ORDINANCE NO. 3406

AN ORDINANCE OF THE CITY OF CORONA, CALIFORNIA AMENDING CHAPTER 16.21 TO UPDATE THE WESTERN RIVERSIDE COUNTY TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM.

WHEREAS, the City of Corona ("City") is a member agency of the Western Riverside Council of Governments ("WRCOG"), a joint powers agency comprised of the County of Riverside and seventeen cities located in Western Riverside County; and

WHEREAS, the member agencies of WRCOG, recognizing that there is insufficient funding to address the impacts of new development on the regional system of highways and arterials in Western Riverside County ("Regional System"), developed a plan whereby the shortfall in funds needed to enlarge the capacity of the Regional System could be made up, in part, by the imposition of a development impact fee on future residential, commercial, and industrial development. A map depicting the boundaries of Western Riverside County and the Regional System is attached as Exhibit "A" and incorporated herein by reference; and

WHEREAS, on November 5, 2002, the voters in Riverside County approved Measure "A" which extended the half-cent sales tax for thirty years to provide funding for various transportation improvements throughout Riverside County, including the acquisition, construction, operation, and maintenance of streets, roads, and highways; and

WHEREAS, Section 5 of the Expenditure Plan for Measure "A" requires that the City participate in the WRCOG Transportation Uniform Mitigation Fee ("TUMF") program in order to receive its fair share of the transportation funds generated by Measure "A"; and

WHEREAS, the TUMF program requires each member entity of WRCOG, including the City, to adopt an ordinance imposing a development impact fee on new construction within that entity's jurisdiction for purposes of funding the TUMF program; and

WHEREAS, on March 5, 2003, the City Council adopted Ordinance No. 2629 adding Chapter 16.21 to the Corona Municipal Code to authorize the City's participation in the WRCOG TUMF program and authorizing imposition of a development impact fee to fund the TUMF program, the amount of which is to be established by resolution; and

WHEREAS, on April 19, 2006, the City Council adopted Ordinance No. 2815 amending Chapter 16.21 of the Corona Municipal Code for the purpose of updating the previously adopted TUMF fees; and

WHEREAS, on December 2, 2009, the City Council adopted Ordinance No. 3020 amending Chapter 16.21 of the Corona Municipal Code for the purpose of updating the previously adopted TUMF fees; and

EXHIBIT 1

WHEREAS, on September 6, 2017, the City Council adopted Ordinance No. 3264 amending Chapter 16.21 of the Corona Municipal Code for the purpose of updating the TUMF regulations and the previously adopted TUMF fees; and

WHEREAS, on December 19, 2018, the City Council adopted Ordinance No. 3290 amending Chapter 16.21 of the Corona Municipal Code to permit WRCOG to calculate and collect TUMF fees on behalf of the City under the TUMF program; and

WHEREAS, WRCOG has identified a funding shortfall in the TUMF program and commissioned a new nexus study in compliance with the Mitigation Fee Act (California Government Code Section 66000 *et seq*.) for the purpose of again updating the previously adopted TUMF fees. The nexus study, entitled "Transportation Uniform Mitigation Fee Nexus Study: 2024 Update," is attached as Exhibit "B" and incorporated herein by reference; and

WHEREAS, the City Council desires to amend Chapter 16.21 to update the TUMF program regulations and to update the previously adopted TUMF fees in accordance with WRCOG's most recent nexus study; and

WHEREAS, this Ordinance is intended to satisfy the City's ongoing obligations for participation in the TUMF program and for receipt of funds under Measure "A."

NOW, THEREFORE, THE CITY COUNCIL OF THE CITY OF CORONA DOES ORDAIN AS FOLLOWS:

SECTION 1. Chapter 16.21. Chapter 16.21 (Transportation Uniform Mitigation Fee Program) is hereby amended in its entirety to read as follows:

"**CHAPTER 16.21**
TRANSPORTATION UNIFORM MITIGATION FEE PROGRAM

Sections

16.21.010 Title.

This chapter shall be known as the "Western Riverside County Transportation Uniform Mitigation Fee Program Chapter."

16.21.020 Findings.

A. The City is a member agency of the Western Riverside Council of Governments ("WRCOG"), a joint powers agency comprised of the County of Riverside and 18 cities located in Western Riverside County. Acting in concert, the WRCOG Member Agencies developed a plan whereby the shortfall in funds needed to enlarge the capacity of the Regional System of Highways and Arterials in Western Riverside County (the "Regional System") could be made up in part by a Transportation Uniform Mitigation Fee ("TUMF") on future residential, commercial and industrial development. A map depicting the boundaries of Western Riverside County and the Regional System is attached as Exhibit "A" to the Ordinance enacting this chapter and is incorporated herein. As a Member Agency of WRCOG and as a TUMF Participating Jurisdiction, the City participated in the preparation of a certain "Western Riverside County Transportation Uniform Fee Nexus Study," dated October 18, 2002 (the "2002 Nexus Study") prepared in compliance with the Mitigation Fee Act (Gov. Code §§ 66000 *et seq*.) and adopted by the WRCOG Executive Committee. Based on the 2002 Nexus Study, the City adopted and implemented an ordinance authorizing the City's participation in a TUMF Program.

B. WRCOG, with the assistance of TUMF Participating Jurisdictions, has prepared an updated nexus study entitled "Transportation Uniform Mitigation Fee Nexus Study: 2024Update" ("2024 Nexus Study") pursuant to California Government Code sections 66000 *et seq*. (the Mitigation Fee Act), for the purpose of updating the fees. On September 9, 2024, the WRCOG Executive Committee reviewed the 2024 Nexus Study and TUMF Program and recommended TUMF Participating Jurisdictions amend their applicable TUMF ordinances to reflect changes in the TUMF network and the cost of construction in order to update the TUMF Program.

C. Consistent with its previous findings made in the adoption of the Ordinances enacting this chapter, the City Council has been informed and advised, and hereby finds, that if the capacity of the Regional System is not enlarged and unless development contributes

to the cost of improving the Regional System, the result will be substantial traffic congestion in all parts of Western Riverside County, with unacceptable Levels of Service. Furthermore, the failure to mitigate growing traffic impacts on the Regional System will substantially impair the ability of public safety services (police and fire) to respond and, thus, adversely affect the public health, safety and welfare. Therefore, continuation of a TUMF Program is essential.

D. The City Council finds and determines that there is a reasonable and rational relationship between the use of the TUMF and the type of development projects on which the fees are imposed because the fees will be used to construct the transportation improvements that are necessary for the safety, health and welfare of the residential and non-residential users of the development in which the TUMF will be levied.

E. The City Council finds and determines that there is a reasonable and rational relationship between the need for the improvements to the Regional System and the type of development projects on which the TUMF is imposed because it will be necessary for the residential and non-residential users of such projects to have access to the Regional system. Such development will benefit from the Regional System improvements and the burden of such developments will be mitigated in part by payment of the TUMF.

F. The City Council finds and determines that the cost estimates set forth in the new 2024 Nexus Study are reasonable cost estimates for constructing the Regional System improvements and the facilities that compromise the Regional System, and that the amount of the TUMF expected to be generated by new development will not exceed the total fair share cost to such development.

G. The fees collected pursuant to this Ordinance shall be used to help pay for the design, planning, construction of and real acquisition for the Regional System improvements and its facilities as identified in the 2024 Nexus Study. The need for the improvements and facilities is related to new development because such development results in additional traffic and creates the demand for the improvements.

H. By notice duly given and published, the City Council set the time and place for a public hearing on the 2024 Nexus Study and the fees proposed thereunder and at least ten (10) days prior to this

hearing, the City Council made the 2024 Nexus Study available to the public.

I. At the time and place set for the hearing, the City Council duly considered data and information provided by the public relative to the cost of the improvements and facilities for which the fees are proposed and all other comments, whether written or oral, submitted prior to the conclusion of the hearing.

J. The City Council finds that the 2024 Nexus Study proposes a fair and equitable method for distributing a portion of the unfunded costs of improvements and facilities to the Regional system.

K. The City Council hereby adopts the 2024 Nexus Study and its findings. The 2024 Nexus Study is attached and incorporated herein as Exhibit "B."

L. The City Council hereby adopts this Ordinance to amend and supersede the provisions of Ordinance No. 3264.

16.21.030 Definitions. For the purpose of this chapter, the following words, terms and phrases shall have the following meanings:

A. "**Class 'A' Office**" means an office building that is typically characterized by high quality design, use of high end building materials, state of the art technology for voice and data, on site support services/maintenance, and often includes full service ancillary uses such as, but not limited to a bank, restaurant/office coffee shop, health club, printing shop, and reserved parking. The minimum requirements of an office building classified as Class 'A" Office shall be as follows: (i) minimum of three stories (exception will be made for March JPA, where height requirements exist); (ii) minimum of 10,000 square feet per floor; (iii) steel frame construction; (iv) central, interior lobby; and (v) access to suites shall be from inside the building unless the building is located in a central business district with major foot traffic, in which case the first floor may be accessed from the street to provide entrances/ exits for commercial uses within the building.

B. "**Class 'B' Office**" means an office building that is typically characterized by high quality design, use of high end building materials, state of the art technology for voice and data, on site support services/maintenance, and often includes full service ancillary uses such as, but not limited to a bank, restaurant/office

coffee shop, health club, printing shop, and reserved parking. The minimum requirements of an office building classified as Class 'B" Office shall be as follows: (i) minimum of two stories; (ii) minimum of 15,000 square feet per floor; (iii) steel frame, concrete or masonry shell construction; (iv) central, interior lobby; and (v) access to suites shall be from inside the building unless the building is located in a central business district with major foot traffic, in which case the first floor may be accessed from the street to provide entrances/exits for commercial uses within the building.

C. "**Development Project**" or "**Project**" means any project undertaken for the purposes of development, including the issuance of a permit for construction.

D. "**Disabled Veteran**" means any veteran who is retired or is in process of medical retirement from military service who is or was severely injured in a theatre of combat operations and has or received a letter of eligibility for the Veterans Administration Specially Adapted Housing (SAH) Grant Program.

E. "**Government/public buildings, public schools, and public facilities**" means any owned and operated facilities by a government entity in accordance with Section 16.21.040(G)(2). A new development that is subject to a long-term lease with a government agency for government/public buildings, public schools, and public facilities shall apply only if all of the following conditions are met:

(1) The new development being constructed is subject to a long-term lease with a government agency.
(2) The project shall have a deed restriction placed on the property that limits the use to government/public facility for the term of the lease, including all extension options, for a period of not less than 20 years. Any change in the use of the facility from government shall trigger the payment of the TUMF in effect at the time the change is made.
(3) No less than ninety percent of the total square footage of the building is leased to the government agency during the term of deed restriction the long term and any extensions thereof.
(4) The new development is constructed at prevailing wage rates.
(5) A copy of the lease is provided to the applicable jurisdiction and to WRCOG.

(6) Based on the facts and circumstances WRCOG determines that the intent of the lease is to provide for a long-term government use, and not to evade payment of TUMF.

F. "**Gross Acreage**" means the total property area as shown on a land division of a map of record, or described through a recorded legal description of the property. This area shall be bounded by road rights of way and property lines.

G. "**Guest Dwellings**" and "**Detached Second Units**" according to the State of California legal definition as following: 1) complies with the State of California Department of Housing and Community Development *Accessory Dwelling Unit* Handbook ; and 2) are ministerially approved by the city's local codes.

H. "**Habitable Structure**" means any structure or part thereof where persons reside, congregate or work and which is legally occupied in whole or part in accordance with applicable building codes, and state and local laws.

I. "**Industrial Project**" means any development project that proposes any industrial or manufacturing use allowed in the following zoning classifications, as identified in Title 17 or an applicable specific plan: BL1, BL1-O, BL2, BL3, GB, GB1, I, ICDD, IP, LCI, LI, M1, M2, M2/0, M3, M3/MR, M4, MI, MSI, MU-II, or SCI.

J. "**Long-Term Lease**" as used in the TUMF Program, a "long-term lease" shall mean a lease with a term of no less than twenty years.

K. "**Low Income Residential Housing**" means "Residential Affordable Units": (A) for rental housing, the units shall be made available, rented and restricted to "lower income households" (as defined in Health and Safety Code Section 50079.5) at an "affordable rent" (as defined in Health and Safety Code Section 50053). Affordable units that are rental housing shall be made available, rented, and restricted to lower income households at an affordable rent for a period of at least fifty-five (55) years after the issuance of a certificate of occupancy for new residential development. and (B) for for-sale housing, the units shall be sold to "persons or families of low or moderate income" (as defined in Health and Safety Code Section 50093) at a purchase price that will not cause the purchaser's monthly housing cost to exceed "affordable housing cost (as defined in Health and Safety Code

Section 50052.5) Affordable units that are for-sale housing units shall be restricted to ownership by persons and families of low or moderate income for at least forty-five (45) years after the issuance of a certificate of occupancy for the new residential development.

L. "**Mixed-Use Development**" as used in the TUMF Program, means Developments with the following criteria: (1) three or more significant revenue-producing uses, and (2) significant physical and functional integration of project components.

M. "**Multi-Family Residential Unit**" means a structure with two or more legal independent residential dwelling units intended for human habitation .

N. "**Non-profit Organization**" means an organization operated exclusively for exempt purposes set forth in section 501(c)(3) of the Internal Revenue Code, and none of its earnings may inure to any private shareholder or individual. In addition, it may not be an action organization, i.e., it may not attempt to influence legislation as a substantial port of its activities and it may not participate in any campaign activity for or against political candidates. For the purposes of the TUMF Program, the non-profit may be a 501(c) (3) charitable organization as defined by the Internal Revenue Service.

O. "**Non-Residential Unit**" means retail commercial, service commercial and industrial development which is designed primarily for non-dwelling use, but shall include hotels and motels.

P. "**Recognized Financing District**" means a Financing District as defined in the TUMF Administrative Plan as may be amended from time to time.

Q. "**Residential Dwelling Unit**" means a building or portion thereof used by one (1) family and containing but one (1) kitchen, which is designed primarily for residential occupancy including single-family and multi-family dwellings. "Residential Dwelling Unit" shall not include hotels or motels.

R. "**Retail Commercial Project**" means any development project that proposes any retail commercial activity use not defined as a service commercial project allowed in the following zoning classifications, as identified in Title 17 or an applicable specific plan: ACDD, BLK1, BLK2, BLK3, BLK4, BLK5, BLK6, BP, C, C2, C3, CG, CO/BP, CP, CR, CS, D, EC, GC, LCI, MU, MU-1, NC, NCD, OP, QP, SC, SCF, SCI, SRSC, TC, or TR, which can include

any eating/dining facility residing on the retail commercial development premises.

S. "**Service Commercial Project**" means any development project that is predominately dedicated to business activities associated with professional or administrative services, and typically consists of corporate offices, financial institutions, legal, and medical offices, eating/dining facilities, and other uses related to personal or professional services.

T. "**Single Family Residential Unit**" means each residential dwelling unit development which is situated on one lot which shares no common wall, foundation, or other interconnection with another dwelling unit.

U. "**TUMF Administrative Plan**" means that the TUMF Administration Plan adopted by the WRCOG Execution Committee May 5, 2003, as amended, setting forth detailed administration procedures and requirements for the TUMF program.

V. "**TUMF Participating Jurisdiction**" means a jurisdiction in Western Riverside County which has adopted and implemented an ordinance authorizing participation in the TUMF Program and complies with all regulations established in the TUMF Administrative Plan, as adopted and amended from time to time by the WRCOG.

16.21.040 Establishment of the Transportation Uniform Mitigation Fee.

A. Adoption of TUMF Schedule. The City Council shall adopt an applicable TUMF schedule through a separate resolution, which may be amended from time to time.

B. Fee Calculation. The fees shall be calculated according to the calculation methodology fee set forth in the WRCOG TUMF Fee Calculation Handbook adopted July 14, 2003, as amended from time to time. In addition to data in the Fee Calculation Handbook, WRCOG Staff and the local agency may consider the following items when establishing the appropriate fee calculation methodology:

- Underlying zoning of the site
- Land-use classifications in the latest Nexus Study
- Project specific traffic studies

- Latest Standardized reference manuals such as the Institute of Traffic Engineers Trip Generation Manual
- Previous TUMF calculations for similar uses
- WRCOG staff shall approve final draft credit / reimbursement agreement prior to execution

WRCOG shall have final determination regarding the appropriate methodology to calculate the fee based on the information provided. In case of a conflict between the applicant, WRCOG, and/or the local agency regarding the fee calculation methodology, the dispute resolution process in the TUMF Administrative Plan will apply.

C. Fee Adjustment. The fee schedule may be periodically reviewed and the amounts adjusted by the WRCOG Executive Committee. By amendment to the resolution, the fees may be increased or decreased to reflect the changes in actual and estimated costs of the Regional System including, but not limited to, debt service, lease payments and construction costs. The adjustment of the fees may also reflect changes in the facilities required to be constructed, in estimated revenues received pursuant to this chapter, as well as the availability or lack thereof of other funds with which to construct the Regional System. WRCOG shall review the TUMF Program no less than every four (4) years after the effective date of this chapter.

D. Purpose. The purpose of the TUMF is to fund those certain improvements to the Regional System as depicted in Exhibit "A" to the ordinance enacting this chapter and identified in the 2024 Nexus Study attached as Exhibit "B" to the ordinance enacting this chapter.

E. Applicability. The TUMF shall apply to all new development within the City, unless otherwise exempt hereunder.

F. Exemptions. The following types of new development shall be exempt from the provisions of this chapter and the TUMF Administrative Plan:

(1) Low income residential housing as described in Section 16.21.030(K) and in the TUMF Administrative Plan.

(2) Government/public buildings, public schools, and public facilities as described in Section 16.21.030(E) and in the TUMF Administrative Plan. Airports that are public use airports and are appropriately permitted by Caltrans or other state agency.

(3) Development Projects which are the subject of a Public Facilities Development Agreement entered into pursuant to Government Code section 65864 *et seq*, prior to the effective date of this chapter wherein the imposition of new fees are expressly prohibited, provided that if the term of such a Development Agreement is extended by amendment or by any other manner after the effective date of this chapter, the TUMF shall be imposed.

(4) The rehabilitation and/or reconstruction of any habitable structure in use on or after January 1, 2000, provided that the same or fewer traffic trips are generated as a result thereof.

(5) Guest Dwellings and Detached Second Units as described in Section 16.21.030(G) and in the Administrative Plan.

(6) Kennels and Catteries established in connection with an existing single family residential unit.

(7) Any sanctuary, or other activity under the same roof of a church or other house of worship that is not revenue generating and is eligible for a property tax exemption (excluding concert venues, coffee/snack shops, book stores, for-profit pre-school day-cares, etc., which would be assessed TUMF).

(8) Any nonprofit corporation or nonprofit organization offering and conducting full-time day school at the elementary, middle school or high school level for students between the ages of five and eighteen years.

(9) New single-family homes, constructed by non-profit organizations, specially adapted and designed for maximum freedom of movement and independent living for qualified Disabled Veterans."

(10) Other uses may be exempt as determined by the WRCOG Executive Committee as further defined in the TUMF Administrative Plan.

G. Credit. Regional System improvements may be credited toward the TUMF in accordance with the TUMF Administrative Plan and the following:

(1) **Regional Tier**

(a) Arterial Credits: If a developer constructs arterial improvements identified on the Regional System, the developer shall receive credit for all costs associated with the arterial component based on the approved Nexus Study for the Regional System effective at the time the credit agreement is entered into. WRCOG staff must pre-approve any credit agreements that deviate from the standard WRCOG approved format.

(b) Other Credits: In special circumstances, when a developer constructs off-site improvements such as an interchange, bridge, or railroad grade separation, credits shall be determined by WRCOG and the City in consultation with the developer. All such credits must have prior written approval from WRCOG.

(c) The amount of the development fee credit shall not exceed the maximum amount determined by the Nexus Study for the Regional System at the time the credit agreement is entered into or actual costs, whichever is less.

(2) **Local Tier**

(a) The local jurisdictions shall compare facilities in local fee programs against the Regional System and eliminate any overlap in its local fee program except where a Recognized Financing District has been established.

(b) If there is a Recognized Financing District established, the local agency may credit that portion of the facility identified in both programs against the TUMF in accordance with the TUMF Administrative Plan.

16.21.050 Reimbursements.

Should the developer construct Regional System improvements in excess of the TUMF fee obligation, the developer may be reimbursed based on actual costs or the approved Nexus Study effective at the time the agreement was entered into, whichever is less. Reimbursements shall be enacted through an agreement between the developer and the City, contingent on funds being available and approved by WRCOG. In all cases, however, reimbursements under such special agreements must coincide with construction of the transportation improvements as scheduled in the five-year Zone Transportation Improvements Program adopted annually by WRCOG.

16.21.060 Procedures for the Levy, Collection and Disposition of Fees.

(A) **Authority of the Public Works Department**. The Director of Public Works, or his/her designee, is hereby authorized to levy and collect the TUMF fees and make all determinations required by this chapter in a manner consistent with the TUMF Administrative Plan.

(B) **Payment of the TUMF**. Payment of the fees shall be as follows:

(1) All fees collected hereunder shall be collected by WRCOG for deposit, investment, accounting and expenditure in accordance with the provisions of this chapter, TUMF Administrative Plan, and the Mitigation Fee Act.

(2) The fees shall be paid at the time a certificate of occupancy is issued for the Development Project or upon final inspection, whichever comes first (the "Payment Date"). However this section should not be construed to prevent payment of the fees prior to issuance of an occupancy permit or final inspection. Fees may be paid at the issuance of a building permit, and the fee payment shall be calculated based on the fee in effect at that time, provided the developer tenders the full amount of his/her TUMF obligation. If the developer makes only a partial payment prior to the Payment Date, the amount of the fee due shall be based on the TUMF fee schedule in place on the Payment Date. The fees shall be calculated according to fee schedule set forth in the resolution adopted pursuant to Section 16.21.040(A) and the calculation methodology set forth in the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time.

(3) The fees required to be paid shall be the fee amounts in effect at the time of payment is due under this chapter, not the date the chapter is initially adopted. The City shall not enter into a development agreement which freezes future adjustments of the TUMF.

(4) If all or part of any development project is sold prior to payment of the fee, the property shall continue to be subject to the requirement for payment of the fee. The obligation to pay the fee shall run with the land and be binding on all the successors in interest to the property.

(5) Fees shall not be waived.

(C) **Issuance of Certificate of Occupancy.** The City shall not issue a certificate of occupancy for any Development Project until WRCOG has provided written evidence that it has collected the fee.

(D) **Appeals**. Appeals shall be filed with WRCOG in accordance with the provisions of the TUMF Administrative Plan. Appealable issues shall be the application of the fee, application of credits, application of reimbursement, application of the legal action stay and application of exemption.

(E) **Reports to WRCOG**. The Director of Public Works, or his/her designee, shall prepare and deliver to the Executive Director of WRCOG, periodic reports as will be established under Section 16.21.070.

16.21.070 Appointment of the TUMF Administrator.

WRCOG is hereby appointed as the Administrator of the Transportation Uniform Mitigation Fee Program. WRCOG is hereby authorized to receive all fees generated from the TUMF within the City, and to invest, account for and expend such fees in accordance with the provisions of this chapter and the Mitigation Fee Act. The detailed administrative procedures concerning the implementation of this chapter shall be contained in the TUMF Administrative Plan. Furthermore, the TUMF Administrator shall use the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time, for the purpose of calculating a developer's TUMF obligation. In addition to detailing the methodology for calculating all TUMF obligations of different categories of new development, the purpose of the Fee Calculation Handbook is to clarify for the TUMF Administrator, where necessary, the definition and calculation methodology for uses not clearly defined in the respective TUMF ordinances.

WRCOG shall expend only that amount of the funds generated from the TUMF for staff support, audit, administrative expenses, and contract services that are necessary and reasonable to carry out its responsibilities and in no case shall the funds expended for salaries and benefits exceed two percent (2%) of the revenue raised by the TUMF Program. The TUMF Administrative Plan further outlines the fiscal responsibilities and limitations of the Administrator."

SECTION 2. Effect. No provisions of this Ordinance shall entitle any person who has already paid the TUMF to receive a refund, credit or reimbursement of such payment. This Ordinance does not create any new TUMF.

SECTION 3. Severability. If any one or more of the terms, provisions or sections of this Ordinance shall to any extent be judged invalid, unenforceable and/or voidable for any reason whatsoever by a court of competent jurisdiction, then each and all of the remaining terms, provisions and sections of this Ordinance shall not be affected thereby and shall be valid and enforceable.

SECTION 4. No Procedural Defenses. TUMF member agencies are prohibited from raising procedural defenses, including without limitation a statute of limitations, laches, the California Government Tort Claims Act, and necessary parties, in a dispute with WRCOG regarding the matters set forth herein.

SECTION 5. Judicial Review. In accordance with State law, any judicial action or proceeding to attack, review, set aside, void or annul this Ordinance shall be commenced within 90 days of the date of adoption of this Ordinance.

SECTION 6. CEQA Findings. The City Council finds that this Ordinance is exempt pursuant to Section 15061(b)(3) of the Guidelines for the California Environmental Quality Act (CEQA), which states that a project is exempt from CEQA if the activity is covered by the general rule that CEQA applies only to projects that have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. This Ordinance simply updates the Transportation Uniform Mitigation Fee program, which merely provides funding for improvements to the regional system of highways and arterials in Western Riverside County and there is no possibility that adopting this Ordinance will have a significant effect on the environment. Therefore, no further environmental analysis is required.

SECTION 7. Effective Date. The Mayor shall sign this Ordinance and the City Clerk shall attest thereto and shall, within fifteen (15) days of its adoption cause it, or a summary of it, to be published in a newspaper of general circulation within the City. This Ordinance shall take effect on April 1, 2025.

PASSED, APPROVED AND ADOPTED this 18th day of December, 2024.

_____
Mayor of the City of Corona, California

ATTEST:

_____
City Clerk of the City of Corona, California

CERTIFICATION

I, Sylvia Edwards, City Clerk of the City of Corona, California, do hereby certify that the foregoing Ordinance was regularly introduced at a regular meeting of the City Council of the City of Corona, California, duly held the 4th day of December, 2024, and thereafter at an adjourned meeting thereof held on the 18th day of December, 2024, it was duly passed and adopted by the following vote:

AYES:
NOES:
ABSENT:
ABSTAINED:

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of Corona, California, this 18th day of December, 2024.

_____
City Clerk of the City of Corona, California

[SEAL]

EXHIBIT "A"
MAP OF REGIONAL SYSTEM

[SEE ATTACHED PAGE]

Figure ES.3 - Regional System of Highways and Arterials - TUMF Network Improvements

Legend

Ultimate Lanes
- 2
- 4
- 6
- 8

- Interchange
- Bridge
- Railroad Crossing
- TUMF Zone
- Cities
- County Boundaries

Northwest
Central
Southwest
Hemet/San Jacinto

WRCOG Western Riverside Council of Governments

EXHIBIT "B"
NEXUS STUDY

[SEE ATTACHED 392 PAGES]

TRANSPORTATION UNIFORM MITIGATION FEE NEXUS STUDY 2024 UPDATE

FINAL REPORT

Prepared for the Western Riverside Council of Governments

In Cooperation with

The City of Banning
The City of Beaumont
The City of Calimesa
The City of Canyon Lake
The City of Corona
The City of Eastvale
The City of Hemet
The City of Jurupa Valley
The City of Lake Elsinore
The City of Menifee
The City of Moreno Valley
The City of Murrieta
The City of Norco
The City of Perris
The City of Riverside
The City of San Jacinto
The City of Temecula
The City of Wildomar
The County of Riverside
Eastern Municipal Water District
March Joint Powers Authority
Riverside County Superintendent of Schools
Riverside Transit Agency
Western Water

Prepared by GHD

As adopted by the WRCOG Executive Committee, September 9, 2024

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ES.0 EXECUTIVE SUMMARY

ES.1 Introduction and Purpose of the Nexus Study

Western Riverside County includes 18 incorporated cities and the unincorporated county covering an area of approximately 2,100 square miles. Through the mid 2000's, this portion of Riverside County was growing at a pace exceeding the capacity of existing financial resources to meet increasing demand for transportation infrastructure. Although the economic recession of the late 2000's, and the associated crises in the mortgage and housing industries, slowed this rate of growth, the regional economy has recovered and the projected rate of development in Western Riverside County remains high. Similarly, the impact of the COVID-19 pandemic on travel demand in the region has also passed, with travel demands, especially for the highway network, surpassing pre-pandemic levels. Continued high growth in households and jobs in Western Riverside County could significantly increase congestion and degrade mobility if substantial investments are not made in transportation infrastructure. This challenge is especially critical for arterial roadways of regional significance, since traditional sources of transportation funding (such as the gasoline tax and local general funds) will not be nearly sufficient to fund the needed improvements.

In February 1999, the cities of Temecula, Murrieta and Lake Elsinore, the Western Riverside Council of Governments (WRCOG), the Riverside County Transportation Commission (RCTC) and the Building Industry Association (BIA) met to discuss the concept of a Transportation Uniform Mitigation Fee (TUMF) for southwest Riverside County. In August 2000, the concept was expanded to include the entire WRCOG sub-region.

Continued high growth in households and jobs in Western Riverside County could significantly increase congestion and degrade mobility if substantial investments are not made in transportation infrastructure. This challenge is especially critical for arterial roadways of regional significance, since traditional sources of transportation funding (such as the gasoline tax and local general funds) will not be nearly sufficient to fund the needed improvements. While the TUMF cannot fund all necessary transportation system improvements, it is intended to address a current transportation funding shortfall by establishing a new revenue source that ensures future new development will contribute toward addressing its indirect cumulative traffic impacts on regional transportation infrastructure. Funding accumulated through the TUMF Program will be used to construct transportation improvements such as new arterial highway lanes, reconfigured freeway interchanges, railroad grade separations and new regional express bus services that will be needed to accommodate future travel demand in Western Riverside County. By levying a fee on new developments in the region, local agencies will be establishing a mechanism by which developers and in turn new county residents and employees will effectively contribute their "fair share" toward sustaining the regional transportation system.

