	
1999	76,883	19.3%	\$ 1.72	5.4%	\$ 42,646	25.7%
2000	82,745	7.6%	\$ 1.76	2.3%	\$ 46,819	9.8%
2001	81,740	-1.2%	\$ 1.95	11.2%	\$ 50,901	8.7%
2002	81,469	-0.3%	\$ 2.18	11.7%	\$ 56,865	11.7%
2003	84,348	3.5%	\$ 2.26	3.7%	\$ 61,148	7.5%
2004	91,550	8.5%	\$ 2.28	0.7%	\$ 67,031	9.6%
2005	92,506	1.0%	\$ 2.56	12.2%	\$ 75,645	12.9%
2006	96,013	3.8%	\$ 2.68	4.6%	\$ 81,928	8.3%
2007	97,377	1.4%	\$ 2.86	7.0%	\$ 89,059	8.7%
2008	93,633	-3.8%	\$ 3.04	6.2%	\$ 91,529	2.8%
2009	83,106	-11.2%	\$ 3.22	6.0%	\$ 86,420	-5.6%
2010	77,907	-6.3%	\$ 3.44	6.8%	\$ 87,096	0.8%
2011	78,791	1.1%	\$ 3.46	0.6%	\$ 88,104	1.2%
2012	78,629	-0.2%	\$ 3.66	5.6%	\$ 92,972	5.5%
2013	78,044	-0.7%	\$ 4.02	10.0%	\$ 100,528	8.1%
2014	82,046	5.1%	\$ 4.43	10.0%	\$ 117,138	16.5%
2015	80,100	-2.4%	\$ 4.77	7.7%	\$ 122,200	4.3%
2016	80,900	1.0%	\$ 4.89	2.5%	\$ 126,500	3.5%
2017	81,700	1.0%	\$ 5.01	2.5%	\$ 131,000	3.6%
2018	82,500	1.0%	\$ 5.14	2.5%	\$ 135,600	3.5%
2019	83,300	1.0%	\$ 5.27	2.5%	\$ 140,400	3.5%
2020	84,100	1.0%	\$ 5.40	2.5%	\$ 145,300	3.5%
2021	84,900	1.0%	\$ 5.54	2.5%	\$ 150,400	3.5%
2022	85,700	0.9%	\$ 5.68	2.6%	\$ 155,700	3.5%
2023	82,300	-4.0%	\$ 5.76	1.4%	\$ 151,600	-2.6%
2024	83,100	1.0%	\$ 5.90	2.6%	\$ 157,000	3.6%
2025	84,300	1.4%	\$ 6.05	2.5%	\$ 163,300	4.0%
2026	85,600	1.5%	\$ 6.21	2.5%	\$ 170,000	4.1%
2027	86,900	1.5%	\$ 6.37	2.6%	\$ 177,000	4.1%
2028	88,200	1.5%	\$ 6.53	2.5%	\$ 184,200	4.1%
2029	89,300	1.2%	\$ 6.69	2.5%	\$ 191,200	3.8%
2030	90,200	1.0%	\$ 6.86	2.6%	\$ 198,100	3.6%
2031	91,100	1.0%	\$ 7.04	2.6%	\$ 205,200	3.6%
2032	92,000	1.0%	\$ 7.22	2.5%	\$ 212,500	3.6%
2033	92,900	1.0%	\$ 7.40	2.5%	\$ 220,000	3.5%
2034	93,600	0.8%	\$ 7.59	2.6%	\$ 227,400	3.4%
2035	94,200	0.6%	\$ 7.72	1.7%	\$ 232,800	2.4%
2036	94,700	0.5%	\$ 7.91	2.4%	\$ 239,700	3.0%
2037	95,200	0.5%	\$ 8.10	2.5%	\$ 246,900	3.0%
2038	95,700	0.5%	\$ 8.30	2.5%	\$ 254,300	3.0%
2039	96,200	0.5%	\$ 8.51	2.5%	\$ 261,900	3.0%
2040	96,700	0.5%	\$ 8.72	2.4%	\$ 269,700	3.0%
2041	97,200	0.5%	\$ 8.93	2.5%	\$ 277,800	3.0%
2042	97,700	0.5%	\$ 9.15	2.5%	\$ 286,100	3.0%
2043	98,200	0.5%	\$ 9.38	2.4%	\$ 294,600	3.0%
2044	98,700	0.5%	\$ 9.61	2.5%	\$ 303,400	3.0%
2045	99,200	0.5%	\$ 9.84	2.4%	\$ 312,400	3.0%
2046	99,700	0.5%	\$ 10.08	2.5%	\$ 321,700	3.0%
2047	100,200	0.5%	\$ 10.33	2.5%	\$ 331,300	3.0%
2048	100,700	0.5%	\$ 10.59	2.4%	\$ 341,100	3.0%
2049	101,200	0.5%	\$ 10.85	2.5%	\$ 351,300	3.0%
2050	101,700	0.5%	\$ 11.11	2.5%	\$ 361,700	3.0%

(1) Toll rate increases after FY 2015 have been assumed for modeling purposes and have not been approved by the agency.