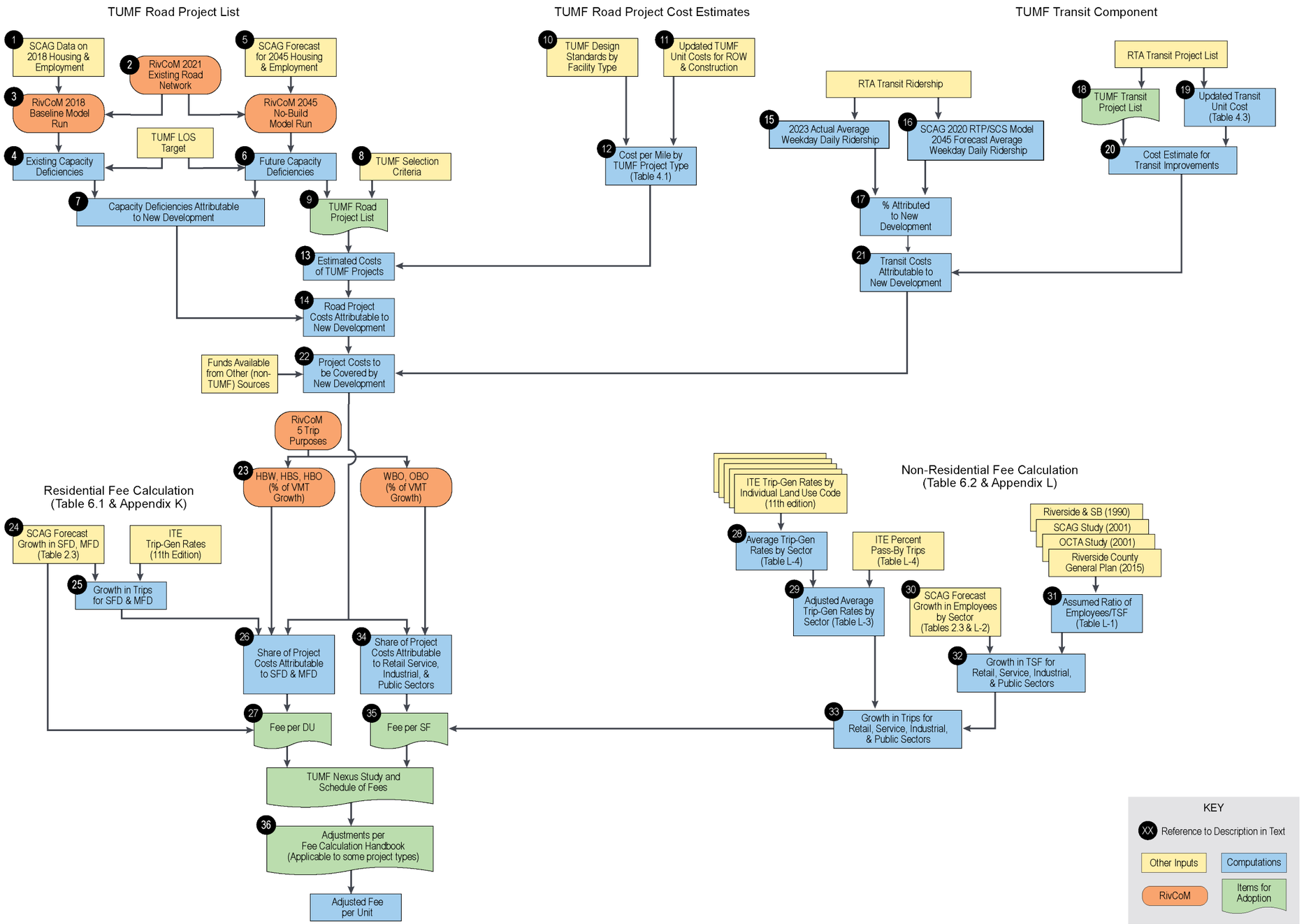
This TUMF Draft Nexus Study is intended to satisfy the requirements of California Government Code Chapter 5 Section 66000-66008 Fees for Development Projects (also known as California Assembly Bill 1600 (AB 1600) or the Mitigation Fee Act) which governs imposing development impact fees in California. The initial WRCOG TUMF Nexus Study was completed in October 2002 and adopted by the WRCOG Executive Committee in November 2002. The results of the first review of the Program were documented in the TUMF Nexus Study 2005 Update adopted by the WRCOG Executive Committee on February 6, 2006. A second comprehensive review of the TUMF Program was adopted by the WRCOG Executive Committee on October 5, 2009. A third comprehensive review of the TUMF Program was conducted following the adoption of the Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS) on April 7, 2016. The WRCOG TUMF Nexus Study 2016 Update Report was adopted by the WRCOG Executive Committee on July 10, 2017.

On September 3, 2020, SCAG adopted Connect SoCal; The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments (2020 RTP/SCS). The adoption of the 2020 RTP/SCS confirmed new growth forecasts for the region that provide a foundational element for updating the TUMF program and the associated nexus determination prompting WRCOG to initiate the current program update. These forecasts are also integrated into the Riverside County Transportation Analysis Model (RivCoM) used to forecast the cumulative regional traffic impacts of new development on the arterial highway network in Western Riverside County.

The overall process for establishing the TUMF nexus is illustrated in Figure ES.1. Each technical step is denoted with a number on the flow chart with the numbers correlating to the detailed description of each step provided in Section 1.3 of the Nexus Study Report. The flow chart also incorporates color coding of the steps to indicate those steps that involved the application of RivCoM, steps that utilized other input data, steps that are computations of various inputs, and steps that required specific actions of the various WRCOG committees to confirm major variables. Where appropriate, the flow chart also includes specific cross references to the sections or tables included in the Nexus Study document that correlate to the particular step.

This version of the WRCOG TUMF Nexus Study Report documents the results of the fourth comprehensive review of the TUMF Program. This version of the document also incorporates revisions in response to comments received during the formal review of the earlier Draft TUMF Nexus Study 2024 Update. The findings of this report were ultimately adopted by the WRCOG Executive Committee on September 9, 2024.

Figure ES.1 - Flowchart of Key Steps in the TUMF Nexus Study Process



ES.2 Future Growth

In preparation for the 2020 RTP/SCS, SCAG undertook robust stakeholder engagement, including participation by WRCOG, Riverside County and the various cities in Western Riverside County, to develop regional demographic forecasts. Using input from regional stakeholders regarding anticipated patterns and rates of development, SCAG compiled and disseminated the forecasts that were ultimately adopted in 2020. The SCAG forecasts adopted for the 2020 RTP/SCS were subsequently used as the basis for RivCoM and are used as the basis for this TUMF Nexus Study Update.

A major distinction between data used for the TUMF Nexus Study 2016 Update and the SCAG 2020 RTP/SCS data used for this 2024 Update is the change in the base year from 2012 to 2018, as well as the change in the horizon year from 2040 to 2045. This shift in the base year and horizon year demographic assumptions of the program carries through all aspects of the nexus analysis, including the travel demand forecasting, network review and fee calculation.

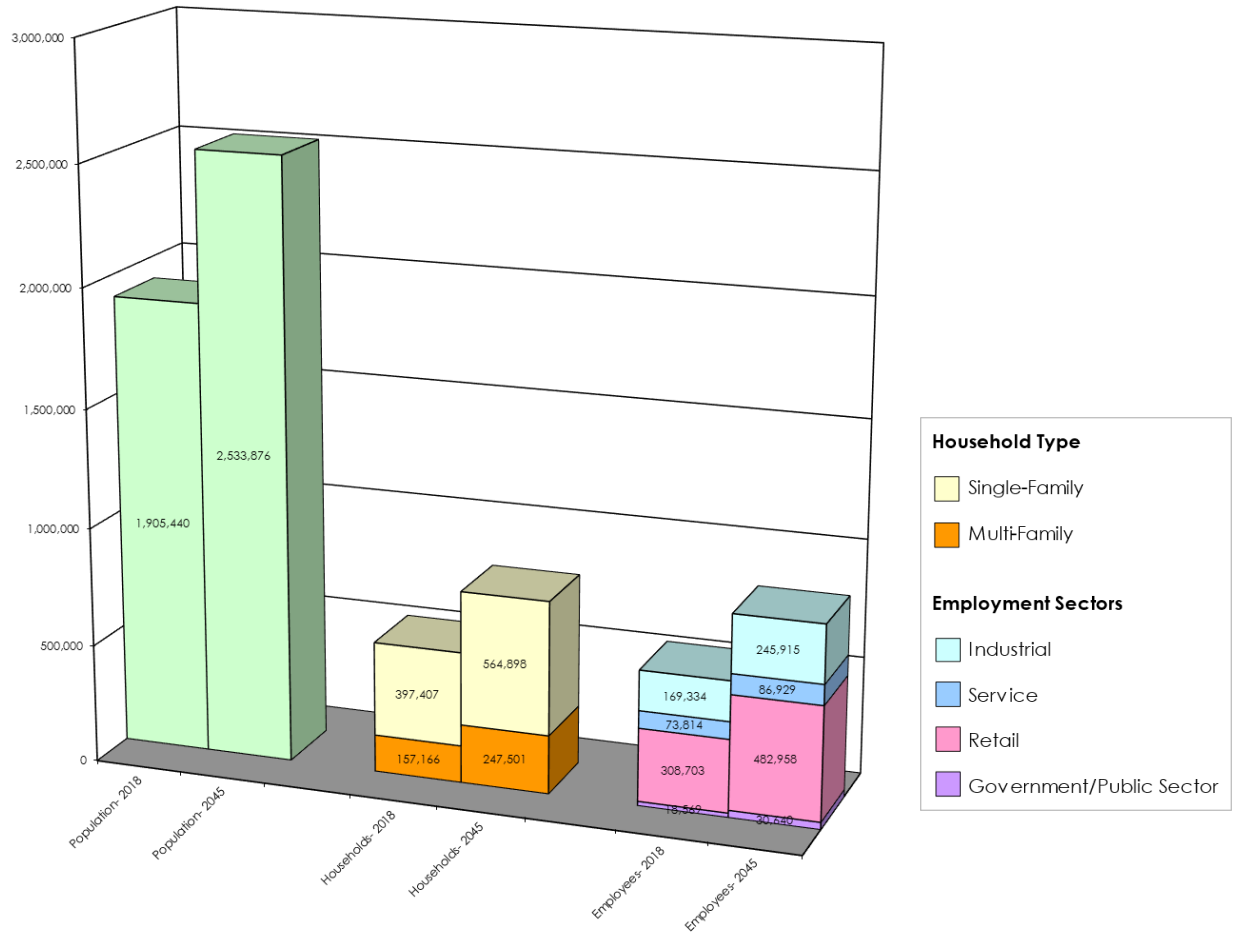
The population of Western Riverside County is projected to increase by 33% in the period between 2018 and 2045. During the same period, employment in Western Riverside County is anticipated to grow by 48%. **Figure ES.2** illustrates the forecast growth in population, household and employment for Western Riverside County.

ES.3 Need for the TUMF

The WRCOG TUMF study area was extracted from the greater RivCoM model network for the purpose of calculating measures for Western Riverside County only. Peak period performance measures for the TUMF study area included total vehicle miles of travel (VMT), total vehicle hours of travel (VHT), total combined vehicle hours of delay (VHD), and total VMT experiencing unacceptable level of service (LOS E).

As a result of the new development and associated growth in population and employment in Western Riverside County, additional pressure will be placed on the transportation infrastructure, particularly the arterial roadways, with the peak period VMT on the TUMF Network estimated to increase by 38% between 2018 and 2045. By 2045, 37% of the total VMT on the TUMF Network is forecast to be traveling on facilities experiencing peak period LOS E or worse. Without improvements to the arterial highway system, the total vehicle hours of delay (VHD) experienced by area motorists on the TUMF Network will increase over 5.0% per year. The need to improve these roadways and relieve future congestion is therefore directly linked to the future development which generates the travel demand.

Figure ES.2 - Population, Households and Employment in Western Riverside County (2018 to 2045)



As population and employment in Western Riverside County grows because of new development, demand for regional transit services in the region is also expected to grow. Weekday system ridership for RTA bus transit services is approximately 16,575 riders per day in Western Riverside County in 2023. By 2045, bus transit services are forecast to serve approximately 57,282 riders per weekday. This represents an average increase of 1,850 weekday riders each year. Based on this rate of ridership growth, weekday ridership is estimated to increase by 40,707 riders per weekday between 2018 and 2045.

The idea behind a uniform mitigation fee is to have new development throughout the region contribute equally to paying the cost of improving the transportation facilities that serve these longer-distance trips between communities. Thus, the fee should be used to improve transportation facilities that serve trips between communities within the region (primarily arterial roadways) as well as the infrastructure for public transportation. The fee should be assessed proportionately on new residential and non-residential development based on the relative impact of each use on the transportation system.

ES.4 The TUMF Network

The Regional System of Highways and Arterials (also referred to as the TUMF Network) is the system of roadways that serve inter-community trips within Western Riverside County and therefore are eligible for improvement funding with TUMF funds. Transportation facilities in Western Riverside County that generally satisfied these guidelines were initially identified, and a skeletal regional transportation framework evolved from facilities where several guidelines were observed. Representatives of all WRCOG constituent jurisdictions reviewed this framework in the context of current local transportation plans to define the TUMF Network, which was subsequently endorsed by the WRCOG Public Works Committee, WRCOG Technical Advisory Committee, TUMF Policy Committee and the WRCOG Executive Committee.

The TUMF Network was reviewed as part of the 2024 Nexus Update to ensure facilities generally still met the previously described performance guidelines, and/or that the scope and magnitude of specific improvements to the TUMF Network were roughly proportional to the impacts needing to be mitigated. This review process resulted in the removal of various facilities from the TUMF Network, as well as various changes in the scope and magnitude of specific improvements to the TUMF Network.

Figure ES.3 illustrates the TUMF improvements to the Regional System of Highways and Arterials.

The total cost of improving the TUMF system is $5.28 billion. Accounting for obligated funds and unfunded existing needs, the estimated maximum eligible value of the TUMF Program is $4.24 billion. The maximum eligible value of the TUMF Program includes approximately $3.87 billion in eligible arterial highway and street related improvements and $154.8 million in eligible transit related improvements. An additional $53.9 million is also eligible as part of the TUMF Program to mitigate the impact of eligible TUMF related arterial highway and street projects on critical native species and wildlife habitat, while $161.2 million is provided to cover the costs incurred by WRCOG to administer the TUMF Program.

Figure ES.3 - Regional System of Highways and Arterials - TUMF Network Improvements

Legend

Ultimate Lanes
- 2
- 4
- 6
- 8

- Interchange
- Bridge
- Railroad Crossing
- TUMF Zone
- Cities
- County Boundaries

Northwest
Central
Southwest
Hemet/San Jacinto

WRCOG Western Riverside Council of Governments

ES.5 TUMF Nexus Analysis

There is a reasonable relationship between the future growth and the need for improvements to the TUMF system. These factors include:

- Western Riverside County is expected to continue growing as a result of future new development.
- Continuing new growth will result in increasing congestion on arterial roadways.
- The future arterial roadway congestion is directly attributable to the cumulative regional transportation impacts of future development in Western Riverside County.
- Capacity improvements to the transportation system will be needed to mitigate the cumulative regional impacts of new development.
- Roads on the TUMF network are the facilities that merit improvement through this fee program.
- Improvements to the public transportation system will be needed to provide adequate mobility for transit-dependent travelers and to provide an alternative to automobile travel.

The split of fee revenues between the backbone and secondary highway networks is related to the proportion of highway vehicle travel that is relatively local (between adjacent communities) and longer distance (between more distant communities but still within Western Riverside County). To estimate a rational fee split between the respective networks, the future travel forecast estimates were aggregated to a matrix of peak period trips between zones. The overall result is that 51.1% of the regional travel is attributable to the backbone network and 48.9% is assigned to the secondary network.

In order to establish the approximate proportionality of the future traffic impacts associated with new residential development and new non-residential development, peak period growth in VMT between 2018 and 2045 was derived from RivCoM and aggregated by trip purpose. It was concluded that home-based person trips represent 77.7% of the total future person trips, and the non-home-based person trips represent 22.3% of the total future person trips.

ES.6 Fair-Share Fee Calculation

The balance of the unfunded TUMF system improvement needs is $4.24 billion which is the maximum value attributable to the mitigation of the cumulative regional transportation impacts of future new development in the WRCOG region and will be captured through the TUMF Program. By levying the uniform fee directly on future new developments (and indirectly on new residents and new employees to Western Riverside County), these transportation system users are assigned their "fair share" of the

costs to address the cumulative impacts of additional traffic they will generate on the regional transportation system.

Of the $4.24 billion in unfunded future improvement needs, 77.7% ($3.30 billion) will be assigned to future new residential development and 22.3% ($946.5 million) will be assigned to future new non-residential development.

ES.7 Conclusions

Based on the results of the Nexus Study evaluation, it can be demonstrated that there is reasonable relationship between the cumulative regional transportation impacts of new land development projects in Western Riverside County and the need to mitigate these transportation impacts using funds levied through the proposed TUMF Program. Factors that reflect this reasonable relationship include:

- Western Riverside County is expected to continue growing as a result of future new development.
- Continuing new growth will result in increasing congestion on arterial roadways;
- The future arterial roadway congestion is directly attributable to the cumulative regional transportation impacts of future development in Western Riverside County;
- Capacity improvements to the transportation system will be needed to mitigate the cumulative impacts of new development;
- Roads on the TUMF network are the facilities that merit improvement through this fee program;
- Improvements to the public transportation system will be needed to provide adequate mobility for transit-dependent travelers and to provide an alternative to automotive travel.

The Nexus Study evaluation has established a proportional "fair share" of the improvement cost attributable to new development based on the impacts of existing development and the availability of obligated funding through traditional sources. The fair share fee allocable to future new residential and non-residential development in Western Riverside County is summarized for differing use types in **Table ES.1**.

Table ES.1 - Transportation Uniform Mitigation Fee for Western Riverside County				
Land Use Type	**Units**	**Development Change**	**Fee Per Unit**	**Total Revenue ($ million)**
Single-Family Residential	DU	167,491	**$15,476**	$2,592.0
Multi-Family Residential	DU	90,335	**$7,816**	$706.1
Industrial	SF GFA	61,489,565	**$2.33**	$143.1
Retail	SF GFA	6,557,500	**$11.21**	$73.5
Service	SF GFA	66,735,957	**$9.76**	$651.1
Government/Public	SF GFA	3,420,665	**$23.07**	$78.9
MAXIMUM TUMF VALUE				**$2,961.0**

1.0 INTRODUCTION AND PURPOSE OF THE NEXUS STUDY

1.1 Background

Western Riverside County includes 18 incorporated cities and the unincorporated county covering an area of approximately 2,100 square miles. Through the mid 2000's, this portion of Riverside County was growing at a pace exceeding the capacity of existing financial resources to meet increasing demand for transportation infrastructure. Although the economic recession of the late 2000's, and the associated crises in the mortgage and housing industries, slowed this rate of growth, the regional economy has recovered and the projected rate of development in Western Riverside County remains high. Similarly, the impact of the COVID-19 pandemic on travel demand in the region has also passed, with travel demands, especially for the highway network, surpassing pre-pandemic levels.

Continued high growth in households and jobs in Western Riverside County could significantly increase congestion and degrade mobility if substantial investments are not made in transportation infrastructure. This challenge is especially critical for arterial roadways of regional significance, since traditional sources of transportation funding (such as the gasoline tax and local general funds) will not be nearly sufficient to fund the needed improvements. Development exactions only provide improvements near the development site, and the broad-based county-level funding sources (i.e., Riverside County's half-cent sales tax known as Measure A) designate only a small portion of their revenues for arterial roadway improvements.

In anticipation of the continued future growth projected in Riverside County, several county-wide planning processes were initiated in 1999. These planning processes include the Riverside County General Plan Update, the Community Environmental Transportation Acceptability Process (CETAP) and the Multi-Species Habitat Conservation Plan (MSHCP). Related to these planning processes is the need to fund the mitigation of the cumulative regional transportation impacts of future new development.

Regional arterial highways in Western Riverside County are forecast to carry significant traffic volumes by 2045. While some localized fee programs exist to mitigate the local impacts of new development on the transportation system in specific areas, and while these programs are effective locally, they are insufficient in their ability to meet the regional demand for transportation infrastructure. Former Riverside County Supervisor Buster recognized the need to establish a comprehensive funding source to mitigate the cumulative regional transportation impacts of new development on regional arterial highways. The need to establish a comprehensive funding source for arterial highway improvements has evolved into the development of the Transportation Uniform Mitigation Fee (TUMF) for Western Riverside County.

In February 1999, the cities of Temecula, Murrieta and Lake Elsinore, the Western Riverside Council of Governments (WRCOG), the Riverside County Transportation Commission (RCTC) and the Building Industry Association (BIA) met to discuss the

concept of a TUMF. The intent of this effort was to have the southwest area of Western Riverside County act as a demonstration for the development of policies and a process for a regional TUMF Program before applying the concept countywide. From February 1999 to September 2000, the Southwest Area Transportation Infrastructure System Funding Year 2020 (SATISFY 2020) Program progressed with policy development, the identification of transportation improvements, traffic modeling, cost estimates, fee scenarios and a draft Implementation Agreement.

In May 2000, Riverside County Supervisor Tavaglione initiated discussions in the northwest area of Western Riverside County to determine the level of interest in developing a TUMF for that area of the county. Interest in the development of a northwest area fee program was high. In August 2000, the WRCOG Executive Committee took action to build upon the work completed in the southwest area for the SATISFY 2020 program and to develop a single consolidated mitigation fee program for all of Western Riverside County. This action was predicated on the desire to establish a single uniform mitigation fee program to mitigate the cumulative regional impacts of new development on the regional arterial highway system, rather than multiple discrete and disparate fee programs with varying policies, fees and improvement projects. A TUMF Policy Committee comprising regional elected officials was formed to recommend and set policies for staff to develop the TUMF Program and provide overall guidance to all other staff committees.

While the TUMF cannot fund all necessary transportation system improvements, it is intended to address a current transportation funding shortfall by establishing a new revenue source that ensures future new development will contribute toward addressing its indirect cumulative traffic impacts on regional transportation infrastructure. Funding accumulated through the TUMF Program will be used to construct transportation improvements such as new arterial highway lanes, reconfigured freeway interchanges, railroad grade separations and new regional express bus services that will be needed to accommodate future travel demand in Western Riverside County. By levying a fee on new developments in the region, local agencies will be establishing a mechanism by which developers and in turn new county residents and employees will effectively contribute their "fair share" toward sustaining the regional transportation system.

This TUMF Nexus Study is intended to satisfy the requirements of California Government Code Chapter 5 Section 66000-66008 Fees for Development Projects (also known as California Assembly Bill 1600 (AB 1600) or the Mitigation Fee Act), which governs imposing development impact fees in California. The Mitigation Fee Act requires that all local agencies in California, including cities, counties, and special districts follow two basic rules when instituting impact fees. These rules are as follows:

1) Establish a nexus or reasonable relationship between the development impact fee's use and the type of project for which the fee is required.
2) The fee must not exceed the project's proportional "fair share" of the proposed improvement and cannot be used to correct current problems or to make improvements for existing development.

1.2 TUMF Nexus Study History

The TUMF Program is implemented through the auspices of WRCOG. As the council of governments for Western Riverside County, WRCOG provides a forum for representatives from 18 cities, the Riverside County Board of Supervisors, the Eastern Municipal Water District, Western Water, the Riverside County Superintendent of Schools, the March Joint Powers Authority and the Riverside Transit Agency to collaborate on issues that affect the entire subregion, such as air quality, solid waste, transportation and the environment. WRCOG strives to "respect local control, provide regional perspective, and make a difference" to elevate the quality of life throughout the subregion. A current list of the standing WRCOG committees and committee membership that oversee the TUMF program is included in **Appendix A.**

The initial WRCOG TUMF Nexus Study was completed in October 2002 and adopted by the WRCOG Executive Committee in November 2002. Its purpose was to establish the nexus or reasonable relationship between new land development projects in Western Riverside County and the proposed development impact fee that would be used to improve regional transportation facilities. It also identified the proportional "fair share" of the improvement cost attributable to new development.

Consistent with the provisions of the Mitigation Fee Act, the WRCOG Executive Committee has established that the TUMF Nexus Study will be subject of a comprehensive review of the underlying program assumptions at least every five years to confirm the Nexus. Acknowledging the unprecedented and unique nature of the TUMF Program, the Executive Committee determined that the first comprehensive review of the Program should be initiated within two years of initial adoption of the Program primarily to validate the findings and recommendations of the study and to correct any program oversights. The results of the first review of the Program were documented in the TUMF Nexus Study 2005 Update adopted by the WRCOG Executive Committee on February 6, 2006. A second comprehensive review of the TUMF Program was conducted in 2008 and 2009 in part to address the impacts of the economic recession on the rate of development within the region and on transportation project costs. The findings of the 2009 review of the program were adopted by the WRCOG Executive Committee on October 5, 2009.

A third comprehensive review of the TUMF Program was conducted in 2014 and 2015 leading to a Draft Nexus Study document being distributed for review in August 2015. The WRCOG Executive Committee subsequently considered comments related to the Draft Nexus Study 2015 Update at the meeting held on September 14, 2015, where it was resolved to "delay finalizing the Nexus Study for the TUMF Program Update until the 2016 Southern California Association of Governments' 2016 Regional Transportation Plan / Sustainable Communities Strategy growth forecast is available for inclusion in the Nexus Study". The Southern California Association of Governments (SCAG) adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS) on April 7, 2016, enabling WRCOG staff to proceed with finalizing the update of the TUMF Nexus Study. The WRCOG TUMF Nexus Study 2016 Update Report was ultimately adopted by the WRCOG Executive Committee on July 10, 2017.

On September 3, 2020, SCAG adopted Connect SoCal; The 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments (2020 RTP/SCS). As stated in the plan document "Connect SoCal embodies a collective vision for the region's future, through the horizon year of 2045. It is developed with input from a wide range of constituents and stakeholders within the Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura, including public agencies, community organizations, elected officials, tribal governments, the business community and the public. Connect SoCal is an important planning document for the region, allowing public agencies who implement transportation projects to do so in a coordinated manner, while qualifying for federal and state funding."

The adoption of the 2020 RTP/SCS confirmed new growth forecasts for the region that were used as the basis to develop the Connect SoCal plan. These forecasts also provide a foundational element for updating the TUMF program and the associated nexus determination prompting WRCOG to initiate the current program update. The 2020 RTP/SCS growth forecasts are used directly in the fee calculation as the basis for determining the anticipated growth in households and employment in the region through the program horizon year of 2045. These forecasts are also integrated into the Riverside County Transportation Analysis Model (RivCoM) used to forecast the cumulative regional traffic impacts of new development on the arterial highway network in Western Riverside County.

Completed in 2021 to succeed the Riverside County Traffic Analysis Model (RIVTAM), RivCoM provides a valuable tool for supporting a variety of transportation planning activities in Riverside County, including the update of the TUMF Nexus Study. RivCoM was developed under the leadership of WRCOG in conjunction with regional partners with the intent to provide jurisdictions in Riverside County with a traffic forecasting tool that, while consistent with the SCAG regional travel demand model, provides a more appropriate level of detail to support transportation planning at the County or City level.

RivCoM is a critical tool for quantifying the cumulative regional traffic impacts of new development as part of the TUMF Nexus Study Update. Utilizing the 2020 RTP/SCS growth forecasts, RivCoM is used to quantify changes in travel demand and traffic conditions on the regional highway network, with a specific focus on the TUMF Network. RivCoM outputs are used to analyze project eligibility and quantify the fair share of traffic growth that is attributable to new development as inputs to determining the fee. The adoption of the Connect SoCal plan and the availability of RivCoM to serve as a critical tool for quantifying network impacts for the TUMF Nexus Study Update were key factors driving the schedule for this update of the fee.

To ensure new development continues to contribute a fair share of the cost to mitigate its cumulative regional transportation impacts in the period between the comprehensive review of program assumptions completed at least every five years, the WRCOG Executive Committee has also established that the TUMF Schedule of Fees will be reviewed annually, and adjusted, as needed, on July 1st to reflect current costs. The revised schedule of fees will typically be recalculated in February of each year based

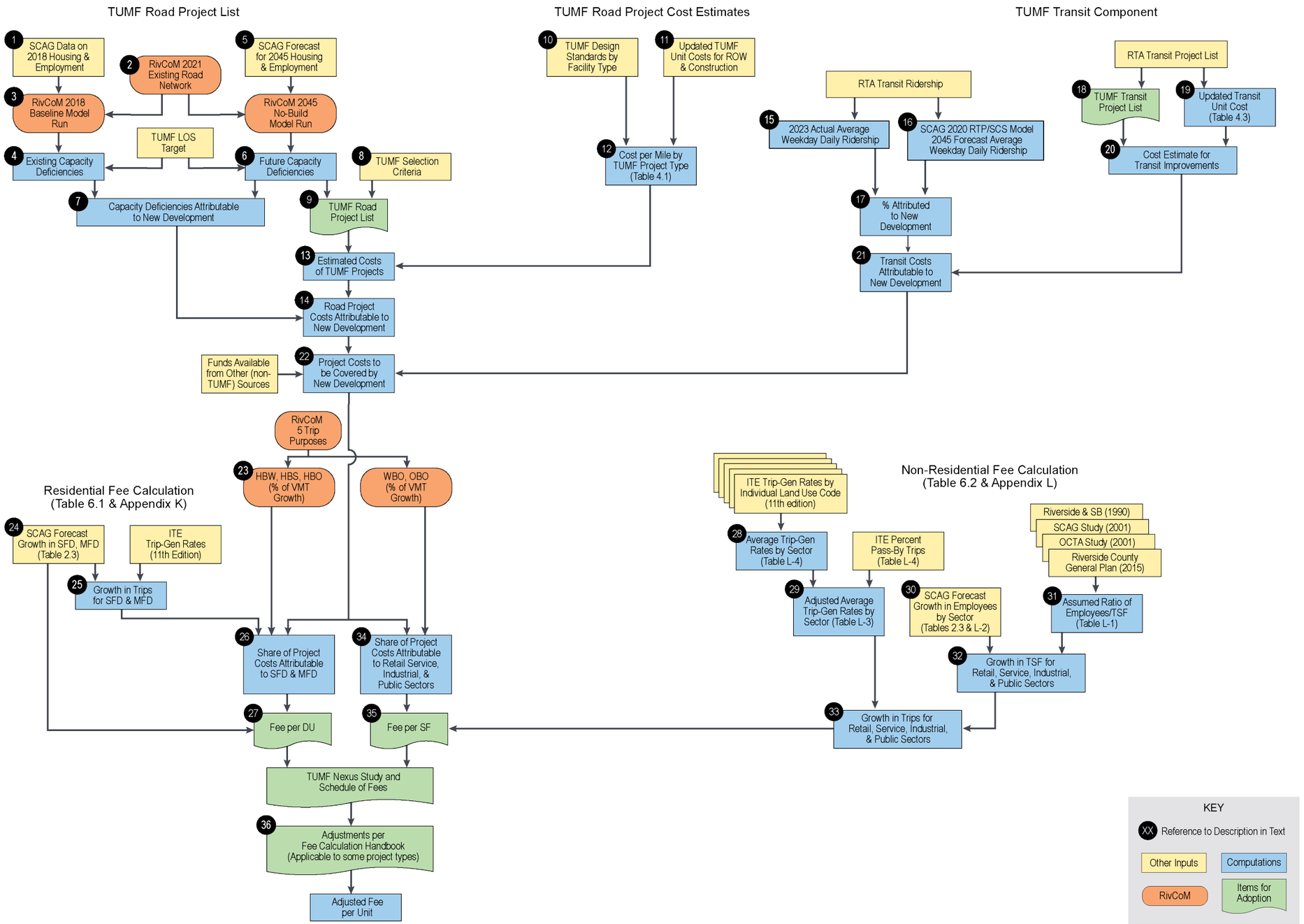
on the percentage increase or decrease in the Engineering News Record (ENR) Construction Cost Index (CCI) for the twelve (12) month period from January of the prior year to January of the current year, and the percentage increase or decrease in the National Association of Realtors (NAR) Median Sales Price of Existing Single Family Homes in the Riverside/San Bernardino Metropolitan Statistical Area for the twelve (12) month period from the 3rd Quarter of the second year prior to the 3rd Quarter of the prior year (to coincide with the publication of the most recently updated index). If approved by the Executive Committee, the resultant percentage change for each of the indices will be applied to the unit cost assumptions for roadway and bus transit costs, and land acquisition costs, respectively, to reflect the combined effects of changes in eligible project costs on the resultant per unit fee for each defined land use category. The most recent annual cost adjustment to the TUMF Schedule of Fees was adopted by the WRCOG Executive Committee on July 12, 2021.

1.3 TUMF Nexus Study Process

In coordination with WRCOG, city and county representatives and other interested parties have reviewed the underlying assumptions of the Nexus Study as part of this comprehensive program review. In particular, the most recent socioeconomic forecasts developed by SCAG as the basis for the 2020 RTP/SCS were incorporated. This use of the most recent SCAG forecasts resulted in a shift of the program base year from 2012 to 2018, as well as a shift in the program horizon year from 2040 to 2045. Furthermore, the TUMF Network was re-examined in detail based on travel demand forecasts derived from the most recent version of the Riverside County Model (RivCoM) to more accurately reflect future project needs to address the cumulative regional impacts of new development in Western Riverside County as well as eliminating those projects having been completed prior to the commencement of the Nexus review in 2021.

The subsequent chapters of this Nexus Study document describe the various assumptions, data inputs and analysis leading to the determination of each major variable in the TUMF calculation, and ultimately leading to the determination of the TUMF Schedule of Fees that indicates the maximum "fair share" fee for each of the various use types defined in the TUMF program. The overall process for establishing the TUMF nexus is summarized in this section, including the flow chart in **Figure 1.1** that illustrates the various technical steps in this fee calculation process. Each technical step that was followed to determine the TUMF Schedule of Fees and establish the program nexus is summarized below, with the numbers denoted on the flow chart correlating to the steps described. The flow chart also incorporates color coding of the steps to indicate those steps that involved the application of RivCoM, steps that utilized other input data, steps that are computations of various inputs, and steps that required specific actions of the various WRCOG committees to confirm major variables. Where appropriate, the flow chart also includes specific cross references to the sections or tables included in this Nexus Study document that correlate to the particular step.

Figure 1.1 - Flowchart of Key Steps in the TUMF Nexus Study Process



2.3.1. Establish the TUMF Network Project List

The roadway network in Western Riverside County must be evaluated to determine how new development activity will impact the performance of the network, and how the resultant traffic impacts can be mitigated by completing various roadway improvements. The following steps integrate the latest SCAG socio-economic forecasts into RivCoM as the basis for determining future roadway deficiencies and identifying the list of eligible improvements to address these future deficiencies. The rational and methodology for accomplishing these steps is further explained in **Chapters 2 and 3** of this report, with the resultant TUMF Network described in **Chapter 4**.

1) The SCAG 2020 RTP/SCS was developed using housing and employment data for 2018 as its base year. This adopted dataset was integrated into RivCoM providing a critical analytic tool to support the Nexus Study Update.

2) The RivCoM model[1] has datasets available that represent the capacity of the different facilities in the road network for several different study years. For this nexus update, the RivCoM 2018 base network that was developed following the adoption of the SCAG 2020 RTP was selected as the one most closely resembling current conditions. This network was subsequently reviewed and updated, including a detailed review by WRCOG staff and participating jurisdictions, to identify projects that were completed on the arterial network in the period between 2016 and December 2021. The arterial network was then recoded to reflect the changes to the TUMF Network to create a 2021 Existing Network as the base network for analysis. A second version of the base network was also developed adding only those facilities that had been identified on the 2016 TUMF network that did not currently exist and therefore were not represented by a link(s) in RivCoM. The Supplemental 2021 Existing Network was utilized as the basis for assessing only those projects that did not currently exist on the TUMF Network.

3) RivCoM was run using the 2018 socio-economic data (SED) and the 2021 Existing Networks to produce the baseline volumes on the roads in the TUMF Network.

4) The baseline volume-to-capacity (V/C) ratio was then determined. The target LOS for TUMF facilities is "D", meaning that facilities with LOS "E" or "F", i.e. those with a V/C ratio of 0.9 or higher, are deemed to have inadequate capacity. The result of this step is a list of roads that have existing capacity deficiencies.

[1] The macro-level traffic forecasting was conducted using the Riverside County Transportation Analysis Model (RivCoM). RivCoM is consistent of SCAG's six-county model with additional detail (traffic analysis zones and local roads) added within Riverside County. It was developed for use in traffic studies in Riverside County as a replacement for the Riverside County Transportation and Analysis Model (RivTAM) integrating an updated modeling platform to improve run time and reliability, as well as a more focused model area, more detailed network and zone structure, and prost processors to satisfy more recent legislative requirements. RivCoM has both the geographic scope needed to analyze all TUMF facilities and conformity with regional planning assumptions. There is a memorandum of understanding among the jurisdictions of Riverside County that encourages the use of the RivCoM model for use in regional traffic studies.

5) The SCAG 2020 RTP/SCS was developed using housing and employment data for 2045 as its forecast horizon year. This adopted dataset was also used as the future base year for the TUMF update calculation.

6) RivCoM was run using the 2021 Existing Networks with the land use assumptions for 2045. These "Future No-Build" scenarios was used to determine where deficiencies would occur in the roadway system if development occurred as expected but no roadway improvements were implemented.

7) Comparing the existing capacity deficiencies with the future deficiencies showed where new deficiencies would occur that are entirely attributable to growth in households and employment. Comparing the existing and future traffic volume to capacity ratio on the roads that are currently deficient shows the portion of the future deficiency that is attributable to growth.

8) It is generally acknowledged that the TUMF program cannot and should not attempt to fund every roadway improvement needed in Western Riverside County. WRCOG has adopted a set of selection criteria that was used to choose which roadway improvements would be eligible for TUMF funding.

9) The selection criteria were applied to the forecast deficiencies to identify projects for the TUMF Project List. The project list was subsequently reviewed to confirm the eligibility of proposed projects, including projects previously included in the TUMF program, as well as additional projects requested for inclusion as part of the current update. The project list was then subsequently updated to reflect those projects considered eligible for TUMF funding as part of the 2024 Nexus Study Update.

2.3.2. Determine the TUMF Network Project Costs

The estimated costs of proposed improvements on the TUMF Network are calculated based on the prices of construction materials, labor and land values for the various eligible project types included as part of the TUMF program. The approach and outcomes of the following steps is described in **Chapter 4** of this report.

10) The TUMF program has design standards covering the road project components that are eligible for TUMF funding. This ensures that projects in jurisdictions with different design standards are treated equally[2].

11) Current cost values for labor and materials such as cement, asphalt, reinforcing steel, etc., as derived from Caltrans cost database, RCTC and other sources, were tabulated and updated to December 2023. Additionally, the ROW cost components per square foot for various land use types were also updated based on current property valuations in Riverside County as researched by Overland, Pacific and Cutler.

[2] A jurisdiction may choose to design to a higher standard, but if it does so, TUMF will only fund up to the equivalent of what costs would have been had the TUMF design standards been followed.

12) The cost values for the contributing labor, materials and land components were applied to estimated quantities of these components for the various roadway project types that are eligible under TUMF to generate aggregate unit cost values for each project type (road costs per lane-mile, typical costs per arterial-freeway interchange, bridge costs per linear foot, etc.).

13) The unit costs from the previous step were then applied to the project list to estimate the costs of the improvements on the TUMF project list.

14) The percentage of each project that was attributable to new development was then applied to the costs of TUMF road projects to find the total road project cost that is attributable to new development.

2.3.3. Determine the TUMF Transit Component

A portion of the TUMF funding is made available for transit services that provide an alternative to car travel for medium-to-long distance intra-regional trips. The eligible transit projects and their associated costs are determined using the following steps, with additional explanation provided in **Chapter 4** of this report.

15) Actual average weekday daily ridership for Riverside Transit Agency (RTA) transit bus services was tabulated for 2023.

16) Forecast average weekday daily ridership for RTA bus transit services was retrieved from the SCAG 2020 RTP/SCS Model for horizon year 2045.

17) The growth in ridership between 2023 and 2045 was compared to determine the portion of 2045 average weekday daily ridership that is attributable to existing passengers and the portion attributable to new growth.

18) A proposed transit project list was provided by RTA staff and was reviewed to confirm the validity of the project list to establish a final recommended transit project list to be included as part of the program. The result was the TUMF Transit Project List.

19) RTA provided information on current costs for the listed transit infrastructure.

20) The cost information was then used to determine the cost of the items on the TUMF Transit Project List.

21) The percent attribution from Step 17 was applied to the project cost estimates from the previous step to determine the cost of transit improvements that are attributable to new development.

22) The costs for road and transit projects that are attributable to new development are then combined along with information on other (non-TUMF) funds to determine the total cost for TUMF projects that is to be cover by new development through the imposition of the fees. The available alternate funding sources were reviewed as part of the Nexus update, specifically including the completion of a detailed review of available federal, state and local funding sources administered by RCTC.

2.3.4. Computing the Fee for Residential Developments

Having determined the total project costs to be covered by new development under the TUMF program, it is necessary to divide these costs among different types of developments roughly in proportion to their expected traffic impacts. The following steps describes the process for determining the proportion attributable to new residential development. The approach for accomplishing these steps along with the findings of this analysis are described in detail in **Chapter 5** and **Chapter 6** of this report.

23) California legislation encourages the use of vehicle miles of travel (VMT) as the primary indicator of traffic impacts because it combines the number of vehicle trips and the average length of those trips to reflect the proportional impact to the roadway network. As a result, the methodology for determining the relative distribution of traffic impacts between residential and non-residential uses for the purposes of TUMF utilizes a VMT based approach. The RivCoM 2021 Existing Network and 2045 No-Build model runs were examined to determine the VMT of various trip types that would take place in Western Riverside County (excluding through trips). The results were compared to determine the growth in VMT for each trip type. Per WRCOG policy (based on National Cooperative Highway Research Program (NCHRP) recommended practice) trips originating in or destined for a home are attributed to residential development while trips where neither the origin nor the destination are a home are attributed to non-residential development.

24) The SCAG 2020 RTP/SCS socio-economic forecasts were used to estimate the number of single-family and multi-family dwelling units that will be developed during the 2018 to 2045 period.

25) The Institute of Transportation Engineers' (ITE's) trip generation rates, which come from surveys of existing sites for various development types, were then used to estimate the daily number of trips that will be generated by future single- and multi-family developments that will occur in the region from 2018 to 2045.

26) The cost to be covered by residential development was divided into the portion attributable to new single-family dwellings and portion attributable to new multi-family development to calculate the cost share for each use.

27) The cost share for single-family dwellings and multi-family dwellings was divided by the number of dwellings of each type to determine the fee level required from each new dwelling unit to cover their fair share of the cost to mitigate the impacts of new developments.

2.3.5. Computing the Fee for Non-Residential Developments

A process similar to that used for residential units was used to determine the fee level for non-residential development. However, the determination of fees for non-residential development involves additional steps due to the additional complexity of accounting for a greater variety of development types within each use category. **Chapter 5** and **Chapter 6** of this report provide additional explanation regarding the methodology for accomplishing these steps along with the results of this analysis.

28) Like many impact fee programs, TUMF groups similar development projects together into general use categories to simplify the administration of the program. TUMF groups the various land use categories found in ITE's Trip Generation Manual into four non-residential categories (industrial, retail, service, and government/public sector) based on the North American Industry Classification System (NAICS), which is also used by the U.S. Census Bureau and SCAG for demographic classifications and is the basis for such classifications in the SCAG Regional Travel Demand Model as well as and the RivCoM model. The ITE trip generation rates for all uses were reviewed for accuracy updated to reflect the most current ITE published rates. The median value for the trip-generation rates for all uses within each category was used in the nexus study to represent the trip-generation characteristics for the category.

29) The trip-generation rates of retail and service uses were adjusted to take into account the share of pass-by trips these uses generate. Pass by trip rates for various retail and service uses were derived from the ITE Trip Generation Manual to determine the median value of all uses as the basis for the adjustment. The ITE pass by trip rates for all uses were reviewed for accuracy and updated to reflect the most current ITE published rates.

30) The SCAG 2020 RTP/SCS socio economic forecasts included non-residential employment for 2018 and 2045. These forecasts were used to estimate the growth in employment in each of the four non-residential uses.

31) The SCAG employment forecasts are denominated in jobs while development applications are typically denominated in square feet of floorspace. The ratio of floorspace per employee was determined as a median value derived from four studies, including a comprehensive study San Bernardino and Riverside Counties conducted in 1990, an OCTA study conducted in 2001, a SCAG study (including a specific focus on Riverside County) conducted in 2001, and the Riverside County General Plan adopted in 2015.

32) The forecast growth in employees was multiplied by the floorspace per employee to produce a forecast of the floorspace that will be developed for each of the four non-residential use types.

33) The trip-generation rate for each of the four uses was multiplied by the forecast of new floorspace to estimate the number of trips generated by each use.

34) The amount of project costs to be covered by non-residential development was split between the four non-residential uses to determine the TUMF cost share for each.

35) The TUMF cost share for each of the four non-residential uses was divided by the forecast growth in floorspace to determine the fee level required from each new square foot of non-residential development to cover their fair share of the cost to mitigate the impacts of new developments.

36) WRCOG has adopted a TUMF Fee Calculation Handbook that allows for fee adjustments to be made to account for unusual circumstances for certain types of residential and non-residential development (fuel filling stations, golf courses, high-cube warehouses, wineries, electric charging stations, etc.) These

adjustments are intended to calculate a fairer proportional fee based on the unique trip generation characteristics of these development types.

The outcome of this process is a schedule of fees for the various use categories identified as part of the TUMF program. The study conclusions including the Schedule of Fees is presented in **Chapter 7** of this report. The schedule of fees represents the ***maximum*** fee permissible under California law for the purposes of the TUMF program. The WRCOG Executive Committee has the option to adopt lower fees, however, in doing so each use category subject to a lower fee would not be contributing a fair share of the cost of their impacts. This would in turn create a funding gap for the program that would necessitate identifying additional project funding from some other source to ensure the cumulative regional impacts of new development are being mitigated fully in accordance with the program.

2.0 FUTURE GROWTH

2.1 Recent Historical Trend

Western Riverside County experienced robust growth in the period from the late 1990's to the mid 2000's. The results of Census 2000 indicate that in the year 2000, Western Riverside County had a population of 1.187 million representing a 30% increase (or 2.7% average annual increase) from the 1990 population of 912,000. Total employment in Western Riverside County in 2000 was estimated by the SCAG to be 381,000 representing a 46% increase (or 3.9% average annual increase) over the 1990 employment of 261,000.

Despite the impacts of the Great Recession and the associated residential mortgage and foreclosure crisis, and more recently with the shifting of population during and following the COVID-19 pandemic, Western Riverside County has continued to grow due to the availability of relatively affordable residential and commercial property, and a generally well-educated workforce. By 2010, the population of the region had grown to 1.742 million, a further 47% growth in population from 2000. Similarly, total employment in the region had also grown from 2000 to 2010 with 434,000 employees estimated to be working in Western Riverside County. This represents a 12% increase from the 381,000 employees working in the region in 2000.

2.2 Available Demographic Data

A variety of alternate demographic information that quantifies future population, household and employment growth is available for Western Riverside County. For earlier versions of the TUMF Nexus Study, the primary available source of consolidated demographic information for Western Riverside County was provided by SCAG. SCAG is the largest of nearly 700 Councils of Government (COG) in the United States and functions as the Metropolitan Planning Organization (MPO) for six counties in Southern California including Los Angeles, Orange, San Bernardino, Riverside, Ventura and Imperial. SCAG is mandated by the federal government to research and plan for issues of regional significance including transportation and growth management. As part of these responsibilities, SCAG maintains a comprehensive database of regional socioeconomic data and develops demographic projections and travel demand forecasts for Southern California.

In preparation for the 2020 RTP/SCS, SCAG undertook robust stakeholder engagement, including participation by WRCOG, Riverside County and the various cities in Western Riverside County, to develop regional demographic forecasts. Using input from regional stakeholders regarding anticipated patterns and rates of development, SCAG compiled and disseminated the forecasts that were ultimately adopted in 2020, including those specific to Western Riverside County. The SCAG forecasts adopted for the 2020 RTP/SCS were subsequently used as the basis for RivCoM and are used as the basis for this TUMF Nexus Study Update.

2.3 Demographic Assumptions Used for the Nexus Study Analysis

A major distinction between data used for the TUMF Nexus Study 2016 Update and the SCAG 2020 RTP/SCS data used for this 2024 Update is the change in the base year from 2012 to 2018, as well as the change in the horizon year from 2040 to 2045. This shift in the base year and horizon year demographic assumptions of the program carries through all aspects of the nexus analysis, including the travel demand forecasting, network review and fee calculation.

The SCAG 2020 RTP/SCS data were compared to the 2016 RTP/SCS data used in the TUMF Nexus Study 2016 Update. As can be seen in **Table 2.1** and **Figure 2.1**, the 2018 data reflects an increase in population and single-family households, and a very slight decline in multi-family households. Employment grew substantially overall, with significant growth in industrial employment, largely attributable to the rapid expansion of warehousing and logistics facilities in Western Riverside County. In contrast, there was a notable decline in government and public sector employment in the region from 2012 to 2018

Table 2.1 - Base Year Socioeconomic Estimates for Western Riverside County

SED Type	2016 Update (2012)	2024 Update (2018)	Change	Percent
Total Population	**1,773,935**	**1,905,440**	**131,505**	**7%**
Total Households	**525,149**	**554,573**	**29,424**	**6%**
Single-Family	366,588	397,407	30,819	8%
Multi-Family	158,561	157,166	-1,395	-1%
Total Employment	**460,787**	**570,420**	**109,633**	**24%**
Industrial	120,736	169,334	48,598	40%
Retail	65,888	73,814	7,926	12%
Service	253,372	308,703	55,331	22%
Government/Public Sector	20,791	18,569	-2,222	-11%

Source: SCAG 2016 RTP/SCS; SCAG 2020 RTP/SCS

Figure 2.1 – Base Year Socioeconomic Estimates for Western Riverside County

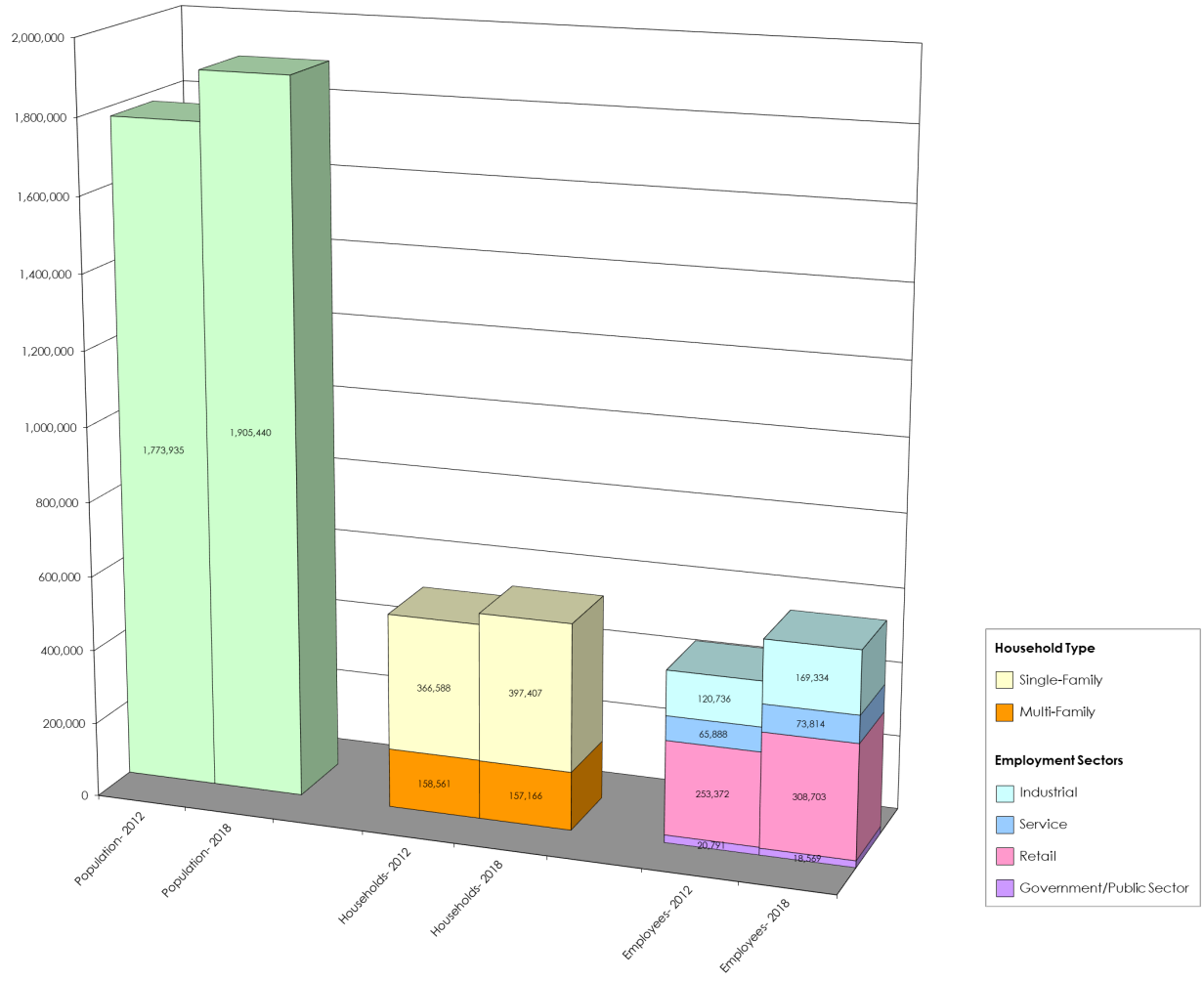


Table 2.2 and **Figure 2.2** compare the socioeconomic forecasts for the program horizon year of 2045 used in the TUMF Nexus Study 2016 Update and 2045 for this study. The most recent forecasts reflect an increase in the horizon year population and households, and a decrease in overall employment in Western Riverside County. The change in employment was not, however, consistent across sectors. The retail employment forecast has decreased approximately 15% from 2040 to 2045, while the industrial employment forecast has increased over 20%. This shift is consistent with the emergence of e-commerce as an alternative to traditional "brick and mortar" retail.

Table 2.2 - Horizon Year Socioeconomic Estimates for Western Riverside County

SED Type	2016 Update (2040)	2024 Update (2045)	Change	Percent
Total Population	**2,429,633**	**2,533,876**	**104,243**	**4%**
Total Households	**775,231**	**812,399**	**37,168**	**5%**
Single-Family	539,631	564,898	25,267	5%
Multi-Family	235,600	247,501	11,901	5%
Total Employment	**861,455**	**846,442**	**-15,013**	**-2%**
TUMF Industrial	201,328	245,915	44,587	22%
TUMF Retail	101,729	86,929	-14,800	-15%
TUMF Service	528,092	482,958	-45,134	-9%
TUMF Government/Public Sector	30,306	30,640	334	1%

Source: SCAG 2016 RTP/SCS; SCAG 2020 RTP/SCS

Figure 2.2 - Horizon Year Socioeconomic Estimates for Western Riverside County

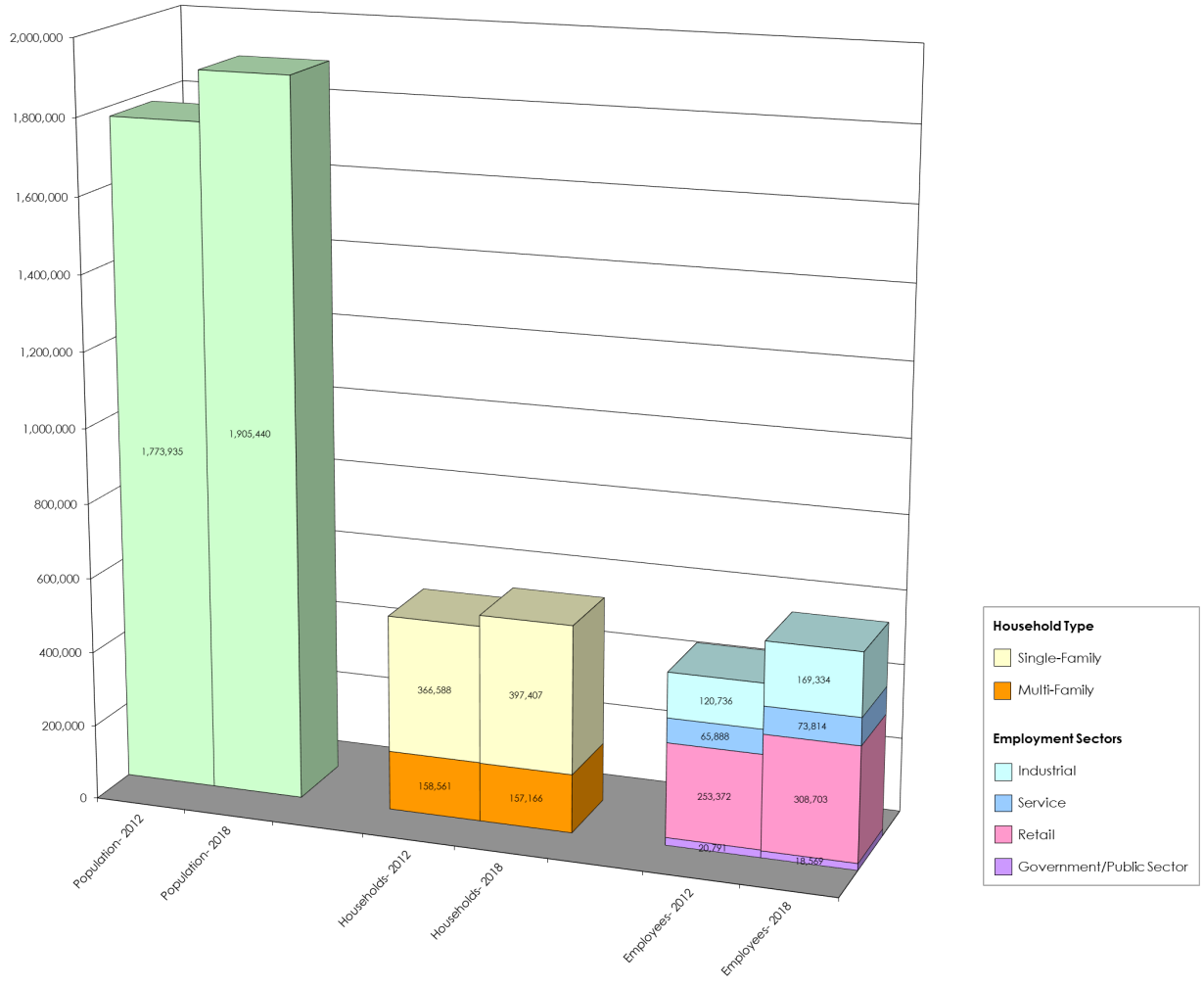


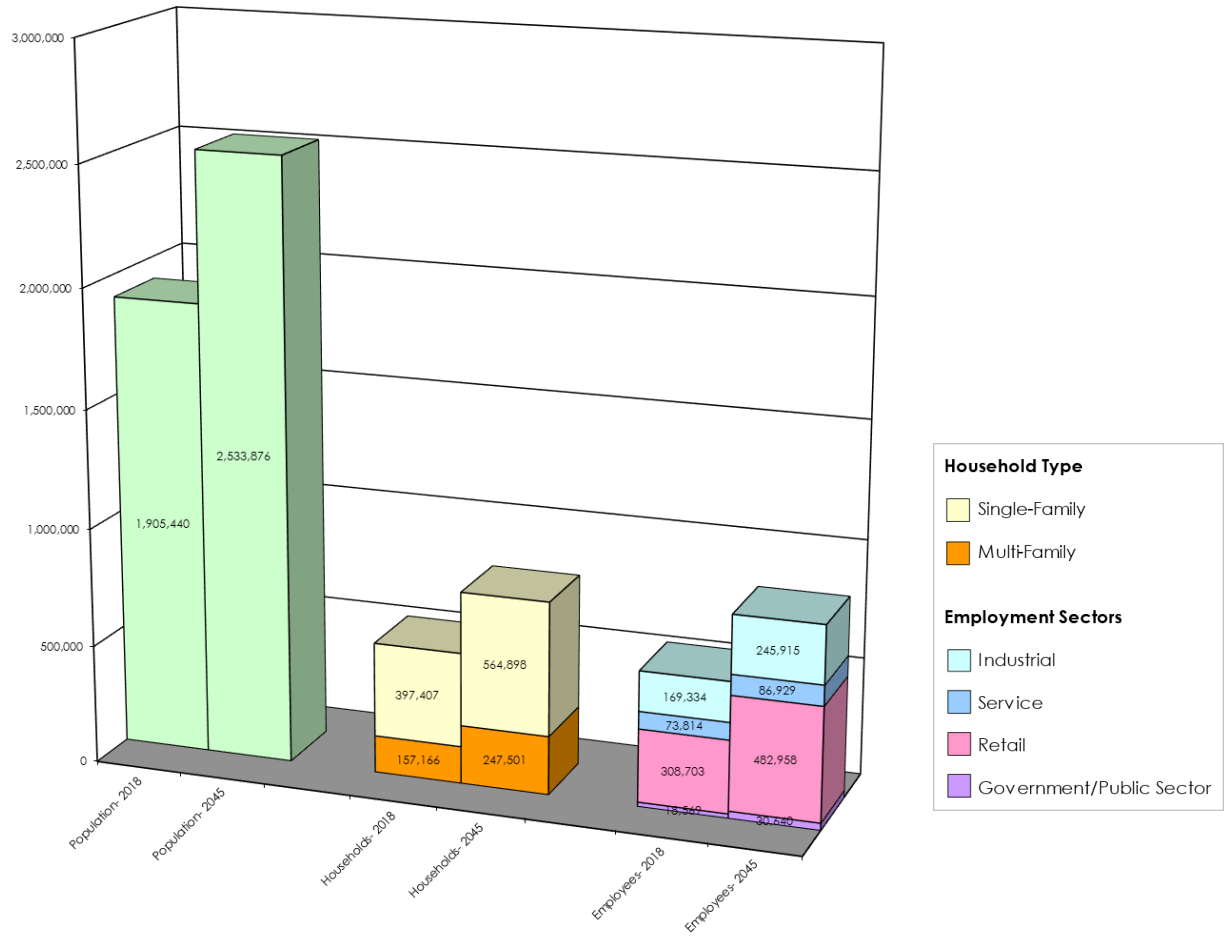
Table 2.3 and **Figure 2.3** summarize the socioeconomic data obtained from SCAG and used as the basis for completing this Nexus Study analysis. The SCAG employment data for 2018 and 2045 was provided for thirteen employment sectors consistent with the California Employment Development Department (EDD) Major Groups including: Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Retail Trade; Transportation, Warehousing and Utilities; Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service; and Government. For the purposes of the Nexus Study, the EDD Major Groups were aggregated to Industrial (Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Transportation, Warehousing and Utilities), Retail (Retail Trade), Service (Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service) and Government/Public Sector (Government). These four aggregated sector types were used as the basis for calculating the fee as described in **Section 6.2**. **Appendix B** provides a table detailing the EDD Major Groups and corresponding North American Industry Classification System (NAICS) Categories that are included in each non-residential sector type.