7.0 SENSITIVITY ANALYSES

As described throughout the report, the traffic and revenue projections have been developed using traditional transportation planning procedures. The results of this process take the form of projections of likely future conditions based on numerous assumptions and estimates. In reviewing the various inputs to the traffic forecasting model, several key inputs have been identified, which when varied from the base condition, result in changes to the revenue forecasts. **Table 7-1** presents results of the sensitivity tests and compares them to the Base Case forecast (i.e., that which results from the base model, base land use and proposed toll schedule). Following is a discussion describing the variables tested and the effects on the revenue forecasts.

Table 7-1: Sensitivity Analyses

Fiscal Year	Average Weekday Transactions	% of Base Case	Annual Revenue (000s)	% of Base Case
2020 Base	84,100		\$ 145,300	
2020 with 2012 Land Use	70,600	-16.1%	\$ 119,700	-17.6%
2035 Base	94,200		\$ 232,800	
2035 VOT Escalation	102,700	9.0%	\$ 254,600	9.4%

7.1 LAND USE SENSITIVITIES

In order to forecast the effect of another recession in the near future, a sensitivity analysis was undertaken to determine the downside impact to the San Joaquin Hills Transportation Corridor if a “double-dip” prolonged recession occurred. In order to analyze the impacts of this recession alternative, existing land use (2012) was analyzed in the 2020 model. Given the recovery in employment and household growth since 2012, this alternative effectively assumes a reduction in recent growth trends back to 2012 baseline levels in 2020.

The recession scenario resulted in a decrease of 16.1 percent of transactions on the San Joaquin Hills Transportation Corridor with a 17.6 percent reduction in revenues for FY 2020.

7.2 VOT ESCALATION

As part of the traffic and revenue forecast, it is assumed that median household income in Orange County grows consistently with inflation at 2.5 percent per year. Therefore, value of time (VOT), which correlates to household income, is the same for the duration of the forecast. An analysis of inflation versus household income growth in Orange County reveals that historically, over long periods, median household income has grown much faster than inflation. As **Table 7-2** below shows, income grew on average, over 1 percent per year faster than inflation between 1980 and 2014.

SAN JOAQUIN HILLS TRANSPORTATION CORRIDOR TRAFFIC AND REVENUE STUDY

7.0 sensitivity analyses
August 22, 2014

Table 7-2: Orange County Inflation versus Household Income

	Inflation ¹	Income ²	Difference
1980 to 1990	5.89%	6.97%	1.08%
1980 to 2000	4.45%	6.30%	1.85%
1980 to 2007	3.99%	5.69%	1.69%
1980 to 2010	3.83%	4.85%	1.02%
1980 to 2014	3.61%	4.63%	1.01%
1990 to 2000	3.07%	5.63%	2.56%
1990 to 2007	2.90%	4.94%	2.04%
1990 to 2010	2.82%	3.81%	0.99%
1990 to 2014	2.68%	3.66%	0.99%
2000 to 2007	2.65%	3.96%	1.32%
2000 to 2014	2.39%	2.28%	-0.11%
2007 to 2014	2.09%	0.63%	-1.47%
2010 to 2014	2.07%	2.95%	0.88%

(1) Inflation data from www.bls.gov

(2) Median Household Income from www.census.gov

In order to understand the potential impact to the traffic and revenue forecast, a sensitivity analysis was performed in which household income and VOT were increased by 0.5 percent per year above inflation. This resulted in a higher VOT for the 2035 forecast year. A similar analysis for the 2020 forecast year was not undertaken but it is reasonable to assume the impact would be less as the growth in VOT would not be as high versus inflation compared to the 2035 forecast year.

The VOT escalation scenario resulted in an increase of 9.0 percent for transactions on the San Joaquin Hills Transportation Corridor with an increase of 9.4 percent for revenues for FY 2035.