Table 2.3 - Population, Households and Employment in Western Riverside County (2018 to 2045)

SED Type	2018	2045	Change	Percent
Total Population	**1,905,440**	**2,533,876**	**628,436**	**33%**
Total Households	**554,573**	**812,399**	**257,826**	**46%**
Single-Family	397,407	564,898	167,491	42%
Multi-Family	157,166	247,501	90,335	57%
Total Employment	**570,420**	**846,442**	**276,022**	**48%**
TUMF Industrial	169,334	245,915	76,581	45%
TUMF Retail	73,814	86,929	13,115	18%
TUMF Service	308,703	482,958	174,255	56%
TUMF Government/Public Sector	18,569	30,640	12,071	65%

Source: SCAG 2020 RTP/SCS

Figure 2.3 - Population, Households and Employment in Western Riverside County (2018 to 2045)



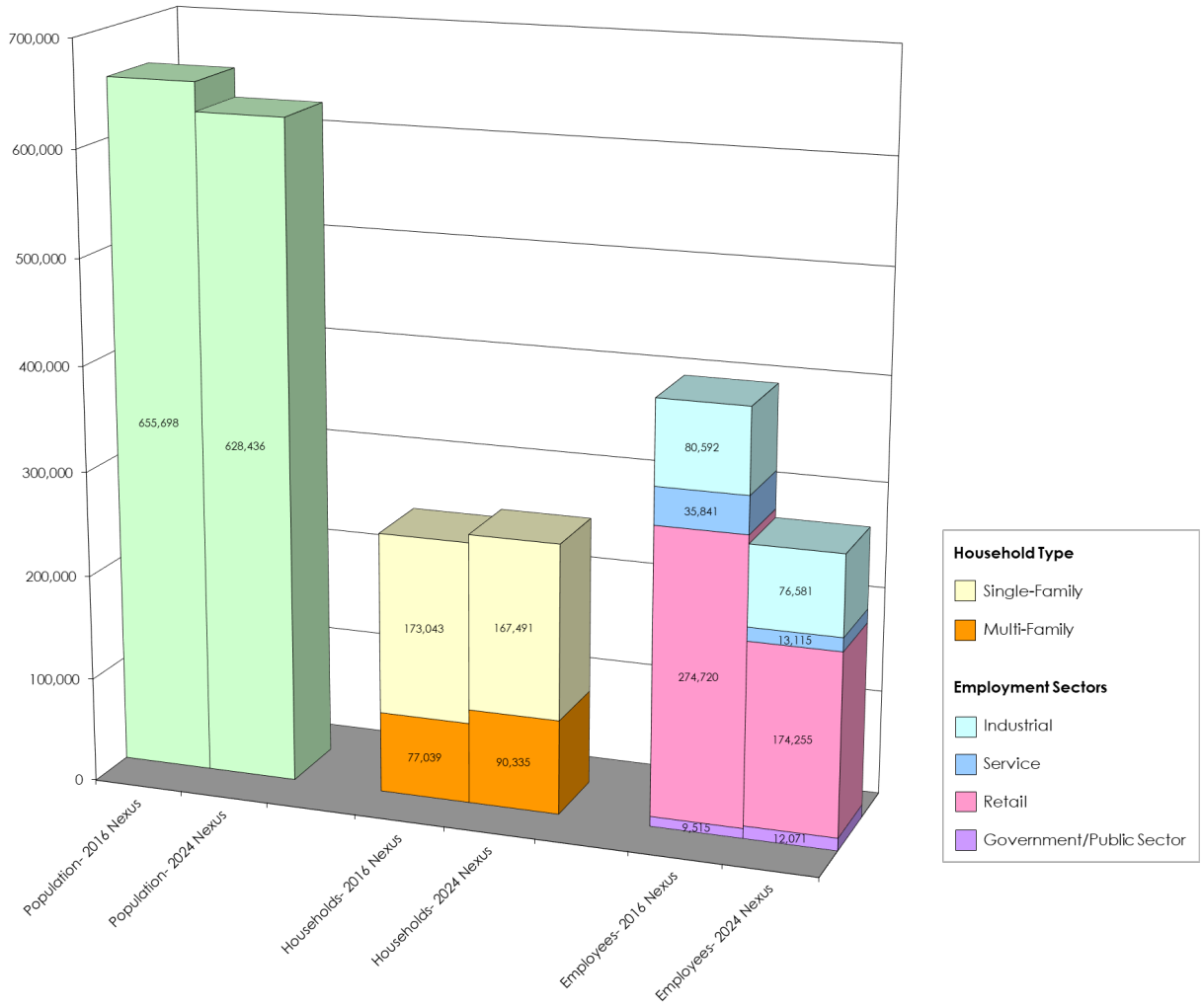
The combined effects of the changes in the base year and horizon year socioeconomic data are modest reductions in the total growth in population and single-family households, but a notable increase in multi-family households. The change in total employment is reduced by 31%, with the most significant reduction in employment growth in the retail sector (-63%), while the industrial sector saw only a slight reduction in total employment growth compared to the 2016 Nexus Update (5%). The Government/public sector employment growth has increased by 27% from the 2016 Nexus Study to the 2024 Nexus Study, although the total number of jobs increased is relatively small as a share of the total employment. **Table 2.4** and **Figure 2.4** provide a comparison of the changes in population, households and employment between the 2016 Nexus Update and the 2024 Nexus Update. The table and figure clearly illustrate the reduction in the rate of growth in Western Riverside County largely attributable to the effects of the economic recession. This reduced rate of growth in the region will serve as the basis for reevaluating the level of impact of new development on the transportation system in the next section, as well as providing the basis for the determination of the fair share fee for each land use type.

Table 2.4 - Population, Households and Employment in Western Riverside County (Existing to Future Change Comparison)

SED Type	2016 Update (2012-2040)	2024 Update (2018-2045)	Difference	Percent
Total Population	**655,698**	**628,436**	**-27,262**	**-4%**
Total Households	**250,082**	**257,826**	**7,744**	**3%**
Single-Family	173,043	167,491	-5,552	-3%
Multi-Family	77,039	90,335	13,296	17%
Total Employment	**400,668**	**276,022**	**-124,646**	**-31%**
TUMF Industrial	80,592	76,581	-4,011	-5%
TUMF Retail	35,841	13,115	-22,726	-63%
TUMF Service	274,720	174,255	-100,465	-37%
TUMF Government/Public Sector	9,515	12,071	2,556	27%

Source: SCAG 2016 RTP/SCS; SCAG 2020 RTP/SCS

Figure 2.4 - Population, Households and Employment in Western Riverside County (Existing to Future Change Comparison)



3.0 NEED FOR THE TUMF

All new developments have some effect on the transportation infrastructure in a community, city or county due to an increase in travel demand. Increasing usage of the transportation facilities leads to more traffic, progressively increasing VMT, traffic congestion and decreasing the level of service (LOS)[3]. To meet the increased travel demand and keep traffic flowing, improvements to transportation facilities become necessary to sustain pre-development traffic conditions.

The projected growth in Western Riverside County (33% growth in population and 48% growth in employment in 27 years) and the related growth in VMT can be expected to increase congestion and degrade mobility if substantial investments are not made in the transportation infrastructure. This challenge is especially critical for arterial highways and roadways that carry a significant number of the trips between cities, since traditional sources of transportation improvement funding (such as the gasoline tax and local general funds) will not be nearly sufficient to fund the improvements needed to serve new development. Development exactions generally provide only a fraction of the improvements with those being confined to the area immediately adjacent to the respective development, and the broad-based county-level funding sources (i.e., Riverside County's half-cent sales tax known as Measure A) designate only a small portion of their revenues for arterial roadway improvements.

This section documents the existing and future congestion levels that demonstrate the need for future improvements to the transportation system to specifically mitigate the cumulative regional transportation impacts of new development. It then describes the TUMF concept that has been developed to fund future new developments' fair share of needed improvements.

The forecast of future congestion levels is derived from Year 2045 No-Build travel demand forecasts for Western Riverside County developed using RivCoM. The Year 2045 No-Build scenario evaluates the effects of 2045 population, employment and resultant traffic generation on the 2021 existing arterial highway network.

3.1 Future Highway Congestion Levels

To support the evaluation of the cumulative regional impacts of new development on the existing arterial highway system in Western Riverside County, existing (2018) and future (2045) SED were modeled on the existing (2021) arterial highway network using RivCoM. To quantify traffic growth impacts, various traffic measures of effectiveness were calculated for the AM and PM peak periods for each of the two scenarios. The

[3] The Highway Capacity Manual 6th Edition – A Guide for Multimodal Mobility Analysis (Transportation Research Board, National Academy of Sciences, Washington, D.C., 2016, Volume 1 – Concepts, pp 5-3) describes LOS as a "quantitative stratification of performance measure or measures representing quality of service….HCM defines six levels of service, ranging from A to F, for each service measure or combination of measures. LOS A represents the best operating conditions from the traveler's perspective and LOS F the worst."

WRCOG TUMF study area was extracted from the greater regional model network for the purpose of calculating measures for Western Riverside County only. Peak period performance measures for the Western Riverside County TUMF study area included total VMT, total vehicle hours of travel (VHT), total combined vehicle hours of delay (VHD), and total VMT experiencing unacceptable level of service (LOS E). These results were tabulated in **Table 3.1**. Plots of the Network Extents are attached in **Appendix C**.

Total Arterial VMT, VHT, VHD and LOS E Threshold VMT were calculated to include all principal arterials, minor arterials and major connectors, respectively. Regional values for each threshold were calculated for a total of all facilities including arterials, freeways, freeway ramps and High-Occupancy Vehicle (HOV) lanes.

Table 3.1 - Regional Highway System Measures of Performance (2018 Existing to 2045 No-Build)

Measure of Performance*	Peak Periods (Total)			
	2018 Existing	2045 No-Build	% Change	% Annual
VMT - Total ALL FACILITIES	23,284,724	29,897,254	28%	0.9%
VMT - FREEWAYS	13,514,522	15,490,284	15%	0.5%
VMT - ALL ARTERIALS	9,770,202	14,406,970	47%	1.4%
TOTAL - TUMF ARTERIAL VMT	**6,216,985**	**8,597,200**	38%	1.2%
VHT - TOTAL ALL FACILITIES	541,350	915,439	69%	2.0%
VHT - FREEWAYS	263,792	399,128	51%	1.5%
VHT - ALL ARTERIALS	277,558	516,311	86%	2.3%
TOTAL TUMF ARTERIAL VHT	**174,455**	**320,869**	84%	2.3%
VHD - TOTAL ALL FACILITIES	108,900	338,056	210%	4.3%
VHD - FREEWAYS	66,156	170,649	158%	3.6%
VHD - ALL ARTERIALS	42,745	167,407	292%	5.2%
TOTAL TUMF ARTERIAL VHD	**33,249**	**124,863**	276%	5.0%
VMT LOS E - TOTAL ALL FACILITIES	5,605,070	13,369,483	139%	3.3%
VMT LOS E - FREEWAYS	4,725,471	9,316,891	97%	2.5%
VMT LOS E & F - ALL ARTERIALS	879,599	4,052,592	361%	5.8%
TOTAL TUMF ARTERIAL VMT w/ LOS E or worse	**765,782**	**3,184,133**	316%	5.4%
% of TUMF ARTERIAL VMT w/ LOS E or worse	**12%**	**37%**		

* Based on RivCoM 2018 base network and SCAG 2020 RTP/SCS SED with updated 2021 arterial network as existing in December 2021

NOTES:

Volume is adjusted by PCE factor

VMT = vehicle miles of travel (the total combined distance that all vehicles travel on the system)

VHT = vehicle hours of travel (the total combined time that all vehicles are traveling on the system)

VHD = vehicle hours of delay (the total combined time that all vehicles have been delayed on the system based on the difference between forecast travel time and free-flow (ideal) travel time)

LOS = level of service (based on forecast volume to capacity ratios).

LOS E or Worse was determined by V/C ratio that exceeds 0.9 thresholds as indicated in the Riverside County General Plan.

The following formulas were used to calculate the respective values:

VMT = Link Distance * Total Daily Volume
VHT = Average Loaded (Congested) Link Travel Time * Total Daily Volume
VHD = VHT – (Free-flow (Uncongested) Link Travel Time * Total Daily Volume)
VMT LOS E or F = VMT (on links where Daily V/C exceeded 0.90)

Note: Volume to capacity (v/c) ratio thresholds for LOS E are based on the Transportation Research Board 2010 Edition of the Highway Capacity Manual (HCM 2010) LOS Maximum V/C Criteria for Multilane Highways with 45 mph Free Flow Speed (Exhibit 14-5, Chapter 14, Page 14-5).

The calculated values were compared to assess the total change between 2018 Existing and 2045 No-Build scenarios, and the average annual change between 2018 Existing and 2044 No-Build. As can be seen from the RivCoM outputs summarized in **Table 3.1**, the additional traffic generated by new development will cause peak period VMT on the arterial highway network to increase by approximately 47% by the year 2045 (approximately 1.4% per year). In the absence of additional improvements to the transportation network in Western Riverside County, the growth in VMT will cause congestion on the highway system to increase almost exponentially, with the most significant increase in congestion observed on the arterial highway system that includes the TUMF Network. Many facilities will experience a significant increase in vehicle delay and deterioration in LOS to unacceptable levels because of new development and the associated growth in traffic. According to the Highway Capacity Manual 6th Edition – A Guide for Multimodal Mobility Analysis (Transportation Research Board, National Academy of Sciences, Washington, D.C., 2016), "LOS E describes operation at or near capacity. Operations…at this level are highly volatile because there are virtually no usable gaps within the traffic stream, leaving little room to maneuver within the traffic stream. Any disruption to the traffic stream, such as vehicles entering…or a vehicle changing lanes, can establish a disruption wave that propagates throughout the upstream traffic stream….the physical and psychological comfort afforded drivers is poor."

The Congestion Management Program for Riverside County (CMP) published by the Riverside County Transportation Commission (RCTC) in 2011 designates LOS E as the "traffic standards must be set no lower than LOS E for any segment or intersection along the CMP System of Highways and Roadways" in Riverside County. "The intent of the CMP is to more directly link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related impacts, and improve air quality." [4] The CMP provides a mechanism for monitoring congestion on the highway system and, where congestion is observed, establishes procedures for developing a deficiency plan to address improvement needs. The reactive nature of the CMP to identify and remediate existing congestion differs from the proactive nature of the TUMF program to anticipate and provide for future traffic needs. For this reason, the TUMF

[4] Congestion Management Program for Riverside County – Executive Summary (Riverside County Transportation Commission, 2011) Page ES-3, ES-1

program follows the guidance of the Highway Capacity Manual in establishing LOS E as the threshold for unacceptable level of service, and subsequently as the basis for measuring system performance and accounting for existing needs. This approach ensures a more conservative accounting of existing system needs as part of the determination of the "fair share" of mitigating the cumulative regional impacts of future new development on the transportation system.

The continuing need for a mitigation fee on new development is shown by the adverse impact that new development will have on Western Riverside County's transportation infrastructure, and particularly the arterial highway network. As a result of the new development and associated growth in population and employment in Western Riverside County, additional pressure will be placed on the transportation infrastructure with the total peak period VMT on the Western Riverside County Regional System of Highways and Arterials (RSHA; also referred to as the TUMF Network) estimated to increase by approximately 38% or 1.2% compounded annually.

As shown in **Table 3.1**, the peak period VMT on arterial facilities within the TUMF Network experiencing LOS E or worse will increase by approximately 316% or 5.4% compounded annually in Western Riverside County in the period between 2018 and 2045. By 2045, 37% of the total VMT on the TUMF arterial highway system is forecast to be traveling on facilities experiencing daily LOS E or worse. Without improvements to the TUMF arterial highway system, the total vehicle hours of delay (VHD) experienced by area motorists on TUMF arterial highways during the peak periods will increase by approximately 5.0% per year. The combined influences of increased travel demand and worsened LOS that manifest themselves in severe congestion and delay highlighting the continuing need to complete substantial capacity expansion on the TUMF arterial highway system to mitigate the cumulative regional impact of increased travel demand resulting from new development.

The RivCoM outputs summarized in **Table 3.1** clearly demonstrate that the travel demands generated by future new development in the region will lead to increasing levels of traffic congestion, especially on the arterial roadways. The need to improve these roadways to accommodate the anticipated growth in VMT and relieve future congestion is therefore directly linked to the future development which generates the additional travel demand.

3.2 Future Transit Utilization Levels

In addition to the roadway network, public transportation will play a role in serving future travel demand in the region. Transit represents a critical component of the transportation system by providing an alternative mode choice for those not wanting to use an automobile, and particularly for those who do not readily have access to an automobile. As population and employment in Western Riverside County grows because of new development, demand for regional transit services in the region is also expected to grow.

While some future transit trips will be accommodated by inter-regional transit services such as Metrolink, a substantial number of the trips within Western Riverside County will be served by bus transit services and for this reason the provision of regional bus transit service is considered integral to addressing the cumulative regional transportation impacts of new developments. Regional bus transit services within Western Riverside County are primarily provided by RTA.

In 2023, RTA reported average weekday daily ridership of 16,575 on their network of buses[5]. The SCAG 2020 RTP/SCS forecasts for RTA average weekday daily ridership in 2045 is 57,282. These values were used to represent the existing and future transit trips consistent with the analysis of highway trips described in **Section 3.1**. The existing and future transit ridership were compared to assess the impact of new development on transit demand. Average weekday daily ridership would be expected to grow by 40,707 between 2023 and 2045, or an average increase of 1,850 weekday daily riders each year. Average weekday daily system ridership is summarized in **Appendix D**.

The future growth in demand for public transit services is reflective of the cumulative regional impacts of new development, and the associated increase in demand for all types of transportation infrastructure and services to accommodate this growth. Furthermore, bus transit ridership is expected to grow as the improved services being planned and implemented by RTA attract new riders and encourages existing riders to use transit more often as an alternative to driving. Attracting additional riders to bus transit services contributes to the mitigation of the cumulative regional transportation impacts of new development by reducing the number of trips that need to be served on the highway system. The need to provide additional bus transit services within Western Riverside County to satisfy this future demand is therefore directly linked to the future development that generates the demand.

3.3 The TUMF Concept

A sizable percentage of trip-making for any given local community extends beyond the bounds of the individual community as residents pursue employment, education, shopping and entertainment opportunities elsewhere. As new development occurs within a particular local community, this dispersal of trips of all purposes by new residents and the new business that serve them generates additional travel demand and contributes to the need for transportation improvements within their community and in the other communities of Western Riverside County. The idea behind a uniform mitigation fee is to have new development throughout the region contribute uniformly to paying the fair share cost of improving the transportation facilities that serve these trips between communities. Thus, the fee is intended to be used primarily to improve

[5] RTA, like most public transportation agencies, have seen significant short-term declines in transit ridership resulting from changes in travel demands, mode choice and trip distribution following the COVID-19 pandemic. RTA's 2016 actual average weekday daily ridership was 30,700. Post COVID-19, the RTA actual average weekday daily ridership in 2023 was 16,575, a decline of almost 50% of pre-pandemic ridership levels. These levels would be expected to continue to recover toward pre-pandemic levels as potential riders resume more regular work schedules, and apprehension toward the use of transit services for public health reasons wane.

transportation facilities that serve trips between communities within the region (in particular, arterial roadways and regional bus transit services).

Some roadways serve trips between adjacent communities, while some also serve trips between more distant communities within the region. The differing roadway functions led to the concept of using a portion of the fee revenues for a backbone system of arterial roadways that serve the longer-distance trips (i.e. using TUMF revenues from the entire region), while using a second portion of the fee revenues for a secondary system of arterials that serve inter-community trips within a specific subregion or zone (i.e. using TUMF revenues from the communities most directly served by these roads – to some extent, a return-to-source of that portion of the funds). Reflecting the importance of public transit to provide an alternative to highway travel as part of a balanced regional transportation strategy, a third portion of fee revenues was reserved for improvements to regional bus transit services (i.e. using TUMF revenues from the entire region).

Much, but not all, of the new trip-making in each area is generated by residential development (i.e. when people move into new homes, they create new trips on the transportation system as they travel to work, school, shopping or entertainment). Some of the new trips are generated simply by activities associated with new businesses (i.e. new businesses will create new trips through the delivery of goods and services, etc.). Apart from commute trips by residents coming to and from work, and the trips of residents coming to and from new businesses to get goods and services, the travel demands of new businesses are not considered to be directly attributable to residential development. The consideration of different sources of new travel demand is therefore reflected in the concept of assessing both residential and non-residential development for their related transportation impacts.

In summary, the TUMF concept includes the following:

- A uniform fee that is levied on new development throughout Western Riverside County.

- The fee is assessed roughly proportionately on new residential and non-residential development based on the relative impact of each new use on the transportation system.

- A portion of the fee is used to fund capacity improvements on a backbone system of arterial roadways that serve longer-distance trips within the region; a portion of the fee is returned to the subregion or zone in which it was generated to fund capacity improvements on a secondary system of arterial roadways that link the communities in that area; and a portion of the fee is used to fund improvements to regional bus transit services that serve trips between the communities within the region.

4.0 THE TUMF NETWORK

4.1 Identification of the TUMF Roadway Network

An integral element of the initial Nexus Study was the designation of the Western Riverside County Regional System of Highways and Arterials. This network of regionally significant highways represents those arterial and collector highway and roadway facilities that primarily support inter-community trips in Western Riverside County and supplement the regional freeway system. As a result, this system also represents the extents of the network of highways and roadways that would be eligible for TUMF funded improvements. The TUMF Network does ***not*** include the freeways of Western Riverside County as these facilities primarily serve longer distance inter-regional trips and a significant number of pass-through trips that have no origin or destination in Western Riverside County[6].

The TUMF Network is the system of roadways that serve inter-community trips within Western Riverside County and therefore are eligible for improvement funding with TUMF funds. The RSHA for Western Riverside County was identified based on several transportation network and performance guidelines as follows:

1. Arterial highway facilities proposed to have a minimum of four lanes at ultimate build-out (not including freeways).
2. Facilities that serve multiple jurisdictions and/or provide connectivity between communities both within and adjoining Western Riverside County.
3. Facilities with forecast traffic volumes exceeding 20,000 vehicles per day in the future horizon year.
4. Facilities with forecast volume to capacity ratio of 0.90 (LOS E) or greater in the future horizon year.
5. Facilities that accommodate regional fixed route transit services.
6. Facilities that provide direct access to major commercial, industrial, institutional, recreational or tourist activity centers, and multi-modal transportation facilities (such as airports, railway terminals and transit centers).

Appendix E includes exhibits illustrating the various performance measures assessed during the definition of the RSHA.

Transportation facilities in Western Riverside County that generally satisfied these guidelines were initially identified, and a skeletal regional transportation framework evolved from facilities where several guidelines were observed. Representatives of all WRCOG constituent jurisdictions reviewed this framework in the context of current local transportation plans to define the TUMF Network, which was subsequently endorsed by

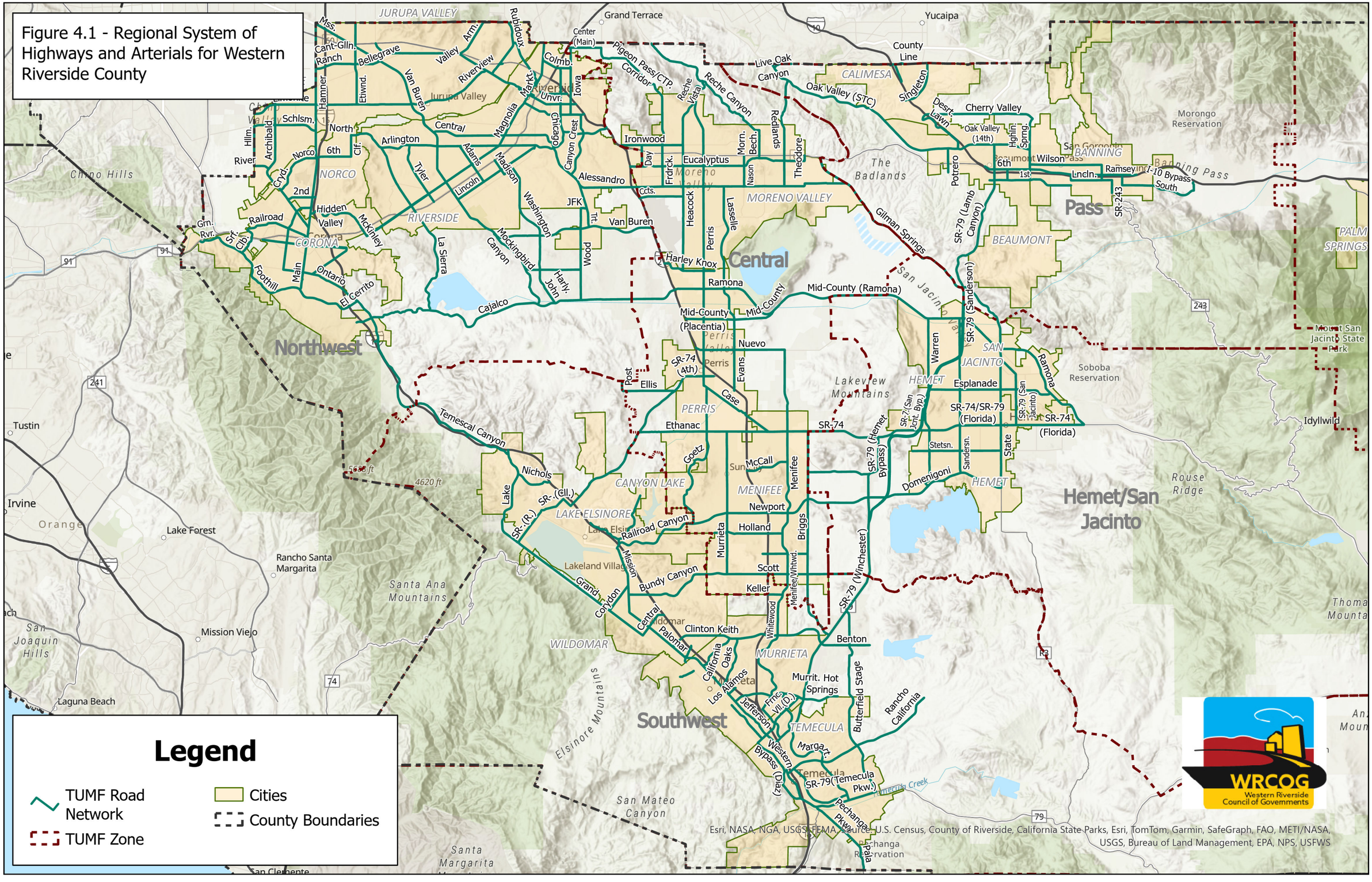
[6] Since pass-through trips have no origin or destination in Western Riverside County, new development within Western Riverside County cannot be considered responsible for mitigating the impacts of pass-through trips. The impact of pass-through trips and the associated cost to mitigate the impact of pass-through trips (and other inter-regional freeway trips) is addressed in the Riverside County Transportation Commission (RCTC) Western Riverside County Freeway Strategic Plan, Phase II – Detailed Evaluation and Impact Fee Nexus Determination, Final Report dated May 31, 2008.

the WRCOG Public Works Committee, WRCOG Technical Advisory Committee, TUMF Policy Committee and the WRCOG Executive Committee.

The RSHA is illustrated in **Figure 4.1**. As stated previously, the RSHA represents those regional significant highway facilities that primarily serve inter-community trips in Western Riverside County and therefore also represents the extents of the network of highways and roadways that would be eligible for TUMF funded improvements.

The TUMF Network was reviewed as part of the 2024 Nexus Update to ensure facilities generally still met the previously described performance guidelines, and/or that the scope and magnitude of specific improvements to the TUMF Network were roughly proportional to the impacts needing to be mitigated. This review process resulted in the removal of various facilities from the TUMF Network, as well as various changes in the scope and magnitude of specific improvements to the TUMF Network. The resulting TUMF Network used as the basis for this Nexus Update is discussed in **Section 4.3** of this report.

Figure 4.1 - Regional System of Highways and Arterials for Western Riverside County



4.2 Backbone Network and Secondary Network

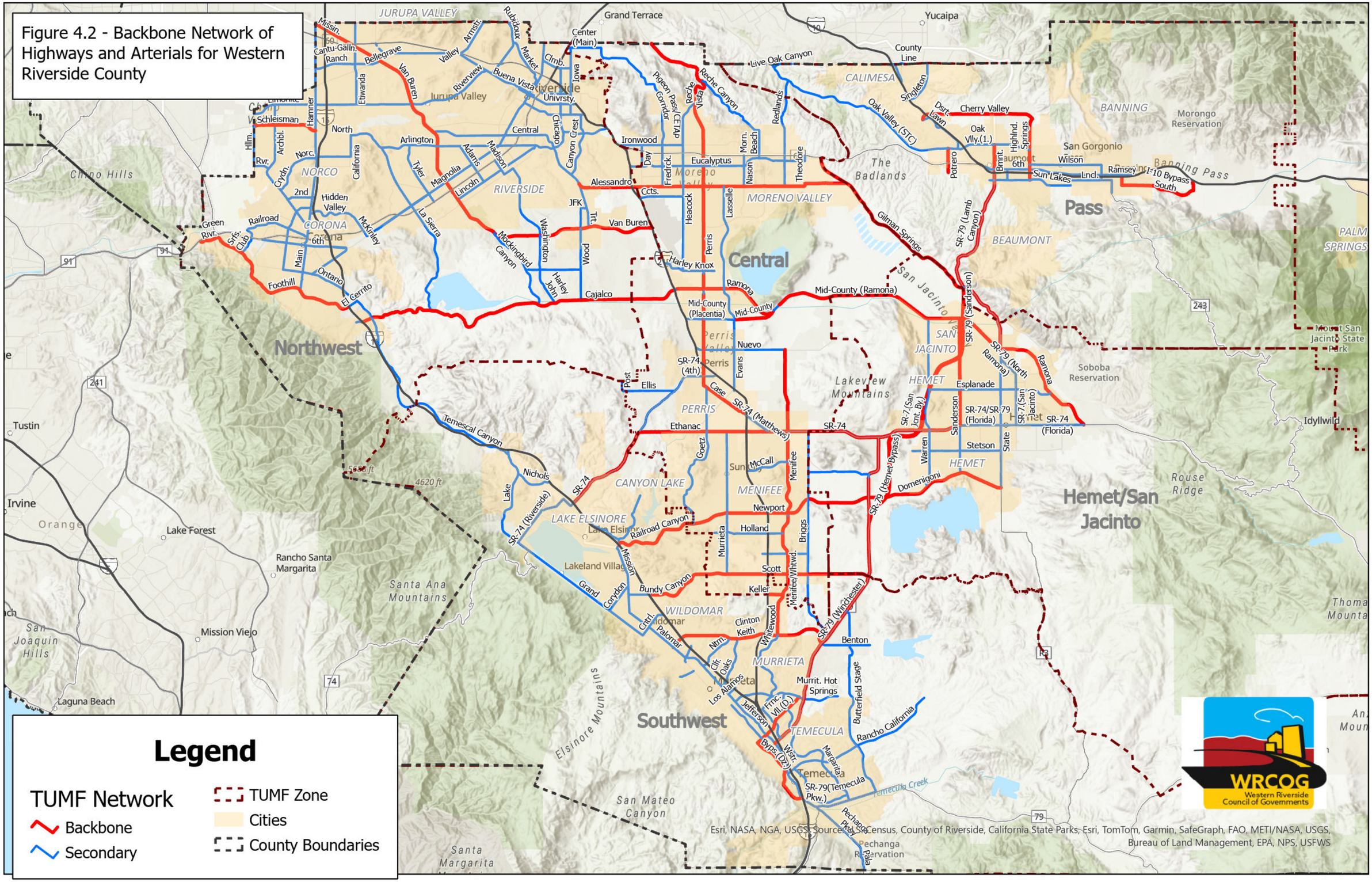
As indicated previously, the TUMF roadway network was refined to distinguish between facilities of "Regional Significance" and facilities of "Zonal Significance." Facilities of Regional Significance were identified as those that typically are proposed to have a minimum of six lanes at general plan build-out[7], extend across and/or between multiple Area Planning Districts[8], and are forecast to carry at least 25,000 vehicles per day in 2045. The Facilities of Regional Significance have been identified as the "backbone" highway network for Western Riverside County. A portion of the TUMF fee is specifically designated for improvement projects on the backbone system. The backbone network is illustrated in **Figure 4.2**.

Facilities of Zonal Significance (the "secondary" network) represent the balance of the RSHA for Western Riverside County. These facilities are typically within one zone and carry comparatively lesser traffic volumes than the backbone highway network, although they are considered significant for circulation within the respective zone. A portion of the TUMF is specifically designated for improvement projects on the secondary network within the zone in which it is collected. The WRCOG APD or zones are illustrated in **Figure 4.3**.

[7] Although facilities were identified based on the minimum number of lanes anticipated at general plan buildout, in some cases it was determined that there was not sufficient demand for all additional lanes on some facilities until beyond the current timeframe of the TUMF Program (2045). As a result, only a portion of the additional lanes on these facilities have currently been identified for funding with TUMF revenues, reflecting the cumulative impact of new development through the current duration of the TUMF Program.

[8] Area Planning Districts (APD) are the five aggregations of communities used for regional planning functions within the WRCOG area. Area Planning Districts are interchangeably referred to as TUMF Zones.

Figure 4.2 - Backbone Network of Highways and Arterials for Western Riverside County



Legend

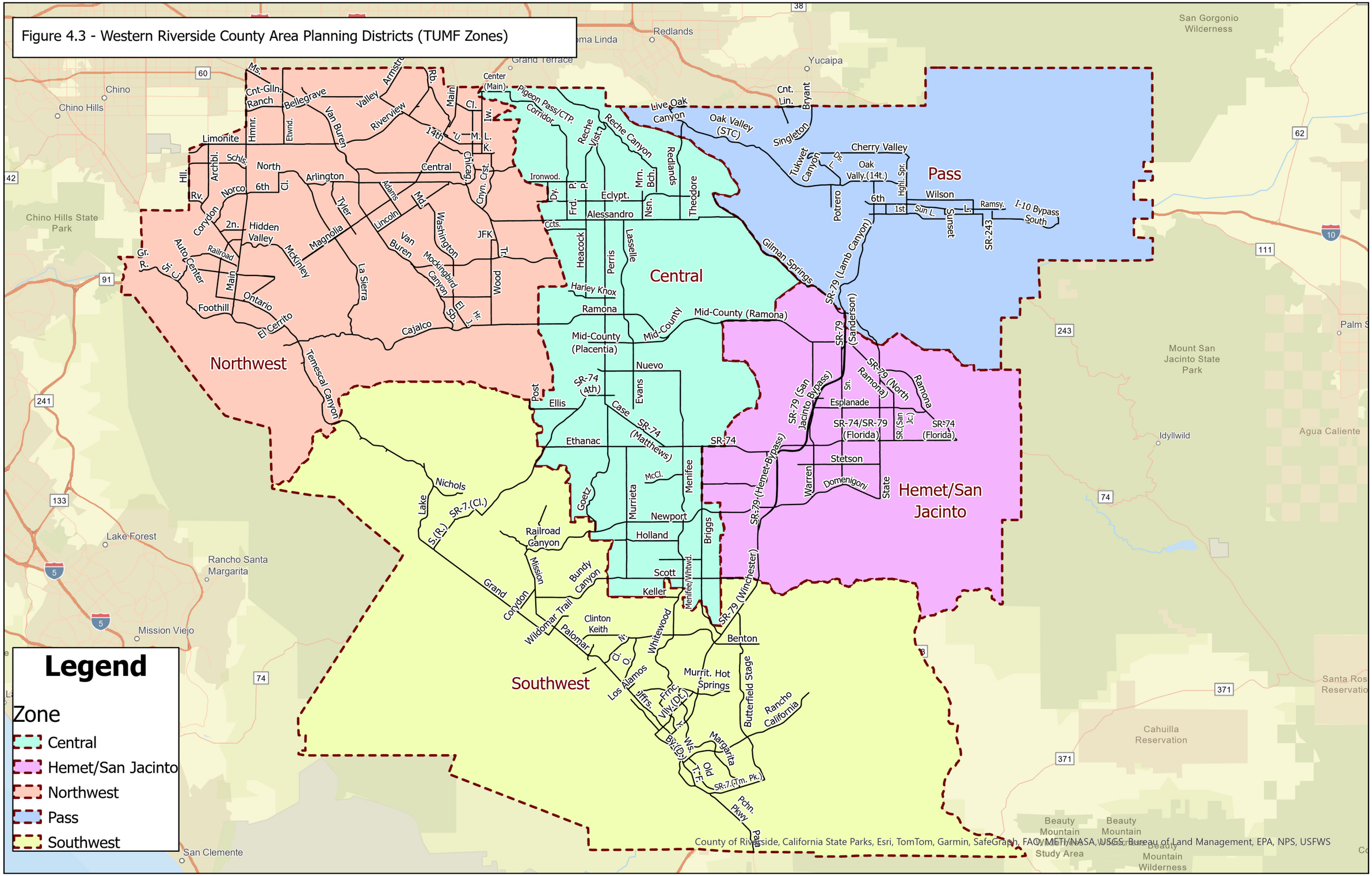
TUMF Network

- Backbone
- Secondary

- TUMF Zone
- Cities
- County Boundaries

WRCOG Western Riverside Council of Governments

Figure 4.3 - Western Riverside County Area Planning Districts (TUMF Zones)



County of Riverside, California State Parks, Esri, TomTom, Garmin, SafeGraph, FAO, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, USFWS

4.3 Future Roadway Transportation Needs

To calculate a "fair share" fee for new development, it is necessary to estimate the cost of improvements on the TUMF system that will be needed to mitigate the cumulative regional impacts of future transportation demands created by new development. Estimates of the cost to improve the network to mitigate the cumulative impacts of new development were originally developed based on unit costs prepared for the Coachella Valley Association of Governments (CVAG) Regional Arterial Cost Estimate (RACE)[9], and the WRCOG Southwest District SATISFY 2020 Summary of Cost Estimates[10] (TKC/WRCOG 2000). The RACE cost estimates were developed based on a summary of actual construction costs for projects constructed in Riverside County in 1998.

The initial unit cost estimates for the TUMF (based on inflated RACE cost estimates) were reviewed in the context of the SATISFY 2020 Draft Cost Estimates and were consolidated to provide typical improvement costs for each eligible improvement type. The refinement of unit costs was completed to simplify the process of estimating the cost to improve the entire TUMF network. Based on RACE and SATISFY 2020, consolidated cost estimates included typical per mile or lump sum costs for each of the improvement types eligible under the TUMF Program. The resultant revised unit cost estimates were used as the basis for estimating the cost to complete the necessary improvements to the TUMF network to mitigate the cumulative regional transportation impacts of new development.

Variations in the consolidated cost estimates for specific improvement types were provided to reflect differences in topography and land use across the region. Unit costs for roadway construction were originally varied to account for variations in construction cost (in particular, roadway excavation and embankment cost) associated with construction on level (code 1) rolling (code 2) and mountainous (code 3) terrain, respectively. Right-of-way acquisition costs which originally included consideration for land acquisition, documentation and legal fees, relocation and demolition costs, condemnation compensation requirements, utility relocation, and environmental mitigation costs were also varied to account for variations in right-of-way costs associated with urban (developed commercial/residential mixed uses – code 1), suburban (developed residential uses – code 2) and rural (undeveloped uses – code 3) land uses, respectively. Lump sum costs for interchange improvements were originally varied to account for variations in cost associated with new complex, new standard (or fully reconstructed), or major (or partially reconstructed) or minor (individual ramp improvements) interchange improvements.

As part of the 2024 TUMF Nexus Update, the original unit cost categories were revised to generate entirely new unit cost values based on the most recent available construction cost, labor cost and land acquisition cost values for comparable projects within Riverside County. The recalculation of the TUMF unit cost components was completed

[9] Parsons Brinckerhoff/Coachella Valley Association of Governments, 1999, Regional Arterial Cost Estimate (RACE)

[10] TKC/Western Riverside Council of Governments, 2000, SATISFY 2020 Summary of Cost Estimates

as part of the 2024 Nexus Update to reflect the effects of significant changes in materials, labor and land acquisition costs including the influences of supply chain disruptions during and following the COVID-19 pandemic, and the elevated rates of inflation prevailing in the past few years. **Appendix F** provides a detailed outline of the assumptions and methodology leading to the revised TUMF unit cost assumptions developed as part of the 2024 Nexus Update. A new category was also added to the cost assumptions to facilitate the use of intelligent transportation systems (ITS) to enhance traffic flows in arterial corridors that require mitigation but cannot accommodate construction of addition lane capacity.

Section 8.5.1 of the Riverside County Integrated Project (RCIP) Multiple Species Habitat Conservation Plan (MSHCP) adopted by the Riverside County Board of Supervisors on June 17, 2003, states that "each new transportation project will contribute to Plan implementation. Historically, these projects have budgeted 3% - 5% of their construction costs to mitigate environmental impacts." This expectation is reiterated in the Western Riverside County Multiple Species Habitat Conservation Plan Nexus Fee Study Update (Economic & Planning Systems, Inc., October 2020) Section 6 which indicates that "about 44% of the revenue for the program" is expected to be derived from non-fee sources, including " the Measure A sales tax which is authorized through 2039 and other transportation funding sources such as the Transportation Uniform Mitigation Fees (TUMF)." Consistent with the MSHCP Nexus Report, an amount equal to 5% of the construction cost for new TUMF network lanes, bridges and railroad grade separations will be specifically included as part of TUMF Program with revenues to be provided to the Western Riverside County Regional Conservation Authority (RCA) for the acquisition of land identified in the MSHCP. The relevant sections of the MSHCP document and the most recent MSHCP Nexus Report are included in **Appendix F**.

Table 4.1 summarizes the unit cost estimate assumptions used to develop the TUMF network cost estimate as part of the current Nexus Update. **Table 4.1** also includes a comparison of the original TUMF unit cost assumptions and the 2016 Nexus Study unit cost assumptions that demonstrates the significant increases in unit costs observed during recent years. In most cases the unit cost assumptions have more than doubled from those used for the 2016 Nexus Study. Cost estimates are provided in current year values as indicated.

To estimate the cost of improving the regional network to provide for traffic growth from new development, the network characteristics and performance guidelines (outlined in **Section 4.1**) were initially used as a basis for determining the needed improvements. The initial list of improvements was then compared with local General Plan Circulation Elements to ensure that the TUMF network included planned arterial roadways of regional significance. A consolidated list of proposed improvements and the unit cost assumptions were then used to establish an initial estimate of the cost to improve the network to mitigate for future traffic growth associated with new development. This initial list of proposed improvements has since been revised and updated as part of each subsequent Nexus Update to reflect the completion of projects, changing levels of development and associated changes in travel demand and transportation system impacts to be mitigated as part of the TUMF program.

Table 4.1 - Unit Costs for Arterial Highway and Street Construction

Component Type	Original Cost Assumptions as published October 18, 2002	Cost Assumptions per 2016 Nexus Study July 10, 2017	**Cost Assumptions per 2024 Nexus Update**	Description
Terrain 1	$550,000	$692,000	**$1,132,000**	Construction cost per lane mile - level terrain
Terrain 2	$850,000	$878,000	**$1,740,000**	Construction cost per lane mile - rolling terrain
Terrain 3	$1,150,000	$1,064,000	**$2,350,000**	Construction cost per lane mile - mountainous terrain
Landuse 1	$900,000	$2,509,000	**$7,830,000**	ROW cost factor per lane mile - urban areas
Landuse 2	$420,000	$2,263,000	**$5,440,000**	ROW cost factor per lane mile - suburban areas
Landuse 3	$240,000	$287,000	**$490,000**	ROW cost factor per lane mile - rural areas
Interchange 1	n/a	$50,032,000	**$84,190,000**	Complex new interchange/interchange modification cost
Interchange 2	$20,000,000	$25,558,000	**$43,490,000**	New interchange/interchange modification total cost
Interchange 3	$10,000,000	$12,343,000	**$22,550,000**	Major interchange improvement total cost
Bridge 1	$2,000	$3,180	**$4,800**	Bridge total cost per lane per linear foot
RRXing 1	$4,500,000	$6,376,000	**$18,200,000**	New Rail Grade Crossing per lane
RRXing 2	$2,250,000	$2,733,000	**$6,900,000**	Existing Rail Grade Crossing per lane
ITS 1			**$686,400**	Infrastructure for ITS of roadway segments per route mile
Planning	10%	10%	**10%**	Planning, preliminary engineering and environmental assessment costs based on construction cost only
Engineering	25%	25%	**25%**	Project study report, design, permitting and construction oversight costs based on construction cost only
Contingency	10%	10%	**10%**	Contingency costs based on total segment cost
Administration		4%	**4%**	TUMF program administration based on total TUMF eligible network cost
MSHCP		5%	**5%**	TUMF component of MSHCP based on total TUMF eligible construction cost

As indicated in **Table 2.4** and **Figure 2.4**, the anticipated rate of forecasted growth in Western Riverside County has been reduced by 4% for population, 3% for single-family residential and 31% for employment. This reduced rate of forecasted socioeconomic growth has a commensurate impact on the forecasted daily traffic in the region as demonstrated by the 2016 Nexus Study VMT compared to the 2024 Nexus Update VMT in **Table 4.2**. As shown in the table, the forecast peak period VMT on the TUMF arterial network in the year 2045 as the basis for the 2024 Nexus Update is more than 5% less than the comparable peak period VMT for 2040 used for the 2016 Nexus Study.

Table 4.2 – Forecasted Daily Traffic in Western Riverside County

Measure of Performance	2024 Nexus Update		2016 Nexus Study	
	Peak Period		Peak Period	
	2018 Existing	2045 No-Build	2012 Existing	2040 No-Build
VMT - Total ALL FACILITIES	23,284,724	29,897,254	19,532,437	29,277,587
VMT - FREEWAYS	13,514,522	15,490,284	11,019,155	14,487,570
VMT - ALL ARTERIALS	9,770,202	14,406,970	8,513,282	14,790,016
TOTAL - TUMF ARTERIAL VMT	**6,216,985**	**8,597,200**	**5,585,202**	**9,089,495**

Source: RivCoM 2018 base network and SCAG 2020 RTP/SCS SED with updated 2021 arterial network as existing in December 2021; RivTAM 2012 network and SCAG 2016 RTP/SCS SED with updated 2015 arterial network completed by WSP, September 2016

As a result of the reduced forecast traffic growth in the region, it is anticipated that the cumulative regional impacts of new development on the arterial highway and transit systems in the region is also reduced necessitating a reduction in the projects identified on the TUMF Network to mitigate the impacts of new development. As part of the 2024 Nexus Update, the list of proposed improvements included in the initial Nexus Study and validated during the subsequent Nexus updates was reviewed for accuracy and, where necessary, amended to remove or modify projects that have changed in need to mitigate impacts based on changes in the patterns of growth and travel demand within the region. Projects completed since the adoption of the 2016 Nexus Update were also removed from the network to reflect the fact that mitigation at these locations is no longer required. The specific network changes were screened by the WRCOG Public Works Committee for consistency with TUMF network guidelines including travel demand and traffic performance.

Based on the findings of the network screening, elements of specific projects were revised to reflect necessary network corrections and modifications to project assumptions. A matrix summarizing the disposition of the requests received as part of the 2024 TUMF Nexus Update was developed and is included in **Appendix G**.

Eligible arterial highway and street improvement types to mitigate the cumulative regional transportation impacts of new development on Network facilities include:

1. Construction of additional Network roadway lanes
2. Construction of new Network roadway segments
3. Expansion of existing Network bridge structures
4. Construction of new Network bridge structures
5. Expansion of existing Network interchanges with freeways
6. Construction of new Network interchanges with freeways
7. Grade separation of existing Network at-grade railroad crossings
8. Installation of ITS along Network roadway segments

All eligible improvement types, except for ITS, provide additional capacity to Network facilities to accommodate future traffic growth generated by new development in Western Riverside County. ITS provides the ability to improve traffic flows along corridors

where capacity expansion is not possible. Following the comprehensive update of the TUMF Program, the estimated total cost to improve the RSHA for Western Riverside County is $4.84 billion with this cost including all arterial highway and street planning, engineering, design, right-of-way acquisition and capital construction costs, but not including transit, MSHCP or program administration costs that will be subsequently described. It should be noted that the full cost to improve the TUMF Network cannot be entirely attributed to new development and must be adjusted to account for the previous obligation of other funds to complete necessary improvements and unfunded existing needs. **Sections 4.5** and **4.6** describe the adjustments to the total TUMF Network improvement need to account for existing needs and obligated funds.

In addition to the arterial highway and street improvement costs indicated above, the TUMF Nexus Update included specific consideration for the TUMF Program obligation to the MSHCP program to mitigate the impact of TUMF network improvements on species and habitat within Western Riverside County. The TUMF obligation to MSHCP was calculated at a rate of 5% of the total construction (capital) cost of new lane segments, bridges and railroad grade separations on the TUMF Network. The total obligation to the MSHCP as indicated in the TUMF Network cost fee table is approximately $64.6 million, although the total obligation specific to the TUMF program is reduced to account for MSHCP obligations associated with improvements addressing existing needs and therefore excluded from TUMF.

The TUMF 2024 Nexus Update similarly includes specific consideration of the costs associated with WRCOG administration of the TUMF Program. The average cost for WRCOG to administer the TUMF Program was calculated at a rate of 4% of the total eligible cost of new lane segments (including interchanges, bridges and railroad grade separations) on the TUMF Network and new transit services. Administration costs incurred by WRCOG include direct salary, fringe benefit and overhead costs for WRCOG staff assigned to administer the program and support participating jurisdictions, and costs for consultant, legal and auditing services to support the implementation of the TUMF program. The total cost for WRCOG administration of the TUMF Program as indicated in the TUMF Network cost fee table is approximately $161.2 million.

The detailed TUMF network cost calculations are provided in **Section 4.7**, including each of the individual segments and cost components considered as part of the TUMF Program, and the maximum eligible TUMF share for each segment following adjustments for obligated funding and unfunded existing needs as described in subsequent sections.

4.4 Public Transportation Component of the TUMF System

In addition to the roadway network, public transportation plays a key role in serving future travel demand in the region. Public transportation serving inter-community trips is generally provided in the form of public bus transit services and in particular express bus or other high frequency services between strategically located community transit centers. In Western Riverside County, these bus transit services are typically provided by

RTA. Transit needs to serve future regional travel in Western Riverside County via bus transit include vehicle acquisitions, transit centers, express bus stop upgrades, maintenance facilities and other associated capital improvements to develop express bus or other high frequency inter-community transit bus services within the region. Metrolink commuter rail service improvements were not included in the TUMF Program as they typically serve longer inter-regional commute trips equivalent to freeway trips on the inter-regional highway system.

The network of regionally significant bus transit services represents those express bus and other high frequency transit bus services that primarily support inter-community trips in Western Riverside County and supplement the regional highway system and inter-regional commuter rail services. As a result, this portion of the bus transit system also represents the extents of the network of bus services that would be eligible for TUMF funded improvements.

The TUMF Bus Transit Network is the system of bus services that serve inter-community trips within Western Riverside County and therefore are eligible for improvement funding with TUMF funds. The Bus Transit Network for Western Riverside County was identified based on several transit network and performance guidelines as follows:

1. Bus transit routes (or corridors comprised of multiple overlapping routes) proposed to have a frequency of greater than three buses per direction during peak hours at ultimate build out.
2. Routes or corridors that serve multiple jurisdictions and/or provide connectivity between communities, both within and adjoining western Riverside County.
3. Routes or corridors with forecast weekday bus ridership in excess of 1,000 person trips per day by 2040.
4. Routes or corridors that are proposed to provide timed interconnections with at least four other routes or corridors at ultimate build out.
5. Routes or corridors that utilize the majority of travel along the TUMF RSHA.
6. Routes or corridors that provide direct access to areas of forecast population and employment growth, major commercial, industrial, institutional, recreational or tourist activity centers, and multi-modal transportation facilities (such as airports, railway terminals and transit centers).

Express bus routes and other high-frequency bus transit routes and corridors in Western Riverside County that generally satisfied the respective guidelines were identified by RTA. Updated cost estimates for improving the infrastructure serving public transportation, including construction of transit centers and transfer facilities, express bus stop upgrades, and capital improvements needed to develop express bus and other high frequency bus transit service within the region were also provided by RTA. The updated transit unit cost data provided by RTA are shown in **Table 4.3**.

Table 4.3 - Unit Costs for Transit Capital Expenditures

Component Type*	Original Cost Assumptions as published October 18, 2002	Cost Assumptions per 2016 Nexus Study July 10, 2017	**Cost Assumptions per 2024 Nexus Update**	Description
Transit Center 1		$6,000,000	**$7,465,000**	Relocation/expansion of existing Regional Transit Center with up to 14 bus bays and park and ride
Transit Center 2	$6,000,000	$9,000,000	**$11,195,000**	New Regional Transit Center with up to 14 bus bays and park and ride
Transfer Facility		$1,000,000	**$1,245,000**	Multiple route transfer hub
O & M Facility		$50,000,000	**$62,186,000**	Regional Operations and Maintenance Facility
Green Technology			**$100,000**	ZEB technology enhancements
Bus Stop	$10,000	$40,000	**$50,000**	Bus Stop Amenities Upgrade on TUMF Network
BRT Service Capital	$540,000	$60,000	**$75,000**	BRT/Limited Stop Service Capital (per stop**)
Vehicle Fleet 1* **			**$160,000**	Small Sized Bus/Van Contract Operated
Vehicle Fleet 2		$155,000	**$300,000**	Medium Sized Bus Contract Operated
Vehicle Fleet 3	$325,125	$585,000	**$1,271,000**	Large Sized Bus Directly Operated
COA Study		$950,000	**$1,150,000**	Comprehensive Operational Analysis Study component of Nexus Study Update

* Transit Cost Component Types were restructured as part of the 2016 Nexus Update in accordance with the RTA Comprehensive Operational Analysis (January 2015)

** BRT Service Capital Cost Assumption was based on a per mile unit prior to the 2016 Nexus Update. 2016 Nexus Update uses a per stop unit cost for BRT Service Capital

*** Vehicle Fleet component was restructured as part of the 2024 Nexus Update with the inclusion of Small Sized Bus/Van Contract Operated as Vehicle Fleet 1 and subsequent renumbering of Vehicle Fleet 2 and 3, respectively

The estimated total cost for future RTA bus transit services to accommodate forecast transit demand is approximately $217.9 million with this cost including all planning, engineering, design and capital improvement costs. Detailed transit component cost estimates are included in **Section 4.7**. The full cost to improve RTA bus transit services cannot be entirely attributed to new development and must be adjusted to account for existing needs. **Section 4.6** describes the adjustments to the total transit cost to account for existing needs.

4.5 Existing Obligated Funding

For some of the facilities identified in the TUMF network, existing obligated funding has previously been secured through traditional funding sources to complete necessary improvements. Since funding has been obligated to provide for the completion of needed improvements to the TUMF system, the funded cost of these improvements will not be recaptured from future developments through the TUMF Program. As a result, the TUMF network cost was adjusted accordingly to reflect the availability of obligated funds.

To determine the availability of obligated funds, WRCOG staff, in conjunction with RCTC staff, completed a review of the current Federal Transportation improvement Program (FTIP) to identify TUMF eligible projects that were also programmed to receive funding from alternate sources. A table summarizing the obligated funds for segments of the TUMF network is included in **Appendix H**. A total of $382.9 million in obligated funding was identified for improvements to the TUMF system. The estimated total TUMF network project cost was subsequently reduced by this amount.

4.6 Unfunded Existing Improvement Needs

A review of the existing traffic conditions on the TUMF network (as presented in **Table 3.1**) indicates that some segments of the roadways on the TUMF system currently experience congestion and operate at unacceptable levels of service. In addition, demand for inter-community transit service already exists and future utilization of proposed inter-community transit services will partially satisfy this existing demand. The need to improve these portions of the system is generated, at least in part, by existing demand, rather than solely the cumulative regional impacts of future new development, so future new development cannot be assessed for the equivalent cost share of improvements providing for this existing need.

To account for existing need in the TUMF Network, the cost for facilities identified as currently experiencing LOS E or F was adjusted. This was done by identifying the portion of any segment of the TUMF Network with a volume to capacity (v/c) ratio of greater than 0.9 (the threshold for LOS E) in the RivCoM 2018 Existing scenario and extracting the share of the overall facility cost to improve that portion. This cost adjustment provides for the mitigation of incremental traffic growth on those TUMF segments with an existing high level of congestion. The following approach was applied to account for incremental traffic growth associated with new development as part of the existing need methodology:

1. Facilities with an existing need were identified by reviewing the RivCoM 2018 Existing scenario assigned traffic on the 2021 existing network and delineating

those facilities included on the TUMF Cost Fee Summary Table that have an average directional v/c exceeding 0.90[11].

a. Weighted directional v/c values were used to determine existing need for network segments, which was calculated by:
    i. Determining the length for the portion of each segment (model link), and calculating the ratio of link length to the overall segment length
    ii. Generating the average directional v/c for each link, for both directions in AM and PM periods, and multiplying by link/segment length ratio
    iii. Determining the maximum peak-period peak-direction v/c for each link, representing the highest directional v/c in either AM or PM
    iv. Calculating weighted average v/c for each TUMF segment, based on the sum of all weighted max v/c values of each link within a segment

b. A similar method was used to determine existing need for spot improvements including interchanges, railroad crossings and bridges. However, no weighting was used in the calculation of existing need for spot improvements. For these facilities, the peak-period peak-direction v/c values (highest directional v/c in either AM or PM) were utilized in the existing need calculation. This was based on the individual link within a network segment where a bridge or railroad crossing is located, or on- and off-ramps in the case of interchanges.

2. Initial costs of addressing the existing need were calculated by estimating the share of a particular roadway segments "new lane" cost, or individual spot improvement cost (including all associated ROW and soft costs).

3. Incremental growth in v/c was determined by comparing the average directional exisitng year v/c for the TUMF facilities (delineated under step one) with the horizon year v/c for the corresponding segments and spot improvements calculated based on the RivCoM 2045 No-Build scenario assigned traffic on the 2021 existing network using the same methodology as the existing year v/c.

[11] The RivCoM 2021 Existing Network used for the TUMF Nexus Study analyses reflects the RivCoM 2018 base year network augmented to include highways facilities on the TUMF Network as they existed in December 2021. A second version of the base network was also developed adding only those facilities that had been identified on the 2016 TUMF Nexus study 2040 Build scenario that did not currently exist in December 2021 and therefore were not represented by a link(s) in the RivCoM base network. The Supplemental 2021 Existing Network was utilized as the basis for determining existing and future v/c for only those projects that did not currently exist on the 2021 TUMF Network.

4. The proportion of the incremental growth attributable to new development was determined by dividing the result of step three with the total 2045 No-Build scenario v/c exceeding LOS E.

5. For those segments experiencing a net increase in v/c over the base year, TUMF will 'discount' the cost of existing need improvements by the proportion of the incremental v/c growth through 2045 No-Build compared to the 2018 Baseline v/c (up to a maximum of 100%).

The unfunded cost of existing highway improvement needs (including the related MSHCP obligation) totals $582.6 million. **Appendix H** includes a detailed breakdown of the existing highway improvement needs on the TUMF network, including the associated unfunded improvement cost estimate for each segment and spot improvement experiencing unacceptable LOS.

For transit service improvements, the cost to provide for existing demand was determined by multiplying the total transit component cost by the share of future transit trips representing existing demand. The cost of existing transit service improvement needs is $63.0 million representing 28.9% of the TUMF transit component. **Appendix H** includes tables reflecting the calculation of the existing transit need share and the existing transit need cost.

4.7 Maximum TUMF Eligible Cost

A total of $382.9 million in obligated funding was identified for improvements to the TUMF system. Since these improvements are already funded with other available revenue sources, the funded portion of these projects cannot also be funded with TUMF revenues. Furthermore, the total cost of the unfunded existing improvement need is $646.9 million. These improvements are needed to mitigate existing transportation deficiencies and therefore their costs cannot be assigned to new development through TUMF.

Based on the estimated costs described in **Sections 4.3** and **4.4**, the total value to complete the identified TUMF network and transit improvements, and administer the program is $5.28 billion. Having accounted for obligated funds and unfunded existing needs as described in **Sections 4.5** and **4.6**, respectively, the estimated maximum eligible value of the TUMF Program is $4.24 billion. The maximum eligible value of the TUMF Program includes approximately $3.87 billion in eligible arterial highway and street related improvements and $154.8 million in eligible transit related improvements. An additional $53.9 million is eligible as part of the TUMF Program to mitigate the impact of eligible TUMF related arterial highway and street projects on critical native species and wildlife habitat, while $161.2 million is provided to cover the costs incurred by WRCOG to administer the TUMF Program.

Figure 4.4 illustrates the various improvements to the RSHA included as part of the TUMF network cost calculation. **Table 4.4** summarizes the TUMF network cost calculations for each of the individual segments. This table also identifies the maximum eligible TUMF share for each segment having accounted for obligated funding and unfunded

existing need. A detailed breakdown of the individual cost components and values for the various TUMF Network segments is included in **Appendix H**. **Table 4.5** outlines the detailed transit component cost estimates. It should be noted that the detailed cost tables (and fee levels) are subject to regular review and updating by WRCOG and therefore WRCOG should be contacted directly to obtain the most recently adopted version of these tables (and to confirm the corresponding fee level).

Figure 4.4 - Regional System of Highways and Arterials - TUMF Network Improvements

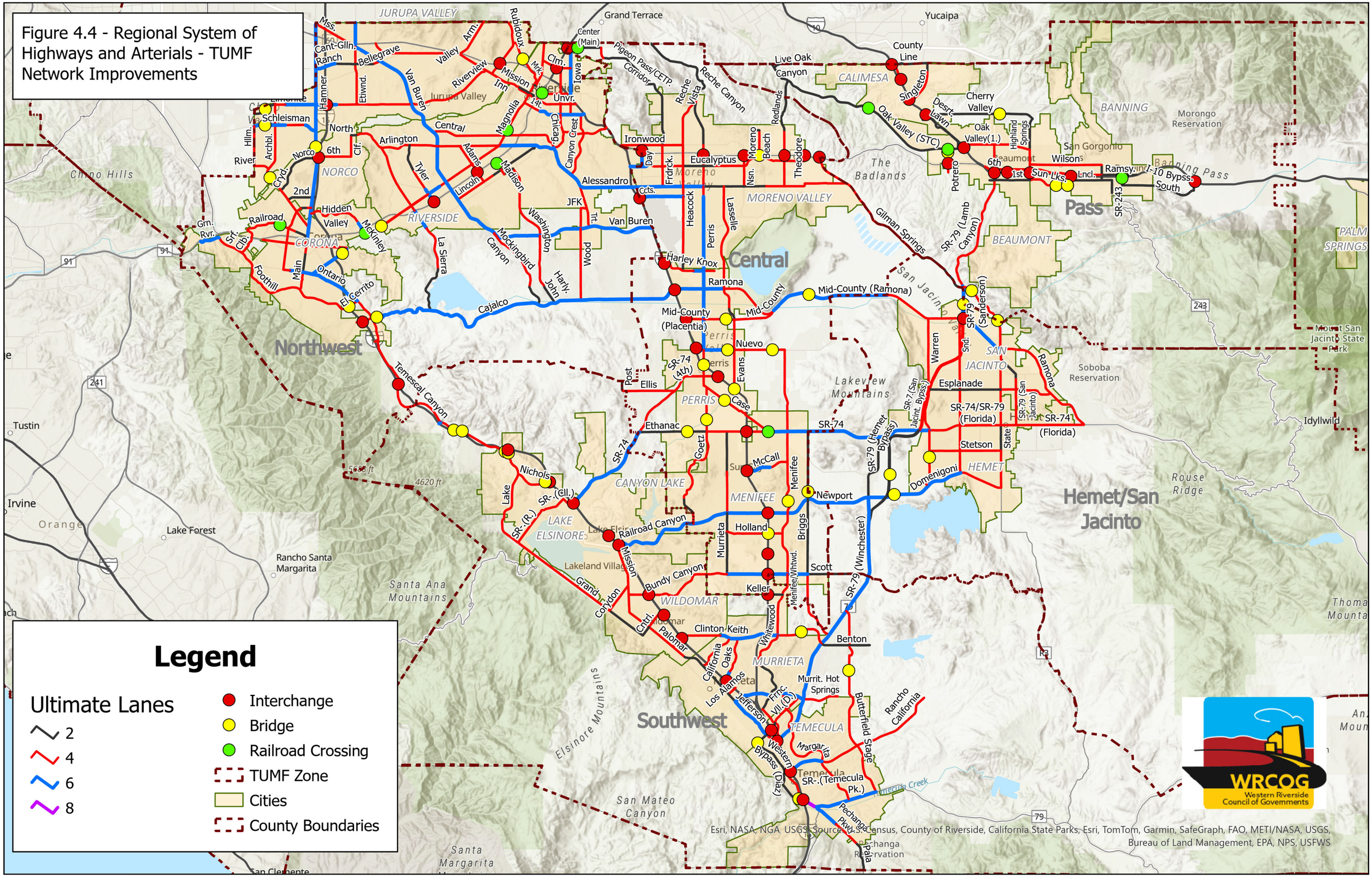


Table 4.4 - TUMF Network Cost Estimates

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Central	Menifee	Ethanac	Goetz	Murrieta	$0	$0
Central	Menifee	Ethanac	Murrieta	I-215	$0	$0
Central	Menifee	Ethanac	I-215	interchange	$32,698,000	$32,698,000
Central	Menifee	Ethanac	Sherman	Matthews	$2,674,000	$2,674,000
Central	Menifee	Ethanac	BNSF San Jacinto Branch	railroad crossing	$105,560,000	$105,560,000
Central	Menifee	Menifee	SR-74 (Pinacate)	Simpson	$1,307,000	$1,307,000
Central	Menifee	Menifee	Salt Creek	bridge	$4,384,000	$4,384,000
Central	Menifee	Menifee	Simpson	Aldergate	$0	$0
Central	Menifee	Menifee	Aldergate	Newport	$0	$0
Central	Menifee	Menifee	Newport	Holland	$0	$0
Central	Menifee	Menifee	Holland	Garbani	$0	$0
Central	Menifee	Menifee	Garbani	Scott	$4,353,000	$4,353,000
Central	Menifee	Menifee/Whitewood	Scott	Murrieta City Limit	$0	$0
Central	Menifee	Newport	Goetz	Murrieta	$0	$0
Central	Menifee	Newport	Murrieta	I-215	$1,130,000	$1,130,000
Central	Menifee	Newport	I-215	Menifee	$0	$0
Central	Menifee	Newport	Menifee	Lindenberger	$0	$0
Central	Menifee	Newport	Lindenberger	SR-79 (Winchester)	$0	$0
Central	Menifee	Scott	I-215	Briggs	$8,635,000	$8,635,000
Central	Menifee	Scott	I-215	interchange	$0	$0
Central	Menifee	Scott	Sunset	Murrieta	$4,388,000	$4,388,000
Central	Menifee	Scott	Murrieta	I-215	$16,949,000	$12,949,000
Central	Menifee	SR-74	Matthews	Briggs	$8,254,000	$8,254,000
Central	Moreno Valley	Alessandro	I-215	Perris	$13,420,000	$13,420,000
Central	Moreno Valley	Alessandro	Perris	Nason	$0	$0
Central	Moreno Valley	Alessandro	Nason	Moreno Beach	$0	$0
Central	Moreno Valley	Alessandro	Moreno Beach	Gilman Springs	$18,019,000	$18,019,000
Central	Moreno Valley	Gilman Springs	SR-60	Alessandro	$7,291,000	$7,291,000
Central	Moreno Valley	Gilman Springs	SR-60	interchange	$0	$0
Central	Moreno Valley	Perris	Reche Vista	Ironwood	$0	$0
Central	Moreno Valley	Perris	Ironwood	Sunnymead	$0	$0
Central	Moreno Valley	Perris	SR-60	interchange	$32,698,000	$11,192,000
Central	Moreno Valley	Perris	Sunnymead	Cactus	$0	$0
Central	Moreno Valley	Perris	Cactus	Harley Knox	$0	$0
Central	Moreno Valley	Reche Vista	Country	Heacock	$7,486,000	$3,799,000
Central	Perris	11th/Case	Perris	Goetz	$4,582,000	$4,582,000
Central	Perris	Case	Goetz	I-215	$20,876,000	$20,876,000
Central	Perris	Case	San Jacinto River	bridge	$1,740,000	$1,235,000
Central	Perris	Ethanac	Keystone	Goetz	$6,056,000	$6,056,000
Central	Perris	Ethanac	San Jacinto River	bridge	$5,568,000	$5,568,000
Central	Perris	Ethanac	I-215	Sherman	$5,316,000	$5,316,000
Central	Perris	Goetz	Case	Ethanac	$1,507,000	$999,000
Central	Perris	Goetz	San Jacinto River	bridge	$5,568,000	$3,398,000
Central	Perris	Mid-County (Placentia)	I-215	Perris	$15,655,000	$15,655,000
Central	Perris	Mid-County (Placentia)	I-215	interchange	$0	$0
Central	Perris	Mid-County (Placentia)	Perris	Evans	$22,985,000	$22,985,000
Central	Perris	Mid-County (Placentia)	Perris Valley Storm Channel	bridge	$8,352,000	$8,352,000
Central	Perris	Perris	Harley Knox	Ramona	$0	$0
Central	Perris	Perris	Ramona	Citrus	$7,063,000	$7,063,000
Central	Perris	Perris	Citrus	Nuevo	$0	$0
Central	Perris	Perris	Nuevo	11th	$6,927,000	$6,927,000
Central	Perris	Perris	I-215 overcrossing	bridge	$0	$0
Central	Perris	Ramona	I-215	Perris	$5,039,000	$5,039,000
Central	Perris	Ramona	I-215	interchange	$32,698,000	$7,725,000
Central	Perris	Ramona	Perris	Evans	$0	$0
Central	Perris	Ramona	Evans	Mid-County (2,800 ft E of Rider)	$0	$0
Central	Perris	SR-74 (4th)	Ellis	I-215	$0	$0
Central	Unincorporated	Ethanac	SR-74	Keystone	$4,666,000	$4,666,000
Central	Unincorporated	Gilman Springs	Alessandro	Bridge Road	$30,601,000	$30,601,000
Central	Unincorporated	Menifee	Nuevo	SR-74 (Pinacate)	$16,684,000	$16,684,000
Central	Unincorporated	Mid-County	Evans	Ramona (2,800 ft E of Rider)	$12,156,000	$12,156,000
Central	Unincorporated	Mid-County (Ramona)	Ramona (2,800 ft E of Rider)	Pico Avenue	$0	$0
Central	Unincorporated	Mid-County (Ramona)	Pico Avenue	Bridge Road	$47,769,000	$47,769,000
Central	Unincorporated	Mid-County (Ramona)	San Jacinto River	bridge	$36,192,000	$36,192,000
Central	Unincorporated	Reche Canyon	San Bernardino County	Reche Vista	$0	$0
Central	Unincorporated	Reche Vista	Reche Canyon	Country	$0	$0
Central	Unincorporated	Scott	Briggs	SR-79 (Winchester)	$0	$0
Central	Unincorporated	SR-74	Ethanac	Ellis	$0	$0
Northwest	Corona	Cajalco	I-15	Temescal Canyon	$0	$0
Northwest	Corona	Cajalco	I-15	interchange	$0	$0
Northwest	Corona	Foothill	Paseo Grande	Lincoln	$0	$0
Northwest	Corona	Foothill	Wardlow Wash	bridge	$0	$0
Northwest	Corona	Foothill	Lincoln	California	$0	$0
Northwest	Corona	Foothill	California	I-15	$0	$0
Northwest	Corona	Green River	SR-91	Dominguez Ranch	$0	$0
Northwest	Corona	Green River	Dominguez Ranch	Palisades	$0	$0
Northwest	Corona	Green River	Palisades	Paseo Grande	$0	$0
Northwest	Eastvale	Schleisman	San Bernardino County	600' e/o Cucamonga Creek	$648,000	$648,000
Northwest	Eastvale	Schleisman	Cucamonga Creek	bridge	$0	$0
Northwest	Eastvale	Schleisman	600' e/o Cucamonga Creek	Harrison	$866,000	$866,000
Northwest	Eastvale	Schleisman	Harrison	Sumner	$488,000	$488,000
Northwest	Eastvale	Schleisman	Sumner	Scholar	$7,625,000	$7,625,000
Northwest	Eastvale	Schleisman	Scholar	A Street	$119,000	$119,000
Northwest	Eastvale	Schleisman	A Street	Hamner	$209,000	$209,000

Table 4.4 - TUMF Network Cost Estimates (continued)

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Northwest	Jurupa Valley	Van Buren	SR-60	Bellegrave	$23,928,000	$10,461,000
Northwest	Jurupa Valley	Van Buren	Bellegrave	Santa Ana River	$60,900,000	$0
Northwest	Riverside	Alessandro	Arlington	Trautwein	$2,410,000	$2,410,000
Northwest	Riverside	Arlington	La Sierra	Magnolia	$0	$0
Northwest	Riverside	Arlington	Magnolia	Alessandro	$46,465,000	$46,465,000
Northwest	Riverside	Van Buren	Santa Ana River	SR-91	$5,230,000	$4,392,000
Northwest	Riverside	Van Buren	SR-91	Mockingbird Canyon	$39,493,000	$21,292,000
Northwest	Riverside	Van Buren	Wood	Trautwein	$0	$0
Northwest	Riverside	Van Buren	Trautwein	Orange Terrace	$7,574,000	$7,574,000
Northwest	Unincorporated	Alessandro	Trautwein	Vista Grande	$0	$0
Northwest	Unincorporated	Alessandro	Vista Grande	I-215	$0	$0
Northwest	Unincorporated	Cajalco	El Sobrante	Harley John	$10,580,000	$9,817,000
Northwest	Unincorporated	Cajalco	Harley John	Harvil	$166,492,000	$166,492,000
Northwest	Unincorporated	Cajalco	Harvil	I-215	$1,238,000	$1,238,000
Northwest	Unincorporated	Cajalco	Temescal Canyon	La Sierra	$49,596,000	$35,953,000
Northwest	Unincorporated	Cajalco	Temescal Wash	bridge	$4,872,000	$1,907,000
Northwest	Unincorporated	Cajalco	La Sierra	El Sobrante	$96,453,000	$96,453,000
Northwest	Unincorporated	Van Buren	Mockingbird Canyon	Wood	$67,429,000	$67,429,000
Northwest	Unincorporated	Van Buren	Orange Terrace	I-215	$0	$0
Pass	Banning	Highland Springs	Wilson (8th)	Sun Lakes	$0	$0
Pass	Banning	Highland Springs	I-10	interchange	$63,061,000	$32,516,000
Pass	Banning	Highland Springs	Oak Valley (14th)	Wilson (8th)	$0	$0
Pass	Banning	Highland Springs	Cherry Valley	Oak Valley (14th)	$0	$0
Pass	Banning	I-10 Bypass South	I-10	Morongo Trail (Apache Trail)	$50,110,000	$50,110,000
Pass	Banning	I-10 Bypass South	I-10	interchange	$63,061,000	$63,061,000
Pass	Banning	I-10 Bypass South	San Gorgonio	bridge	$4,176,000	$4,176,000
Pass	Banning	I-10 Bypass South	UP/Hargrave	railroad crossing	$52,780,000	$52,780,000
Pass	Beaumont	Beaumont	Oak Valley (14th)	I-10	$0	$0
Pass	Beaumont	Potrero	Oak Valley (San Timoteo Canyon)	SR-60	$1,100,000	$1,100,000
Pass	Beaumont	Potrero	SR-60	interchange	$63,061,000	$29,561,000
Pass	Beaumont	Potrero	UP	railroad crossing	$40,020,000	$40,020,000
Pass	Beaumont	Potrero	Noble Creek	bridge	$0	$0
Pass	Beaumont	Potrero	SR-60	4th	$0	$0
Pass	Beaumont	SR-79 (Beaumont)	I-10	California	$0	$0
Pass	Beaumont	SR-79 (Beaumont)	I-10	interchange	$63,061,000	$7,408,000
Pass	Calimesa	Cherry Valley	I-10	interchange	$63,061,000	$59,773,000
Pass	Calimesa	Cherry Valley	Roberts St	Roberts Rd	$3,053,000	$3,053,000
Pass	Unincorporated	Cherry Valley	Bellflower	Noble	$6,411,000	$6,411,000
Pass	Unincorporated	Cherry Valley	Highland Springs	Bellflower	$0	$0
Pass	Unincorporated	Cherry Valley	Noble	Roberts St	$0	$0
Pass	Unincorporated	Cherry Valley	San Timoteo Wash	bridge	$0	$0
Pass	Unincorporated	SR-79 (Lamb Canyon)	California	Gilman Springs	$0	$0
San Jacinto	Hemet	Domenigoni	Warren	Sanderson	$7,726,000	$7,726,000
San Jacinto	Hemet	Domenigoni	Sanderson	State	$0	$0
San Jacinto	Hemet	SR-74	Winchester	Warren	$35,208,000	$35,208,000
San Jacinto	San Jacinto	Mid-County (Ramona)	Warren	Sanderson	$0	$0
San Jacinto	San Jacinto	Mid-County (Ramona)	Sanderson/SR-79 (Hemet Bypass)	interchange	$0	$0
San Jacinto	San Jacinto	Ramona	Sanderson	State	$0	$0
San Jacinto	San Jacinto	Ramona	State	Main	$0	$0
San Jacinto	San Jacinto	Ramona	Main	Cedar	$31,518,000	$26,928,000
San Jacinto	San Jacinto	Ramona	Cedar	SR-74	$0	$0
San Jacinto	Unincorporated	Domenigoni	SR-79 (Winchester)	Warren	$13,508,000	$13,508,000
San Jacinto	Unincorporated	Domenigoni	San Diego Aqueduct	bridge	$4,176,000	$4,176,000
San Jacinto	Unincorporated	Gilman Springs	Bridge	Sanderson	$0	$0
San Jacinto	Unincorporated	Mid-County (Ramona)	Bridge	Warren	$9,221,000	$9,221,000
San Jacinto	Unincorporated	SR-74	Briggs	SR-79 (Winchester)	$15,417,000	$15,417,000
San Jacinto	Unincorporated	SR-79 (Hemet Bypass)	SR-74 (Florida)	Domenigoni	$13,901,000	$13,901,000
San Jacinto	Unincorporated	SR-79 (Hemet Bypass)	San Diego Aqueduct	bridge	$4,176,000	$4,176,000
San Jacinto	Unincorporated	SR-79 (Hemet Bypass)	Domenigoni	Winchester	$6,542,000	$6,542,000
San Jacinto	Unincorporated	SR-79 (San Jacinto Bypass)	Mid-County (Ramona)	SR-74 (Florida)	$56,690,000	$56,690,000
San Jacinto	Unincorporated	SR-79 (Sanderson)	Gilman Springs	Ramona	$6,899,000	$2,555,000
San Jacinto	Unincorporated	SR-79 (Sanderson)	San Jacinto River	bridge	$19,488,000	$7,651,000
San Jacinto	Unincorporated	SR-79 (Winchester)	Domenigoni	Keller	$65,022,000	$65,022,000

Table 4.4 - TUMF Network Cost Estimates (continued)

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Southwest	Canyon Lake	Goetz	Railroad Canyon	Newport	$0	$0
Southwest	Canyon Lake	Railroad Canyon	Canyon Hills	Goetz	$0	$0
Southwest	Lake Elsinore	Railroad Canyon	I-15	Canyon Hills	$0	$0
Southwest	Lake Elsinore	Railroad Canyon	I-15	interchange	$0	$0
Southwest	Lake Elsinore	SR-74	I-15	interchange	$63,061,000	$24,162,000
Southwest	Murrieta	Clinton Keith	Copper Craft	Toulon	$0	$0
Southwest	Murrieta	Clinton Keith	Toulon	I-215	$2,076,000	$2,076,000
Southwest	Murrieta	Clinton Keith	I-215	Whitewood	$0	$0
Southwest	Murrieta	French Valley (Date)	Murrieta Hot Springs	Winchester Creek	$7,321,000	$7,321,000
Southwest	Murrieta	French Valley (Date)	Winchester Creek	Margarita	$0	$0
Southwest	Murrieta	Whitewood	Menifee City Limit	Keller	$0	$0
Southwest	Murrieta	Whitewood	Keller	Clinton Keith	$0	$0
Southwest	Temecula	French Valley (Cherry)	Jefferson	Diaz	$3,929,000	$3,929,000
Southwest	Temecula	French Valley (Cherry)	Murrieta Creek	bridge	$5,846,000	$5,846,000
Southwest	Temecula	French Valley (Date)	Margarita	Ynez	$0	$0
Southwest	Temecula	French Valley (Date)	Ynez	Jefferson	$5,010,000	$5,010,000
Southwest	Temecula	French Valley (Date)	I-15	interchange	$122,076,000	$122,076,000
Southwest	Temecula	SR-79 (Winchester)	Murrieta Hot Springs	Jefferson	$2,697,000	$2,697,000
Southwest	Temecula	SR-79 (Winchester)	I-15	interchange	$0	$0
Southwest	Temecula	Western Bypass (Diaz)	Cherry	Rancho California	$2,285,000	$2,285,000
Southwest	Temecula	Western Bypass (Vincent Moroga)	Rancho California	SR-79 (Front)	$23,629,000	$23,629,000
Southwest	Temecula	Western Bypass (Vincent Moroga)	I-15	interchange	$0	$0
Southwest	Temecula	Western Bypass (Vincent Moroga)	Murrieta Creek	bridge	$4,176,000	$4,176,000
Southwest	Unincorporated	Benton	SR-79	Eastern Bypass	$0	$0
Southwest	Unincorporated	Clinton Keith	Whitewood	SR-79	$5,539,000	$5,539,000
Southwest	Unincorporated	Clinton Keith	Warm Springs Creek	bridge	$0	$0
Southwest	Unincorporated	SR-74	I-15	Ethanac	$27,699,000	$26,347,000
Southwest	Unincorporated	SR-79 (Winchester)	Keller	Thompson	$34,213,000	$34,213,000
Southwest	Unincorporated	SR-79 (Winchester)	Thompson	La Alba	$27,699,000	$27,699,000
Southwest	Unincorporated	SR-79 (Winchester)	La Alba	Hunter	$7,854,000	$3,042,000
Southwest	Unincorporated	SR-79 (Winchester)	Hunter	Murrieta Hot Springs	$595,000	$442,000
Southwest	Wildomar	Bundy Canyon	I-15	Monte Vista	$1,362,000	$1,362,000
Southwest	Wildomar	Bundy Canyon	Monte Vista	Sunset	$24,818,000	$24,818,000
Southwest	Wildomar	Bundy Canyon	I-15	interchange	$32,698,000	$24,613,000
Southwest	Wildomar	Clinton Keith	Palomar	I-15	$0	$0
Southwest	Wildomar	Clinton Keith	I-15	Copper Craft	$5,030,000	$0
Subtotal					$2,331,921,000	$1,961,707,000

Table 4.4 - TUMF Network Cost Estimates (continued)

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Central	Menifee	Briggs	Newport	Scott	$0	$0
Central	Menifee	Briggs	SR-74 (Pinacate)	Simpson	$2,991,000	$2,991,000
Central	Menifee	Briggs	Simpson	Old Newport	$5,430,000	$5,430,000
Central	Menifee	Briggs	Salt Creek	bridge	$8,352,000	$8,352,000
Central	Menifee	Garbani	I-215	interchange	$63,061,000	$42,483,000
Central	Menifee	Goetz	Juanita	Lesser Lane	$11,378,000	$11,378,000
Central	Menifee	Goetz	Newport	Juanita	$0	$0
Central	Menifee	Holland	Murrieta	Bradley	$15,708,000	$15,708,000
Central	Menifee	Holland	Bradley	Haun	$11,439,000	$11,439,000
Central	Menifee	Holland	Haun	Antelope	$9,456,000	$9,456,000
Central	Menifee	Holland	I-215 overcrossing	bridge	$9,744,000	$9,744,000
Central	Menifee	Holland	Antelope	Menifee	$3,844,000	$3,844,000
Central	Menifee	McCall	I-215	Aspel	$5,354,000	$5,354,000
Central	Menifee	McCall	I-215	interchange	$0	$0
Central	Menifee	McCall	Aspel	Menifee	$2,288,000	$2,288,000
Central	Menifee	Murrieta	Ethanac	McCall	$0	$0
Central	Menifee	Murrieta	McCall	Newport	$7,967,000	$7,967,000
Central	Menifee	Murrieta	Newport	Bundy Canyon	$0	$0
Central	Moreno Valley	Cactus	I-215	Heacock	$5,617,000	$5,617,000
Central	Moreno Valley	Cactus	I-215	interchange	$0	$0
Central	Moreno Valley	Day	Ironwood	SR-60	$0	$0
Central	Moreno Valley	Day	SR-60	interchange	$0	$0
Central	Moreno Valley	Day	SR-60	Eucalyptus	$0	$0
Central	Moreno Valley	Eucalyptus	I-215	Towngate	$8,843,000	$8,843,000
Central	Moreno Valley	Eucalyptus	Towngate	Frederick	$0	$0
Central	Moreno Valley	Eucalyptus	Frederick	Heacock	$0	$0
Central	Moreno Valley	Eucalyptus	Heacock	Kitching	$0	$0
Central	Moreno Valley	Eucalyptus	Kitching	Moreno Beach	$0	$0
Central	Moreno Valley	Eucalyptus	Moreno Beach	Theodore	$0	$0
Central	Moreno Valley	Frederick	SR-60	Alessandro	$0	$0
Central	Moreno Valley	Heacock	Cactus	San Michele	$0	$0
Central	Moreno Valley	Heacock	Reche Vista	Cactus	$0	$0
Central	Moreno Valley	Heacock	San Michele	Harley Knox	$0	$0
Central	Moreno Valley	Ironwood	SR-60	Day	$0	$0
Central	Moreno Valley	Ironwood	Day	Heacock	$0	$0
Central	Moreno Valley	Lasselle	Alessandro	John F Kennedy	$0	$0
Central	Moreno Valley	Lasselle	John F Kennedy	Oleander	$0	$0
Central	Moreno Valley	Moreno Beach	Reche Canyon	SR-60	$18,797,000	$18,797,000
Central	Moreno Valley	Moreno Beach	SR-60 overcrossing	bridge	$0	$0
Central	Moreno Valley	Nason	SR-60	Alessandro	$0	$0
Central	Moreno Valley	Pigeon Pass	Ironwood	SR-60	$0	$0
Central	Moreno Valley	Pigeon Pass/CETAP Corridor	Hidden Springs	Ironwood	$0	$0
Central	Moreno Valley	Reche Canyon	Moreno Valley City Limit	Locust	$0	$0
Central	Moreno Valley	Redlands	Locust	Alessandro	$39,789,000	$39,789,000
Central	Moreno Valley	Redlands	SR-60	interchange	$32,698,000	$32,698,000
Central	Moreno Valley	Theodore	SR-60	Eucalyptus	$3,966,000	$3,966,000
Central	Moreno Valley	Theodore	SR-60	interchange	$32,698,000	$32,698,000
Central	Perris	Ellis	Goetz	Evans	$9,526,000	$9,526,000
Central	Perris	Evans	Oleander	Ramona	$0	$0
Central	Perris	Evans	Ramona	Morgan	$0	$0
Central	Perris	Evans	Morgan	Rider	$0	$0
Central	Perris	Evans	Rider	Placentia	$0	$0
Central	Perris	Evans	Placentia	Nuevo	$6,492,000	$6,492,000
Central	Perris	Evans	Nuevo	Ellis	$17,705,000	$17,705,000
Central	Perris	Evans	San Jacinto River	bridge	$11,136,000	$11,136,000
Central	Perris	Evans	I-215	bridge	$8,352,000	$8,352,000
Central	Perris	Goetz	Lesser	Ethanac	$7,845,000	$7,845,000
Central	Perris	Harley Knox	I-215	Indian	$0	$0
Central	Perris	Harley Knox	I-215	interchange	$0	$0
Central	Perris	Harley Knox	Indian	Perris	$0	$0
Central	Perris	Harley Knox	Perris	Redlands	$0	$0
Central	Perris	Nuevo	I-215	Murrieta	$16,971,000	$16,971,000
Central	Perris	Nuevo	I-215	interchange	$32,698,000	$19,736,000
Central	Perris	Nuevo	Murrieta	Dunlap	$4,367,000	$4,367,000
Central	Perris	Nuevo	Perris Valley Storm Channel	bridge	$0	$0
Central	Perris	SR-74 (Matthews)	I-215	Ethanac	$0	$0
Central	Perris	SR-74 (Matthews)	I-215	interchange	$32,698,000	$21,835,000
Central	Unincorporated	Center (Main)	I-215	Mt Vernon	$0	$0
Central	Unincorporated	Center (Main)	I-215	interchange	$32,698,000	$11,912,000
Central	Unincorporated	Center (Main)	BNSF	railroad crossing	$20,010,000	$20,010,000
Central	Unincorporated	Ellis	Post	SR-74	$11,550,000	$11,550,000
Central	Unincorporated	Mount Vernon/CETAP Corridor	Center	Pigeon Pass	$2,582,000	$2,582,000
Central	Unincorporated	Nuevo	Dunlap	Menifee	$8,737,000	$2,505,000
Central	Unincorporated	Nuevo	San Jacinto River	bridge	$5,568,000	$5,568,000
Central	Unincorporated	Pigeon Pass/CETAP Corridor	Hidden Springs	Mount Vernon	$8,106,000	$8,106,000
Central	Unincorporated	Post	Santa Rosa Mine	Ellis	$0	$0
Central	Unincorporated	Reche Canyon	Reche Vista	Moreno Valley City Limit	$0	$0
Central	Unincorporated	Redlands	San Timoteo Canyon	Locust	$0	$0

Table 4.4 - TUMF Network Cost Estimates (continued)

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Northwest	Corona	6th	SR-91	Magnolia	$0	$0
Northwest	Corona	Auto Center	Railroad	SR-91	$0	$0
Northwest	Corona	Cajalco	Bedford Canyon	I-15	$0	$0
Northwest	Corona	Hidden Valley	Norco Hills	McKinley	$0	$0
Northwest	Corona	Lincoln	Parkridge	Ontario	$0	$0
Northwest	Corona	Magnolia	6th	Sherborn	$7,054,000	$6,419,000
Northwest	Corona	Magnolia	Temescal Creek	bridge	$4,176,000	$3,580,000
Northwest	Corona	Magnolia	Sherborn	Rimpau	$0	$0
Northwest	Corona	Magnolia	Rimpau	Ontario	$0	$0
Northwest	Corona	Main	Grand	Ontario	$0	$0
Northwest	Corona	Main	Ontario	Foothill	$0	$0
Northwest	Corona	Main	Hidden Valley	Parkridge	$5,314,000	$4,389,000
Northwest	Corona	Main	Parkridge	SR-91	$0	$0
Northwest	Corona	Main	SR-91	S. Grand	$0	$0
Northwest	Corona	McKinley	Hidden Valley	Promenade	$0	$0
Northwest	Corona	McKinley	Promenade	SR-91	$0	$0
Northwest	Corona	McKinley	SR-91	Magnolia	$0	$0
Northwest	Corona	McKinley	Arlington Channel	bridge	$0	$0
Northwest	Corona	McKinley	BNSF	railroad crossing	$105,560,000	$0
Northwest	Corona	Ontario	I-15	El Cerrito	$13,451,000	$13,451,000
Northwest	Corona	Ontario	Lincoln	Buena Vista	$0	$0
Northwest	Corona	Ontario	Buena Vista	Main	$0	$0
Northwest	Corona	Ontario	Main	Kellogg	$0	$0
Northwest	Corona	Ontario	Kellogg	Fullerton	$0	$0
Northwest	Corona	Ontario	Fullerton	Rimpau	$0	$0
Northwest	Corona	Ontario	Rimpau	I-15	$0	$0
Northwest	Corona	Railroad	Auto Club	Buena Vista	$0	$0
Northwest	Corona	Railroad	BNSF	railroad crossing	$40,020,000	$40,020,000
Northwest	Corona	Railroad	Buena Vista	Main (at Grand)	$0	$0
Northwest	Corona	River	Corydon	Main	$0	$0
Northwest	Corona	Serfas Club	SR-91	Green River	$0	$0
Northwest	Eastvale	Archibald	Remington	River	$3,382,000	$3,382,000
Northwest	Eastvale	Hamner	Mission	Bellegrave	$0	$0
Northwest	Eastvale	Hamner	Bellegrave	Amberhill	$199,000	$199,000
Northwest	Eastvale	Hamner	Amberhill	Limonite	$2,787,000	$2,787,000
Northwest	Eastvale	Hamner	Limonite	Schleisman	$991,000	$991,000
Northwest	Eastvale	Hamner	Schleisman	Santa Ana River	$5,533,000	$3,675,000
Northwest	Eastvale	Hellman	Schleisman	Walters	$419,000	$419,000
Northwest	Eastvale	Hellman	Walters	River	$21,503,000	$21,503,000
Northwest	Eastvale	Hellman	Cucamonga Creek	bridge	$3,828,000	$3,828,000
Northwest	Eastvale	Limonite	I-15	Eastvale Gateway	$289,000	$289,000
Northwest	Eastvale	Limonite	I-15	interchange	$0	$0
Northwest	Eastvale	Limonite	Eastvale Gateway	Hamner	$255,000	$255,000
Northwest	Eastvale	Limonite	Hamner	Sumner	$1,094,000	$1,094,000
Northwest	Eastvale	Limonite	Sumner	Harrison	$497,000	$497,000
Northwest	Eastvale	Limonite	Harrison	Archibald	$0	$0
Northwest	Eastvale	Limonite	Archibald	Hellman (Keller SBD Co.)	$2,208,000	$2,208,000
Northwest	Eastvale	Limonite	Cucamonga Creek	bridge	$13,920,000	$0
Northwest	Eastvale	River	Hellman	Archibald	$5,948,000	$5,948,000
Northwest	Jurupa Valley	Armstrong	San Bernardino County	Valley	$6,192,000	$6,192,000
Northwest	Jurupa Valley	Bellegrave	Cantu-Galleano Ranch	Van Buren	$464,000	$464,000
Northwest	Jurupa Valley	Cantu-Galleano Ranch	Wineville	Bellegrave	$793,000	$793,000
Northwest	Jurupa Valley	Etiwanda	Philadelphia	SR-60	$1,515,000	$989,000
Northwest	Jurupa Valley	Etiwanda	SR-60	Limonite	$0	$0
Northwest	Jurupa Valley	Limonite	I-15	Wineville	$0	$0
Northwest	Jurupa Valley	Limonite	Wineville	Etiwanda	$0	$0
Northwest	Jurupa Valley	Limonite	Etiwanda	Van Buren	$2,981,000	$2,981,000
Northwest	Jurupa Valley	Limonite	Van Buren	Clay	$0	$0
Northwest	Jurupa Valley	Limonite	Clay	Riverview	$0	$0
Northwest	Jurupa Valley	Market	Rubidoux	Santa Ana River	$5,181,000	$0
Northwest	Jurupa Valley	Market	Santa Ana River	bridge	$13,920,000	$6,204,000
Northwest	Jurupa Valley	Mission	Milliken	SR-60	$0	$0
Northwest	Jurupa Valley	Mission	SR-60	Santa Ana River	$0	$0
Northwest	Jurupa Valley	Riverview	Limonite	Mission	$0	$0
Northwest	Jurupa Valley	Rubidoux	Pine	Mission	$0	$0
Northwest	Jurupa Valley	Rubidoux	SR-60	interchange	$32,698,000	$9,051,000
Northwest	Jurupa Valley	Valley	Armstrong	Mission	$0	$0
Northwest	Norco	1st	Parkridge	Mountain	$0	$0
Northwest	Norco	1st	Mountain	Hamner	$0	$0
Northwest	Norco	2nd	River	I-15	$0	$0
Northwest	Norco	6th	Hamner	California	$0	$0
Northwest	Norco	6th	I-15	interchange	$32,698,000	$3,489,000
Northwest	Norco	Arlington	Crestview	Fairhaven	$4,342,000	$4,342,000
Northwest	Norco	California	Arlington	6th	$15,237,000	$12,525,000
Northwest	Norco	Corydon	River	5th	$0	$0
Northwest	Norco	Hamner	Santa Ana River	bridge	$33,408,000	$11,455,000
Northwest	Norco	Hamner	Santa Ana River	Hidden Valley	$49,591,000	$49,591,000
Northwest	Norco	Hidden Valley	I-15	Norco Hills	$0	$0
Northwest	Norco	Hidden Valley	Hamner	I-15	$0	$0
Northwest	Norco	Norco	Corydon	Hamner	$0	$0
Northwest	Norco	North	California	Crestview	$0	$0
Northwest	Norco	River	Archibald	Corydon	$1,743,000	$1,109,000

Table 4.4 - TUMF Network Cost Estimates (continued)

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Northwest	Riverside	14th	Market	Martin Luther King	$0	$0
Northwest	Riverside	1st	Market	Main	$0	$0
Northwest	Riverside	3rd	SR-91	I-215	$1,941,000	$1,941,000
Northwest	Riverside	3rd	BNSF	railroad crossing	$105,560,000	$30,560,000
Northwest	Riverside	Adams	Arlington	SR-91	$0	$0
Northwest	Riverside	Adams	SR-91	Lincoln	$0	$0
Northwest	Riverside	Adams	SR-91	interchange	$32,698,000	$3,262,000
Northwest	Riverside	Arlington	Fairhaven	La Sierra	$0	$0
Northwest	Riverside	Buena Vista	Santa Ana River	Redwood	$0	$0
Northwest	Riverside	Canyon Crest	Martin Luther King	Central	$0	$0
Northwest	Riverside	Canyon Crest	Central	Country Club	$0	$0
Northwest	Riverside	Canyon Crest	Country Club	Via Vista	$4,996,000	$1,593,000
Northwest	Riverside	Canyon Crest	Via Vista	Alessandro	$0	$0
Northwest	Riverside	Central	Chicago	I-215/SR-60	$0	$0
Northwest	Riverside	Central	SR-91	Magnolia	$0	$0
Northwest	Riverside	Central	Alessandro	SR-91	$0	$0
Northwest	Riverside	Central	Van Buren	Magnolia	$0	$0
Northwest	Riverside	Chicago	Alessandro	Spruce	$0	$0
Northwest	Riverside	Chicago	Spruce	Columbia	$0	$0
Northwest	Riverside	Columbia	Main	Iowa	$0	$0
Northwest	Riverside	Columbia	I-215	interchange	$32,698,000	$9,050,000
Northwest	Riverside	Iowa	Center	3rd	$30,272,000	$30,272,000
Northwest	Riverside	Iowa	3rd	University	$0	$0
Northwest	Riverside	Iowa	University	Martin Luther King	$0	$0
Northwest	Riverside	JFK	Trautwein	Wood	$1,880,000	$1,880,000
Northwest	Riverside	La Sierra	Arlington	SR-91	$0	$0
Northwest	Riverside	La Sierra	SR-91	Indiana	$192,000	$192,000
Northwest	Riverside	La Sierra	Indiana	Victoria	$778,000	$778,000
Northwest	Riverside	Lemon (NB One way)	Mission Inn	University	$0	$0
Northwest	Riverside	Lincoln	Van Buren	Jefferson	$0	$0
Northwest	Riverside	Lincoln	Jefferson	Washington	$0	$0
Northwest	Riverside	Lincoln	Washington	Victoria	$0	$0
Northwest	Riverside	Madison	SR-91	Victoria	$853,000	$853,000
Northwest	Riverside	Madison	BNSF	railroad crossing	$20,010,000	$20,010,000
Northwest	Riverside	Magnolia	BNSF Railroad	Tyler	$0	$0
Northwest	Riverside	Magnolia	BNSF	railroad crossing	$0	$0
Northwest	Riverside	Magnolia	Tyler	Harrison	$0	$0
Northwest	Riverside	Magnolia	Harrison	14th	$0	$0
Northwest	Riverside	Main	1st	San Bernardino County	$0	$0
Northwest	Riverside	Market	14th	Santa Ana River	$9,491,000	$9,491,000
Northwest	Riverside	Martin Luther King	14th	I-215/SR-60	$24,031,000	$24,031,000
Northwest	Riverside	Mission Inn	Redwood	Lemon	$0	$0
Northwest	Riverside	Redwood (SB One way)	Mission Inn	University	$0	$0
Northwest	Riverside	Trautwein	Alessandro	Van Buren	$0	$0
Northwest	Riverside	Tyler	SR-91	Magnolia	$0	$0
Northwest	Riverside	Tyler	SR-91	interchange	$63,061,000	$21,814,000
Northwest	Riverside	Tyler	Magnolia	Hole	$0	$0
Northwest	Riverside	Tyler	Hole	Wells	$0	$0
Northwest	Riverside	Tyler	Wells	Arlington	$0	$0
Northwest	Riverside	University	Redwood	SR-91	$859,000	$859,000
Northwest	Riverside	University	SR-91	I-215/SR-60	$2,067,000	$2,067,000
Northwest	Riverside	Victoria	Lincoln	Arlington	$0	$0
Northwest	Riverside	Victoria	Madison	Washington	$0	$0
Northwest	Riverside	Washington	Victoria	Hermosa	$27,018,000	$27,018,000
Northwest	Riverside	Wood	JFK	Van Buren	$3,053,000	$3,053,000
Northwest	Riverside	Wood	Van Buren	Bergamont	$0	$0
Northwest	Riverside	Wood	Bergamont	Krameria	$0	$0
Northwest	Unincorporated	Cantu-Galleano Ranch	Hamner	Wineville	$0	$0
Northwest	Unincorporated	Dos Lagos (Weirick)	Temescal Canyon	I-15	$0	$0
Northwest	Unincorporated	El Cerrito	I-15	Ontario	$0	$0
Northwest	Unincorporated	El Sobrante	Mockingbird Canyon	Cajalco	$0	$0
Northwest	Unincorporated	Harley John	Washington	Scottsdale	$0	$0
Northwest	Unincorporated	Harley John	Scottsdale	Cajalco	$0	$0
Northwest	Unincorporated	La Sierra	Victoria	El Sobrante	$0	$0
Northwest	Unincorporated	La Sierra	El Sobrante	Cajalco	$0	$0
Northwest	Unincorporated	Mockingbird Canyon	Van Buren	El Sobrante	$20,871,000	$20,871,000
Northwest	Unincorporated	Temescal Canyon	El Cerrito	Tuscany	$3,168,000	$0
Northwest	Unincorporated	Temescal Canyon	Tuscany	Dos Lagos	$0	$0
Northwest	Unincorporated	Temescal Canyon	Dos Lagos	Leroy	$0	$0
Northwest	Unincorporated	Temescal Canyon	Leroy	Dawson Canyon	$0	$0
Northwest	Unincorporated	Temescal Canyon	Dawson Canyon	I-15	$0	$0
Northwest	Unincorporated	Temescal Canyon	I-15	interchange	$32,698,000	$32,698,000
Northwest	Unincorporated	Temescal Canyon	I-15	Park Canyon	$14,329,000	$14,329,000
Northwest	Unincorporated	Temescal Canyon	Park Canyon	Indian Truck Trail	$0	$0
Northwest	Unincorporated	Washington	Hermosa	Harley John	$12,787,000	$12,787,000
Northwest	Unincorporated	Wood	Krameria	Cajalco	$12,537,000	$12,537,000

Table 4.4 - TUMF Network Cost Estimates (continued)

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Pass	Banning	8th	Wilson	I-10	$0	$0
Pass	Banning	Lincoln	Sunset	SR-243	$0	$0
Pass	Banning	Ramsey	I-10	8th	$0	$0
Pass	Banning	Ramsey	8th	Highland Springs	$0	$0
Pass	Banning	SR-243	I-10	Wesley	$0	$0
Pass	Banning	Sun Lakes	Highland Home	Sunset	$30,502,000	$30,502,000
Pass	Banning	Sun Lakes	Smith Creek	bridge	$8,352,000	$8,352,000
Pass	Banning	Sun Lakes	Montgomery Creek	bridge	$5,568,000	$5,568,000
Pass	Banning	Sun Lakes	Highland Springs	Highland Home	$0	$0
Pass	Banning	Sunset	Ramsey	Lincoln	$0	$0
Pass	Banning	Sunset	I-10	interchange	$32,698,000	$32,698,000
Pass	Banning	Wilson	Highland Home	8th	$0	$0
Pass	Banning	Wilson	Highland Springs	Highland Home	$0	$0
Pass	Beaumont	1st	Viele	Pennsylvania	$0	$0
Pass	Beaumont	1st	Pennsylvania	Highland Springs	$0	$0
Pass	Beaumont	6th	I-10	Highland Springs	$0	$0
Pass	Beaumont	Desert Lawn	Champions	Oak Valley (STC)	$0	$0
Pass	Beaumont	Oak Valley (14th)	Highland Springs	Pennsylvania	$0	$0
Pass	Beaumont	Oak Valley (14th)	Pennsylvania	Oak View	$0	$0
Pass	Beaumont	Oak Valley (14th)	Oak View	I-10	$0	$0
Pass	Beaumont	Oak Valley (14th)	I-10	interchange	$63,061,000	$62,401,000
Pass	Beaumont	Oak Valley (STC)	UP Railroad	Tukwet Canyon	$0	$0
Pass	Beaumont	Oak Valley (STC)	Tukwet Canyon	I-10	$0	$0
Pass	Beaumont	Pennsylvania	6th	1st	$6,588,000	$6,588,000
Pass	Beaumont	Pennsylvania	I-10	interchange	$0	$0
Pass	Calimesa	Bryant	County Line	Avenue L	$0	$0
Pass	Calimesa	Calimesa	County Line	I-10	$0	$0
Pass	Calimesa	Calimesa	I-10	interchange	$63,061,000	$63,061,000
Pass	Calimesa	County Line	7th	Bryant	$0	$0
Pass	Calimesa	County Line	I-10	interchange	$32,698,000	$32,698,000
Pass	Calimesa	Desert Lawn	Palmer	Champions	$0	$0
Pass	Calimesa	Singleton	Avenue L	Condit	$0	$0
Pass	Calimesa	Singleton	Condit	Roberts	$12,972,000	$12,972,000
Pass	Calimesa	Singleton	I-10	interchange	$63,061,000	$0
Pass	Calimesa	Tukwet Canyon	Roberts Rd	Palmer	$0	$0
Pass	Unincorporated	Live Oak Canyon	Oak Valley (STC)	San Bernardino County	$0	$0
Pass	Unincorporated	San Timoteo Canyon	San Bernardino County	UP Railroad	$0	$0
Pass	Unincorporated	San Timoteo Canyon	UP Railroad	railroad crossing	$52,780,000	$52,780,000
San Jacinto	Hemet	Sanderson	Acacia	Menlo	$0	$0
San Jacinto	Hemet	Sanderson	Domenigoni	Stetson	$0	$0
San Jacinto	Hemet	Sanderson	RR Crossing	Acacia	$0	$0
San Jacinto	Hemet	Sanderson	Stetson	RR Crossing	$0	$0
San Jacinto	Hemet	Sanderson	Menlo	Esplanade	$0	$0
San Jacinto	Hemet	SR-74 (Florida)	Warren	Cawston	$0	$0
San Jacinto	Hemet	SR-74 (Florida)	Columbia	Ramona	$0	$0
San Jacinto	Hemet	SR-74/SR-79 (Florida)	Cawston	Columbia	$0	$0
San Jacinto	Hemet	State	Domenigoni	Chambers	$0	$0
San Jacinto	Hemet	State	Chambers	Stetson	$0	$0
San Jacinto	Hemet	State	Florida	Esplanade	$0	$0
San Jacinto	Hemet	State	Stetson	Florida	$0	$0
San Jacinto	Hemet	Stetson	Cawston	State	$0	$0
San Jacinto	Hemet	Stetson	Warren	Cawston	$4,357,000	$4,357,000
San Jacinto	Hemet	Warren	Esplanade	Domenigoni	$19,926,000	$19,926,000
San Jacinto	Hemet	Warren	Salt Creek	bridge	$4,176,000	$4,176,000
San Jacinto	San Jacinto	Esplanade	Mountain	State	$0	$0
San Jacinto	San Jacinto	Esplanade	State	Warren	$0	$0
San Jacinto	San Jacinto	Sanderson	Ramona	Esplanade	$0	$0
San Jacinto	San Jacinto	SR-79 (North Ramona)	State	San Jacinto	$0	$0
San Jacinto	San Jacinto	SR-79 (San Jacinto)	North Ramona Blvd	7th	$0	$0
San Jacinto	San Jacinto	SR-79 (San Jacinto)	7th	SR-74	$0	$0
San Jacinto	San Jacinto	State	Ramona	Esplanade	$0	$0
San Jacinto	San Jacinto	State	Gilman Springs	Quandt Ranch	$3,317,000	$3,317,000
San Jacinto	San Jacinto	State	San Jacinto River	bridge	$0	$0
San Jacinto	San Jacinto	State	Quandt Ranch	Ramona	$0	$0
San Jacinto	San Jacinto	Warren	Ramona	Esplanade	$13,469,000	$13,469,000
San Jacinto	Unincorporated	Gilman Springs	Sanderson	State	$11,097,000	$11,097,000
San Jacinto	Unincorporated	Gilman Springs	Massacre Canyon Wash	bridge	$1,392,000	$1,392,000
San Jacinto	Unincorporated	SR-79 (Winchester)	SR-74 (Florida)	Domenigoni	$0	$0

Table 4.4 - TUMF Network Cost Estimates (continued)

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE
Southwest	Lake Elsinore	Corydon	Mission	Grand	$3,336,000	$3,336,000
Southwest	Lake Elsinore	Diamond	Mission	I-15	$0	$0
Southwest	Lake Elsinore	Franklin (integral to Railroad Canyon Interchange)	I-15	interchange	$32,698,000	$32,698,000
Southwest	Lake Elsinore	Grand	Lincoln	Toft	$0	$0
Southwest	Lake Elsinore	Grand	Toft	SR-74 (Riverside)	$3,512,000	$3,512,000
Southwest	Lake Elsinore	Lake	I-15	Lincoln	$39,817,000	$32,726,000
Southwest	Lake Elsinore	Lake	I-15	interchange	$32,698,000	$15,771,000
Southwest	Lake Elsinore	Lake	Temescal Wash	bridge	$2,506,000	$1,150,000
Southwest	Lake Elsinore	Mission	Railroad Canyon	Bundy Canyon	$0	$0
Southwest	Lake Elsinore	Nichols	I-15	Lake	$7,850,000	$7,850,000
Southwest	Lake Elsinore	Nichols	Temescal Wash	bridge	$4,176,000	$4,176,000
Southwest	Lake Elsinore	Nichols	I-15	interchange	$63,061,000	$63,061,000
Southwest	Lake Elsinore	SR-74 (Collier/Riverside)	I-15	Lakeshore	$24,303,000	$24,303,000
Southwest	Lake Elsinore	SR-74 (Grand)	Riverside	SR-74 (Ortega)	$9,733,000	$3,691,000
Southwest	Lake Elsinore	SR-74 (Riverside)	Lakeshore	Grand	$20,175,000	$20,175,000
Southwest	Lake Elsinore	Temescal Canyon	I-15	Lake	$7,411,000	$7,411,000
Southwest	Lake Elsinore	Temescal Canyon	Temescal Wash	bridge	$3,480,000	$3,480,000
Southwest	Murrieta	California Oaks	Jefferson	I-15	$0	$0
Southwest	Murrieta	California Oaks	I-15	Jackson	$0	$0
Southwest	Murrieta	California Oaks	Jackson	Clinton Keith	$0	$0
Southwest	Murrieta	Jackson	Whitewood	Ynez	$0	$0
Southwest	Murrieta	Jefferson	Palomar	Nutmeg	$1,562,000	$1,562,000
Southwest	Murrieta	Jefferson	Nutmeg	Murrieta Hot Springs	$0	$0
Southwest	Murrieta	Jefferson	Murrieta Hot Springs	Cherry	$30,634,000	$30,634,000
Southwest	Murrieta	Keller	I-215	Whitewood	$0	$0
Southwest	Murrieta	Keller	I-215	interchange	$0	$0
Southwest	Murrieta	Los Alamos	Jefferson	I-215	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	Jefferson	I-215	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	I-215	Margarita	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	Margarita	SR-79 (Winchester)	$4,057,000	$3,899,000
Southwest	Murrieta	Nutmeg	Jefferson	Clinton Keith	$0	$0
Southwest	Murrieta	Whitewood	Clinton Keith	Los Alamos	$2,708,000	$2,708,000
Southwest	Murrieta	Whitewood	Los Alamos	Murrieta Hot Springs	$0	$0
Southwest	Murrieta	Whitewood	Murrieta Hot Springs	Jackson	$4,629,000	$4,629,000
Southwest	Murrieta	Ynez	Jackson	SR-79 (Winchester)	$0	$0
Southwest	Temecula	Butterfield Stage	Murrieta Hot Springs	Calle Chapos	$816,000	$816,000
Southwest	Temecula	Butterfield Stage	Calle Chapos	La Serena	$696,000	$696,000
Southwest	Temecula	Butterfield Stage	La Serena	Rancho California	$904,000	$904,000
Southwest	Temecula	Butterfield Stage	Rancho California	Pauba	$846,000	$846,000
Southwest	Temecula	Butterfield Stage	Pauba	SR-79 (Temecula Pkwy)	$725,000	$725,000
Southwest	Temecula	Jefferson	Cherry	Rancho California	$2,285,000	$2,285,000
Southwest	Temecula	Margarita	Murrieta Hot Springs	SR-79 (Temecula Pkwy)	$7,644,000	$7,644,000
Southwest	Temecula	Old Town Front	Rancho California	I-15/SR-79 (Temecula Pkwy)	$0	$0
Southwest	Temecula	Pechanga Pkwy	SR-79 (Temecula Pkwy)	Via Gilberto	$0	$0
Southwest	Temecula	Pechanga Pkwy	Via Gilberto	Pechanga Pkwy	$0	$0
Southwest	Temecula	Rancho California	Jefferson	Margarita	$18,254,000	$18,181,000
Southwest	Temecula	Rancho California	I-15	interchange	$32,698,000	$0
Southwest	Temecula	Rancho California	Margarita	Butterfield Stage	$0	$0
Southwest	Temecula	SR-79 (Temecula Pkwy)	I-15	Pechanga Pkwy	$0	$0
Southwest	Temecula	SR-79 (Temecula Pkwy)	Pechanga Pkwy	Butterfield Stage	$3,065,000	$3,065,000
Southwest	Unincorporated	Briggs	Scott	SR-79 (Winchester)	$6,509,000	$6,509,000
Southwest	Unincorporated	Butterfield Stage	Tucalota Creek	bridge	$0	$0
Southwest	Unincorporated	Butterfield Stage (Pourroy)	Auld	Murrieta Hot Springs	$23,076,000	$23,076,000
Southwest	Unincorporated	Grand	Ortega	Corydon	$68,025,000	$68,025,000
Southwest	Unincorporated	Horsethief Canyon	Temescal Canyon	I-15	$0	$0
Southwest	Unincorporated	Indian Truck Trail	Temescal Canyon	I-15	$0	$0
Southwest	Unincorporated	Murrieta Hot Springs	SR-79 (Winchester)	Pourroy	$0	$0
Southwest	Unincorporated	Pala	Pechanga	San Diego County	$0	$0
Southwest	Unincorporated	Pourroy	SR-79 (Winchester)	Auld	$2,236,000	$2,236,000
Southwest	Unincorporated	Rancho California	Butterfield Stage	Glen Oaks	$87,369,000	$87,369,000
Southwest	Unincorporated	Temescal Canyon	Horsethief Canyon Wash	bridge	$3,340,000	$3,340,000
Southwest	Unincorporated	Temescal Canyon	Indian Truck Trail	I-15	$15,739,000	$15,739,000
Southwest	Unincorporated	Temescal Canyon	Indian Wash	bridge	$1,462,000	$1,462,000
Southwest	Wildomar	Bundy Canyon	Mission	I-15	$9,704,000	$9,704,000
Southwest	Wildomar	Grand	Corydon	Wildomar Trail	$0	$0
Southwest	Wildomar	Mission	Bundy Canyon	Palomar	$0	$0
Southwest	Wildomar	Palomar	Clinton Keith	Washington	$3,227,000	$3,227,000
Southwest	Wildomar	Palomar	Mission	Clinton Keith	$13,493,000	$13,493,000
Southwest	Wildomar	Wildomar Trail	I-15	Baxter	$1,281,000	$1,281,000
Southwest	Wildomar	Wildomar Trail	I-15	interchange	$32,698,000	$27,858,000
Southwest	Wildomar	Wildomar Trail	Baxter	Palomar	$11,316,000	$11,316,000
Southwest	Wildomar	Wildomar Trail	Palomar	Grand	$0	$0
Subtotal					$2,508,329,000	$1,913,028,000
Totals	Network				$4,840,250,000	$3,874,735,000
	Transit				$217,870,000	$154,831,000
	Administration				$161,183,000	$161,183,000
	MSHCP				$64,606,000	$53,859,000
	TOTAL				$5,283,909,000	$4,244,608,000

Table 4.5 – TUMF Transit Cost Estimates

AREA PLAN DIST	LEAD AGENCY	PROJECT NAME	LOCATION	UNITS (number/ length in miles)	UNIT COST	TOTAL	MAXIMUM TUMF SHARE
Central	RTA	Menifee Mobility Hub	Menifee	1	$7,465,000	$7,465,000	$5,305,000
Northwest	RTA	Riverside Mobility Hub at Vine Street	Riverside	1	$11,195,000	$11,195,000	$7,956,000
Central	RTA	Moreno Valley Mobility Hub(s)	Moreno Valley	1	$11,195,000	$11,195,000	$7,956,000
Northwest	RTA	Jurupa Valley Mobility Hub(s)	Jurupa Valley	1	$11,195,000	$11,195,000	$7,956,000
Pass	RTA	Pass Area Mobility Hub(s)	Banning	1	$11,195,000	$11,195,000	$7,956,000
Southwest	RTA	Lake Elsinore / Canyon Lake Mobility Hub(s)	Lake Elsinore	1	$11,195,000	$11,195,000	$7,956,000
San Jacinto	RTA	Hemet Mobility Hub	Hemet	1	$11,195,000	$11,195,000	$7,956,000
San Jacinto	RTA	San Jacinto Mobility Hub	San Jacinto	1	$11,195,000	$11,195,000	$7,956,000
San Jacinto	RTA	MSJC Mobility Hub	San Jacinto	1	$1,245,000	$1,245,000	$885,000
Regional	RTA	ZEB Technology Enhancements	Various locations region wide	10	$100,000	$1,000,000	$711,000
Northwest	RTA	Regional Operations and Maintenance Facility	Riverside	1	$62,186,000	$62,186,000	$44,192,000
Regional	RTA	Annual Transit Enhancements Program	Various locations region wide	290	$50,000	$14,500,000	$10,304,000
Northwest	RTA	HQTC Improvements	UCR, Riverside to Perris	42	$75,000	$3,150,000	$2,239,000
Regional	RTA	Vehicle Fleet Small Buses/Vans	Various locations region wide	30	$160,000	$4,800,000	$3,411,000
Regional	RTA	Vehicle Fleet Medium Buses	Various locations region wide	20	$300,000	$6,000,000	$4,264,000
Regional	RTA	Vehicle Fleet Large Buses	Various locations region wide	29	$1,271,000	$36,859,000	$26,194,000
Regional	RTA	COA Study	Various locations region wide	2	$1,150,000	$2,300,000	$1,634,000
TOTAL						**$217,870,000**	**$154,831,000**

4.8 TUMF Network Evaluation

To assess the effectiveness of the proposed TUMF Network improvements to mitigate the cumulative regional impact of new development in Western Riverside County, the proposed network improvements were added to the 2021 existing network in RivCoM and the model was run with 2045 socioeconomic data to determine the relative impacts on horizon year traffic conditions. To quantify the impacts of the TUMF Network improvements, the various traffic measures of effectiveness described in **Section 3.1** for the 2018 Existing and 2045 No-Build scenarios were again calculated for the 2045 TUMF Build scenario. The results for VMT, VHT, VHD, and total VMT experiencing unacceptable level of service (LOS E) were then compared to the results presented in **Table 3.1** for the no-build conditions. The 2045 TUMF Build comparison results are provided in **Table 4.6**. Plots of the Network Extents are attached in **Appendix H**.

As shown in **Table 4.6**, the 2045 peak period VMT on all arterial facilities experiencing LOS of E or worse will decrease with the addition of the TUMF Network improvements while the share of VMT on the TUMF arterial network experiencing LOS E or worse during the peak periods will be reduced to 32% (which is still above the level experienced in 2018). It should be noted that the total VMT on the arterial system **increases** because of freeway trips being diverted to the arterial system to benefit from the proposed TUMF improvements.

Despite a greater share of the total peak period VMT in 2045, the arterial system can more efficiently accommodate the increased demand with the proposed TUMF improvements. Although peak period VMT on the TUMF improved arterial system increases by approximately 6% in 2045 compared to the No Build condition, VHT on the arterial system remains almost constant. Additionally, a benefit is observed on the

freeway system with VMT and VHT being reduced following TUMF Network improvements. By completing TUMF improvements, the total VHD experienced by all area motorists would be reduced during the peak period by over 7% from the levels that would be experienced under the 2045 No-Build scenario. These results highlight the effectiveness of the TUMF Program to mitigate the cumulative regional transportation impacts of new development commensurate with the level of impact being created.

Table 4.6 – Regional Highway System Measures of Performance
(2018 Existing and 2045 No-Build Scenarios to 2045 TUMF Build Scenario)

	Peak Periods (Total)		
Measure of Performance*	**2018 Existing**	**2045 No-Build**	**2045 Build**
VMT - Total ALL FACILITIES	23,284,724	29,897,254	30,160,328
VMT - FREEWAYS	13,514,522	15,490,284	15,418,548
VMT - ALL ARTERIALS	9,770,202	14,406,970	14,741,781
TOTAL - TUMF ARTERIAL VMT	**6,216,985**	**8,597,200**	**9,096,417**
VHT - TOTAL ALL FACILITIES	541,350	915,439	895,725
VHT - FREEWAYS	263,792	399,128	388,847
VHT - ALL ARTERIALS	277,558	516,311	506,878
TOTAL TUMF ARTERIAL VHT	**174,455**	**320,869**	**321,062**
VHD - TOTAL ALL FACILITIES	108,900	338,056	313,288
VHD - FREEWAYS	66,156	170,649	161,528
VHD - ALL ARTERIALS	42,745	167,407	151,760
TOTAL TUMF ARTERIAL VHD	**33,249**	**124,863**	**114,451**
VMT LOS E - TOTAL ALL FACILITIES	5,605,070	13,369,483	12,788,016
VMT LOS E - FREEWAYS	4,725,471	9,316,891	9,115,937
VMT LOS E & F - ALL ARTERIALS	879,599	4,052,592	3,672,079
TOTAL TUMF ARTERIAL VMT w/ LOS E or worse	**765,782**	**3,184,133**	**2,929,288**
% of TUMF ARTERIAL VMT w/ LOS E or worse	**12%**	**37%**	**32%**

* Source: RivCoM 2018 base network and SCAG 2020 RTP/SCS SED with updated 2021 arterial network as existing in December 2021and RivCoM 2018 base network and SCAG 2020 RTP/SCS SED with updated 2021 arterial network plus future TUMF network projects.

NOTES:

Volume is adjusted by PCE factor

VMT = vehicle miles of travel (the total combined distance that all vehicles travel on the system)

VHT = vehicle hours of travel (the total combined time that all vehicles are traveling on the system)

VHD = vehicle hours of delay (the total combined time that all vehicles have been delayed on the system based on the difference between forecast travel time and free-flow (ideal) travel time)

LOS = level of service (based on forecast volume to capacity ratios).

LOS E or Worse was determined by V/C ratio that exceeds 0.9 thresholds as indicated in the Riverside County General Plan.

5.0 TUMF NEXUS ANALYSIS

The objective of this section is to evaluate and document the rational nexus (or reasonable relationship) between the proposed fee and the transportation system improvements it will be used to help fund. The analysis starts by documenting the correlation between future development and the need for transportation system improvements on the TUMF network to mitigate the cumulative regional impacts of this new development, followed by analysis of the nexus evaluation of the key components of the TUMF concept.

5.1 Future Development and the Need for Improvements

Previous sections of this report documented the projected population, household and employment growth in Western Riverside County, the expected increases in traffic congestion and travel delay, and the identification of the transportation system improvements that will serve these future inter-community travel demands. The following points coalesce this information in a synopsis of how the future growth relates to the need for improvements to the TUMF system.

- Western Riverside County is expected to continue growing.
  Development in Western Riverside County is expected to continue at a robust rate of growth into the foreseeable future. Current projections estimate the population is projected to grow from a level of approximately 1.91 million in 2018 to a future level of about 2.53 million in 2045, while employment is projected to grow from a level of about 570,000 in 2018 to approximately 846,000 in 2045 (as shown in **Table 2.3**).

- Continuing growth will result in increasing congestion on arterial roadways.
  Traffic congestion and delay on arterial roadways are projected to increase dramatically in the future (as shown in **Table 3.1**). Without improvements to the transportation system, congestion levels will grow rapidly and travelers will experience unacceptable travel conditions with slow travel speeds and lengthy delays.

- The future arterial roadway congestion is directly attributable to future development in Western Riverside County.
  Traffic using arterial roadways within Western Riverside County is virtually all generated within or attracted to Western Riverside County, since longer-distance trips passing through the region typically use the freeway system, not arterial roadways. Therefore, the future recurring congestion problems on these roadways will be attributable to new trips that originate in, terminate in, or travel within Western Riverside County.

- Capacity improvements to the transportation system will be needed to alleviate the future congestion caused by new development.
  To maintain transportation service closer to current levels of efficiency, capacity enhancements will need to be made to the arterial roadway system. These enhancements could include new or realigned roads, additional lanes on existing

roads, new or expanded bridges, new or upgraded freeway interchanges, grade separation of at-grade rail crossings, or the installation of new ITS to improve traffic flows. The completion of improvements to the arterial roadway system would enhance regional mobility and reduce the total peak period vehicles hours of travel (VHT) by over 2%, reduce peak period vehicle hours of delay (VHD) by over 7%, and reduce the share of traffic experiencing congestion in the peak periods by over 4% (as shown in **Table 4.6**). The specific needs and timing of implementation will depend on the location and rate of future development, so the specific improvements to be funded by the TUMF and their priority of implementation will be determined during future project programming activities as improvement needs unfold and as TUMF funds become available.

- Roads on the TUMF network are the facilities that merit improvement through this fee program.
  The criteria used to identify roads for the TUMF network (future number of lanes, future traffic volume, future congestion level, and roadway function linking communities and activity centers and serving public transportation) were selected to ensure that these are the roadways that will serve inter-community travel and will require future improvement to alleviate congestion.

- Improvements to the public transportation system will be needed to provide adequate mobility for transit-dependent travelers and to provide an alternative to automobile travel.
  Since a portion of the population does not own an automobile and depends on public transportation for mobility, public transportation infrastructure and service will need to be enhanced and expanded to ensure continued mobility for this segment of the population. In addition, improvements to the public transportation system will be required to ensure that transit service can function as a viable option for future new Western Riverside County residents and employees who choose to avoid congestion by using public transportation.

For the reasons cited above, it can be readily concluded that there is a rational nexus between the future need for transportation improvements on the TUMF system and the future development upon which the proposed TUMF would be levied. The following sections evaluate the rational nexus in relation to the system components and the types of uses upon which the fee is assessed.

5.2 Application of Fee to System Components

As noted in **Section 3.2**, the TUMF concept includes splitting the fee revenues between the backbone system of arterials, the secondary system of arterials, and the public transportation system. This section evaluates the travel demands to determine the rational nexus between the future travel demands and the use of the fee to fund improvements to the future system components.

The split of fee revenues between the backbone and secondary highway networks is related to the proportion of highway vehicle trips that are relatively local (between

adjacent communities) and longer distance (between more distant communities but still within Western Riverside County). To estimate a rational fee split between the respective networks, the future combined AM and PM peak period travel forecast estimates were aggregated to a matrix of trips between zones to show the percentage of trips that remain within each zone in relation to the volume that travels to the other zones. This analysis was completed using the Year 2045 No-Build scenario trip tables from RivCoM.

The first step in the analysis was to create a correspondence table between the TAZs in the model and the five WRCOG TUMF zones (i.e. Northwest, Southwest, Central, Hemet/San Jacinto and Pass). The TAZs were then compressed into six districts (the five WRCOG zones and one for the rest of the SCAG region).

Table 5.1 shows the estimated peak period vehicle trips within and between each of the zones. **Table 5.2** shows the percentage of peak period vehicle trips within and between the respective zones. **Appendix I** includes the detailed RivCoM outputs used to develop the regional trip distribution profile shown in **Table 5.1** and **5.2**.

Table 5.1 - 2045 No-Build Peak Period Vehicle Trips by WRCOG Zone

From \ To	Central	Hemet/San Jacinto	Northwest	Pass	Southwest	Outside WRCOG	TOTAL
Central	417,608	23,474	89,780	6,301	55,101	57,558	**649,822**
Hemet/San Jacinto	29,401	209,005	8,647	8,432	16,081	18,078	**289,645**
Northwest	58,578	2,684	743,234	2,687	11,032	196,041	**1,014,257**
Pass	8,068	7,585	6,114	110,385	908	32,334	**165,395**
Southwest	55,812	16,232	32,852	1,976	667,255	62,713	**836,839**
Outside WRCOG	33,907	7,574	192,712	24,490	33,867		**292,550**
TOTAL	**603,375**	**266,554**	**1,073,340**	**154,271**	**784,244**	**366,724**	**3,248,507**

Based on RivCoM Year 2045 No-Build scenario

Table 5.2 – 2045 No-Build Percent Peak Period Vehicle Trips By WRCOG Zone

From \ To	Central	Hemet/San Jacinto	Northwest	Pass	Southwest	Outside WRCOG	TOTAL
Central	64.3%	3.6%	13.8%	1.0%	8.5%	8.9%	**100%**
Hemet/San Jacinto	10.2%	72.2%	3.0%	2.9%	5.6%	6.2%	**100%**
Northwest	5.8%	0.3%	73.3%	0.3%	1.1%	19.3%	**100%**
Pass	4.9%	4.6%	3.7%	66.7%	0.5%	19.5%	**100%**
Southwest	6.7%	1.9%	3.9%	0.2%	79.7%	7.5%	**100%**

Based on RivCoM Year 2045 No-Build scenario

Table 5.3 summarizes the calculation of the split between the backbone and secondary highway networks as derived from the peak period trip values provided in **Table 5.1**. Peak period vehicle trips to and from areas outside Western Riverside County were subtracted from the calculation, on the presumption that most of their inter-regional travel would occur on the freeway system. Peak period trips between zones (regional) were assigned to the backbone network, since these trips are primarily served by the arterial roadways that provide connections between the zones. Peak period trips within zones (local) were split between the backbone network and the secondary network in proportion to their lane-miles, since roadways on both networks serve intra-zonal trips. The backbone network includes approximately 41.1% of the lane-miles on the future TUMF system, and the secondary network includes approximately 58.9% of the lane-miles.

The backbone network is therefore assigned all the inter-zonal peak period trips plus 41.1% of the intra-zonal peak period trips. The secondary network is assigned 58.9% of the intra-zonal peak period trips and none of the inter-zonal peak period trips. The overall result is that 51.1% of the regional travel is assigned to the backbone network and 48.9% is assigned to the secondary network.

Table 5.3 - Backbone-Secondary Network Share Calculation

Calculation Value Description	Input Values	Backbone Value	Backbone Share	Secondary Value	Secondary Share
Total Western Riverside County Peak Period Vehicle Trips	3,248,507				
Less Internal/External Peak Period Vehicle Trips	-659,273				
Total Peak Period Vehicle Trips Internal to Western Riverside County	**2,589,234**				
Peak Period Vehicle Trips Between TUMF Zones	441,747				
Peak Period Vehicle Trips Within TUMF Zones	2,147,487				
TUMF Future Network Lane-Miles	3,029.9	1,243.9	41.1%	1,786.0	58.9%
Peak Period Vehicle Trips Between TUMF Zones	441,747	441,747	100.0%	0	0.0%
Peak Period Vehicle Trips Within TUMF Zones (as share of intra-zonal trips)	2,147,487	882,332	41.1%	1,265,155	58.9%
Total Peak Period Vehicle Trips Assigned	**2,589,234**	**1,324,079**	**51.1%**	**1,265,155**	**48.9%**

Based on RivCoM Year 2045 No-Build scenario; TUMF Nexus Study Exhibit H-1

5.3 Application of Fee to Residential and Non-Residential Developments

In order to establish the approximate proportionality of the future traffic impacts associated with new residential development and new non-residential development, the growth in daily VMT between the 2018 Existing and 2045 No-Build Scenarios from RivCoM were aggregated by trip purpose. RivCoM produces person trips (irrespective of mode choice) on the basis of five trip purposes: home-based-work (HBW), home-based-other (HBO), home-based-school (HBS), non-home-based (NHB), and home-based-university (HBU).

NCHRP Report #187 Quick Response Urban Travel Estimation Techniques and Transferable Parameters User's Guide (Transportation Research Board, 1978) details operational travel estimation techniques that are universally used for the travel demand modeling. Chapter 2 of this report, which details trip generation estimation, states that "HBW (Home Based Work) and HBNW (Home Based Non-Work) trips are generated at the households, whereas the NHB (Non-Home Based) trips are generated elsewhere." In accordance with NCHRP Report #187, growth in daily VMT was aggregated into home-based growth in daily VMT (combining the four home-based purposes: HBW, HBO, HBSC and HBU) and non-home-based growth in daily VMT. The home-based growth in daily VMT represents 77.7% of the total future growth in daily VMT and the non-home-based growth in daily VMT represent 22.3% of the total future growth in daily VMT, as shown in **Table 5.4**. **Appendix J** includes the RivCoM outputs used to develop the trip purpose summary in **Table 5.4**.

Table 5.4 - Daily VMT Growth by Trip Purpose for Western Riverside County (2018 - 2045)

VEHICLE TRIP PURPOSE	2018 EXISTING DAILY VMT	2045 NO-BUILD DAILY VMT	DAILY VMT GROWTH	DAILY VMT GROWTH SHARE
Home-Based-Work	81,121,525	98,818,811	17,697,286	31.8%
Home-Based-Other	114,840,696	138,710,519	23,869,822	42.9%
Home-Based-School (K-12)	8,592,941	9,230,272	637,331	1.1%
Non-Home-Based	61,534,566	73,907,099	12,372,533	22.3%
Home-Based-University	5,377,197	6,400,662	1,023,465	1.8%
TOTAL	271,466,925	327,067,363	55,600,437	100.00%
Home-Based Trips (Residential Uses)			**43,227,904**	**77.7%**
Non-Home-Based Trips (Non-Residential Uses)			**12,372,533**	**22.3%**

Based on RivCoM Year 2018 Existing Scenario, November 2023 and RivCoM Year 2045 No Build Scenario, November 2023

6.0 FAIR-SHARE FEE CALCULATION

The fee amounts, by type of development, that are justified to mitigate the cumulative regional impacts of new development on transportation facilities in Western Riverside County are quantified in this section. The total cost of improving the TUMF system is $5.28 billion. Existing funding obligated for improvements to the TUMF system totals $382.9 million while unfunded improvement needs generated by existing development represent $646.9 million of the total cost. The balance of the unfunded TUMF system improvement needs is $4.24 billion which is the maximum value attributable to the mitigation of the cumulative regional transportation impacts of future new development in the WRCOG region and will be captured through the TUMF Program. By levying the uniform fee directly on future new developments (and indirectly on new residents and new employees to Western Riverside County), these transportation system users are assigned their "fair share" of the costs to address the cumulative impacts of additional traffic they will generate on the regional transportation system.

Of the $4.24 billion in unfunded future improvement needs, 77.7% ($3.30 billion) will be assigned to future new residential development and 22.3% ($946.5 million) will be assigned to future new non-residential development.

6.1 Residential Fees

The portion of the unfunded future improvement cost allocable to new residential development through the TUMF is $3.30 billion. Since this future transportation system improvement need is generated by new residential development anticipated through the Year 2045, the fee will be spread between the residential developments projected to be constructed between 2018 and 2045. The projected residential growth from year 2018 to 2045 is 257,826 households (or dwelling units) as is indicated in **Table 2.3**.

Different household types generate different numbers of trips. To reflect the difference in trip generation between lower density "single-family" dwelling units and higher density "multi-family" dwelling units, the TUMF was weighted based on the respective trip generation rates of these different dwelling unit types. For the purposes of the TUMF Program, single family dwelling units are those housing units with a density of less than 8 units per acre while multi-family units are those with a density of 8 or more units per acre. According to the SCAG 2020 RTP/SCS forecasts included in **Table 2.3** and **Appendix B**, single family dwelling units (including mobile homes) are forecast to constitute 65.0% of the growth in residential dwelling units in the region between 2018 and 2045.

Data provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition (2021) show that, on average, single-family dwelling units generate 0.99 vehicle trips per dwelling unit per hour in the PM peak hour, whereas apartments, condominiums and townhouses (considered to be representative of higher density multi-family dwelling units) generate a median of 0.50 vehicle trips per unit per hour in the PM peak hour. The growth in dwelling units for single-family and multi-family, respectively, were multiplied by the corresponding trip generation rates to determine

the weighted proportion of the change in trips attributable to each use type as the basis for determining the per unit fee required to levy the necessary $3.20 billion to mitigate the cumulative regional transportation impacts of future new residential development. **Table 6.1** summarizes the calculation of the fee for single-family and multi-family dwelling units. **Appendix K** includes worksheets detailing the calculation of the residential (and non-residential) TUMF for Western Riverside County.

Table 6.1 - Fee Calculation for Residential Share

Residential Sector	2018 Dwelling Units	2045 Dwelling Units	Dwelling Unit Change	Trip Generation Rate	Trip Change	Percentage of Trip Change	Fee/DU
Single-Family	397,407	564,898	167,491	0.99	165,816	78.6%	**$15,476**
Multi-Family	157,166	247,501	90,335	0.50	45,168	21.4%	**$7,816**
Total	554,573	812,399	257,826		210,984	100.0%	

Household data based on SCAG 2020 RTP/SCS;
Trip Generation based on ITE Trip Generation (2021).

Consistent with the socio-economic forecasts developed by SCAG and the trip generation basis to assess the cumulative regional transportation impacts of new development, the residential fee calculation for TUMF reflects a uniform fee per dwelling unit for two categories as described previously: single-family residential and multi-family residential. On September 28, 2021, California Governor Gavin Newsome signed Assembly Bill 602 (AB 602) approving several changes to the Mitigation Fee Act, including the additional of §66016.5 to the California Government Code (CGC). CGC §66016.5(a)(5)(A) states "A nexus study adopted after July 1, 2022, shall calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development…." unless certain findings are made. These findings include:

"(i) An explanation as to why square footage is not appropriate metric to calculate fees imposed on housing development project.
(ii) An explanation that an alternative basis of calculating the fee bears a reasonable relationship between the fee charged and the burden posed by the development.
(iii) That other policies in the fee structure support smaller developments, or otherwise ensure that smaller developments are not charged disproportionate fees."

To address these provisions of AB 602, WRCOG analyzed the trip generation characteristics of single-family and multi-family residential dwelling units of various sizes to determine whether the TUMF should be imposed based on the square footage of the respective housing type. The findings of the analyses for single-family and multi-family, respectively, were summarized in technical memoranda that are included in **Appendix K**. Based on the findings of the analyses, WRCOG has determined that the fee for single-family residential units should be adjusted in four tiers to correlate to the trip generation characteristics associated with various ranges of single-family housing sizes to demonstrate compliance with AB 602. The tiers reflecting the adjustments to the

standard single-family residential fee per dwelling unit (as calculated in **Table 6.1**) for differing ranges of single-family dwelling unit sizes are summarized in **Table 6.2**. Adjustments to the standard uniform fair-share single-family residential fee to account for variations in trip generation rates based on the size of the units will be made at the time of determining the fee obligation consistent with the process outlined further in the WRCOG TUMF Fee Calculation Handbook.

Table 6.2 – Single-Family Residential Fee Adjustments by Unit Size

Adjustment Tier	Housing Unit Size Range (in square feet)	Base Fee Adjustment
Tier 1	Less than or equal to 1,800	80%
Tier 2	1,801 to 2,300	90%
Tier 3	2,301 to 2,700	100%
Tier 4	More than 2,700	125%

For multi-family residential units, WRCOG determined that the fee can be imposed on all multi-family units uniformly consistent with the conclusions of the analysis of multi-family trip generation rates by unit size, which demonstrated little variation in trip generation rates across the range of multi-family residential unit sizes. Therefore, the multi-family residential fee, as calculated in **Table 6.2**, can be applied uniformly to all multi-family residential units under the TUMF program.

6.2 Non-Residential Fees

The portion of the unfunded future improvement cost allocable to new non-residential development through the TUMF is $946.5 million. Estimates of employment by sector were obtained from the SCAG 2020 RTP/SCS socioeconomic data included in **Table 2.3** and **Appendix B**. From the 2045 employment forecast, the amount of employee growth in each sector was calculated. The employment figures were then translated into square footage of new development using typical ratios of square feet per employee derived from four sources including: Cordoba Corporation/Parsons Brinckerhoff Quade and Douglas (PBQD), Land Use Density Conversion Factors For Long Range Corridor Study San Bernardino and Riverside Counties, August 20, 1990; Orange County Transportation Authority (OCTA), Orange County Subarea Model Guidelines Manual, June 2001; SCAG, Employment Density Study, October 31, 2001; and the County of Riverside, General Plan, as amended December 15, 2015. Worksheets showing the development of the TUMF employee conversion factors and the application of the conversion factors to calculate the square footage of future new non-residential development in Western Riverside County are included in **Appendix L**.

To account for the differences in trip generation between various types of non-residential uses, the new non-residential development was weighted by trip generation rate for each sector. Typical trip generation rates per employee were obtained from the Institute of Transportation Engineers (ITE) Trip Generation – 11th Edition (2021), and were weighted based on a calculated value of trips per employee as derived from the

employee conversion factors and ITE typical trip generation rates per square foot of development, before being assigned to the non-residential categories as follows: Industrial – 0.6 PM peak hour trips per employee, Retail – 1.8 PM peak hour trips per employee, Service – 1.2 PM peak hour trips per employee, and Government/Public – 2.1 PM peak hour trips per employee[12]. These rates were applied to the employment growth in each sector to determine the relative contribution of each sector to new trip-making, and the $946.5 million was then allocated among the non-residential categories based on the percentage of new trips added. This proportionate non-residential fee share by sector was then divided by the estimated square footage of future new development to obtain the rate per square foot for each type of use. The calculation of the non-residential fee by sector is shown in **Table 6.3**.

Table 6.3 - Fee Calculation for Non-Residential Share

Non-Residential Sector	Employment Change	Trip Generation Rate per Employee	Trip Change	Percentage of Trip Change	Change in Square Feet of Gross Floor Area	Fee/SF
Industrial	76,581	0.6	45,949	15.1%	61,489,565	**$2.33**
Retail	13,115	1.8	23,607	7.8%	6,557,500	**$11.21**
Service	174,255	1.2	209,106	68.8%	66,735,957	**$9.76**
Government/Public	12,071	2.1	25,349	8.3%	3,420,665	**$23.07**
Total	276,022		304,011	100.0%	138,203,688	

Employment Change data based on SCAG 2020 RTP/SCS; Trip Generation based on ITE (2021); Change in Square Feet conversion factor based on Cordoba (1990), OCTA (2001), SCAG (2001) and County of Riverside (2015).

[12] The median trip generation rate for 'Retail' and 'Service' was reduced to reflect the influence of pass-by trips using the weekday PM peak median pass-by trip rate for select uses as derived from the ITE Trip Generation Manual (11th Edition) (September 2021).

7.0 CONCLUSIONS

Based on the results of the Nexus Study evaluation, there is reasonable relationship between the cumulative regional transportation impacts of new land development projects in Western Riverside County and the need to mitigate these transportation impacts using funds levied through the ongoing TUMF Program. Factors that reflect this reasonable relationship include:

- Western Riverside County is expected to continue growing because of future new development.
- Continuing new growth will result in increasing congestion on arterial roadways.
- The future arterial roadway congestion is directly attributable to the cumulative regional transportation impacts of future development in Western Riverside County.
- Capacity improvements to the transportation system will be needed to mitigate the cumulative regional impacts of new development.
- Roads on the TUMF network are the facilities that merit improvement through this fee program.
- Improvements to the public transportation system will be needed to provide adequate mobility for transit-dependent travelers and to provide an alternative to automobile travel.

The Nexus Study evaluation has established a proportional "fair share" of the improvement cost attributable to new development based on the impacts of existing development and the availability of obligated funding through traditional sources. Furthermore, the Nexus Study evaluation has divided the fair share of the cost to mitigate the cumulative regional impacts of future new development in Western Riverside County in rough proportionality to the cumulative impacts of future residential and non-residential development in the region. The respective fee allocable to future new residential and non-residential development in Western Riverside County is summarized for differing use types in **Table 7.1**.

Table 7.1 - Transportation Uniform Mitigation Fee for Western Riverside County

Land Use Type	Units	Development Change	Fee Per Unit	Total Revenue ($ million)
Single Family Residential	DU	167,491	**$15,476**	$2,592.0
Multi Family Residential	DU	90,335	**$7,816**	$706.1
Industrial	SF GFA	61,489,565	**$2.33**	$143.1
Retail	SF GFA	6,557,500	**$11.21**	$73.5
Service	SF GFA	66,735,957	**$9.76**	$651.1
Government/Public	SF GFA	3,420,665	**$23.07**	$78.9
MAXIMUM TUMF VALUE				**$4,244.6**

8.0 APPENDICES

The following Appendices incorporate the extent of materials used to support the development of the WRCOG TUMF Nexus Study and, where appropriate, specifically the 2024 Update. The respective Appendices also incorporate an explanation of the methodology and assumptions used to develop the various elements of the Nexus Study.

These Appendices represent a compilation of materials derived from a variety of technical resources. Each of the following Appendices relate to the development of a specific element of the Nexus Study. These Appendices are as follows:

Appendix A - List of WRCOG Committees
Appendix B - Western Riverside County Population and Employment Growth 2018 – 2045
Appendix C - Western Riverside County Traffic Growth 2018 – 2045
Appendix D - Western Riverside County Transit System Ridership 2018 – 2045
Appendix E - Western Riverside County Regional System of Highways and Arterials Performance Measures
Appendix F - TUMF Network Cost Assumptions
Appendix G - TUMF 2024 Program Update Disposition of Network Change Requests
Appendix H - TUMF Network Cost Estimate and Evaluation
Appendix I - Western Riverside County Regional Trip Distribution
Appendix J - Western Riverside County Regional Trip Purpose
Appendix K - Residential Fee Calculation
Appendix L - Non-Residential Fee Calculation

Appendix A - List of WRCOG Committees

WRCOG Executive Committee

Sheri Flynn	City of Banning
Mike Lara	City of Beaumont
Wendy Hewitt	City of Calimesa
Mark Terry	City of Canyon Lake
Jacque Casillas (2nd Vice-Chair)	City of Corona
Christian Dinco	City of Eastvale
Jackie Peterson	City of Hemet
Chris Barajas (Past Chair)	City of Jurupa Valley
Brian Tisdale	City of Lake Elsinore
Bob Karwin	City of Menifee
Elena Baca-Santa Cruz	City of Moreno Valley
Lisa DeForest	City of Murrieta
Kevin Bash	City of Norco
Rita Rogers (Chair)	City of Perris
Chuck Conder	City of Riverside
Crystal Ruiz	City of San Jacinto
James Stewart	City of Temecula
Joseph Morabito	City of Wildomar
Kevin Jeffries	County of Riverside Dist. 1
Karen Spiegel	County of Riverside Dist. 2
Chuck Washington	County of Riverside Dist. 3
Yxstian Gutierrez	County of Riverside Dist. 5
Phil Paule	Eastern Municipal Water District
Dr. Edwin Gomez	Riverside County Superintendent of Schools (ex-officio)
Brenda Dennstedt (Vice-Chair)	Western Water

WRCOG Technical Advisory Committee

Doug Schulze	City of Banning
Elizabeth Gibbs	City of Beaumont
Will Kolbow	City of Calimesa
Aaron Brown	City of Canyon Lake
Brett Channing	City of Corona
Mark Orme	City of Eastvale
Mark Prestwich	City of Hemet
Rod Butler (Past Chair)	City of Jurupa Valley
Jason Simpson	City of Lake Elsinore
Armando Villa	City of Menifee
Mike Lee	City of Moreno Valley
Kim Summers	City of Murrieta
Lori Sassoon	City of Norco
Clara Miramontes (Chair)	City of Perris
Mike Futrell	City of Riverside
Rob Johnson	City of San Jacinto
Aaron Adams	City of Temecula
Dan York	City of Wildomar
Jeff Van Wagenen	County of Riverside
Joe Mouawad	Eastern Municipal Water District
Grace Martin	March Joint Power Authority
Matt Snellings	Riverside County Office of Education
Craig Miller	Western Water

WRCOG Planning Directors' Committee

no new appointment made (as of 07/24/24)	City of Banning
Carole Kendrick	City of Beaumont
Kelly Lucia	City of Calimesa
Jim Morrisey	City of Canyon Lake
Joanne Coletta	City of Corona
David Murray	City of Eastvale
Monique Alaniz-Flejter	City of Hemet
Joe Perez (Chair)	City of Jurupa Valley
Damaris Abraham	City of Lake Elsinore
Cheryl Kitzerow	City of Menifee
Sean Kelleher (2nd Vice-Chair)	City of Moreno Valley
David Chantarangsu	City of Murrieta
Alma Robles	City of Norco
Kenneth Phung (Vice-Chair)	City of Perris
Judy Eguez	City of Riverside
Travis Randel	City of San Jacinto
Matt Peters	City of Temecula
Matthew Bassi	City of Wildomar
John Hildebrand	County of Riverside
Jeffrey Smith	March Joint Powers Authority
Jennifer Nguyen	Riverside Transit Agency
Ryan Shaw	Western Water

WRCOG Public Works Committee

Art Vela	City of Banning
Robert Vestal	City of Beaumont
Michael Thornton	City of Calimesa
Stuart McKibben	City of Canyon Lake
Savat Khamphou (Vice-Chair)	City of Corona
Jimmy Chung	City of Eastvale
Noah Rau	City of Hemet
Paul Toor (Chair)	City of Jurupa Valley
Remon Habib	City of Lake Elsinore
Nick Fidler	City of Menifee
Melissa Walker	City of Moreno Valley
Bob Moehling	City of Murrieta
Sam Nelson	City of Norco
John Pourkazemi	City of Perris
Gil Hernandez	City of Riverside
Stuart McKibbin (Vice-Chair)	City of San Jacinto
Patrick Thomas	City of Temecula
Jason Farag	City of Wildomar
Patricia Romo	County of Riverside
Lauren Sotelo	March Joint Powers Authority
Jillian Guizado	Riverside County Transportation Commission
Mauricio Alvarez	Riverside Transit Agency

WRCOG Finance Directors' Committee

Lincoln Bogard	City of Banning
Jennifer Ustation	City of Beaumont
Celeste Reid	City of Calimesa
Terry Shea	City of Canyon Lake
Kim Sitton	City of Corona
Amanda Wells	City of Eastvale
vacant	City of Hemet
June Overholt	City of Jurupa Valley
Shannon Buckley	City of Lake Elsinore
Travis Hickey	City of Menifee
Launa Jimenez	City of Moreno Valley
Javier Carcamo (Past Chair)	City of Murrieta
Lisette Free	City of Norco
Ernie Reyna (Chair)	City of Perris
Kristie Thomas	City of Riverside
Erika Gomez (2nd Vice-Chair)	City of San Jacinto
Jennifer Hennessy	City of Temecula
Adam Jantz	City of Wildomar
Vacant	County of Riverside
John Adams	Eastern Municipal Water District
Grace Martin	March Joint Power Authority
Dr. Ruth Perez	Riverside County Office of Education
Kevin Mascaro	Western Water

Appendix B - Western Riverside County Population and Employment Growth 2008 – 2035

Although a variety of alternate demographic information is available for the purpose of quantifying population and household growth in Western Riverside County, it was determined that the data developed by SCAG to support the 2020 RTP/SCS represented the most comprehensive source of socioeconomic data (SED) for the six-county SCAG region that includes Riverside County. The SCAG 2020 RTP/SCS SED information is disaggregated to the level of traffic analysis zones (TAZ) that comprise inputs to RivCoM. These SED data by TAZ were extracted from RivCoM (specifically the TAZ_Data.CSV file located in the PopSyn output folder) and aggregated to correspond with the TUMF zones to support this update of the TUMF Nexus. The SCAG 2020 RTP/SCS SED data retrieved from RivCoM and used as the basis for the Nexus Update is summarized in this Appendix.

The SCAG employment data for 2018 and 2045 was provided for thirteen employment sectors consistent with the California Employment Development Department (EDD) Major Groups including: Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Retail Trade; Transportation, Warehousing and Utilities; Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service; and Government. For the purposes of the Nexus Study, the SCAG Employment Categories were aggregated to Industrial (Farming, Natural Resources and Mining; Construction; Manufacturing; Wholesale Trade; Transportation, Warehousing and Utilities), Retail (Retail Trade), Service (Information; Financial Activities; Professional and Business Service; Education and Health Service; Leisure and Hospitality; Other Service) and Government/Public Sector (Government). These four aggregated sector types were used as the basis for calculating the fee as described in **Section 6.2**. This Appendix includes tables detailing the SCAG RTP/SCS SED Employment Categories and corresponding North American Industry Classification System (NAICS) Categories that are included in each non-residential sector type.

EXHIBIT B-1

Western Riverside County Population, Households and Employment (2018) - SCAG 2020 RTP/SCS Base Year

SED Type/Zone	Central	Northwest	Pass	San Jacinto	Southwest	Total
Population						
Total Population	**408,260**	**777,900**	**98,688**	**187,677**	**432,915**	**1,905,440**
Households						
Single-Family	83,142	152,897	24,937	38,888	97,543	397,407
Multi-Family	26,889	63,591	8,661	26,055	31,970	157,166
Total Households	**110,031**	**216,488**	**33,598**	**64,943**	**129,513**	**554,573**
Employment						
Farming, Natural Resources and Mining	799	3,431	559	1,625	2,080	8,494
Construction	6,245	31,914	1,807	2,067	13,290	55,323
Manufacturing	4,172	25,866	1,101	925	8,902	40,966
Wholesale Trade	8,428	9,269	268	546	6,490	25,001
Retail Trade	13,346	32,061	5,472	4,564	18,371	73,814
Transportation, Warehousing and Utilities	7,349	22,686	1,132	2,132	6,251	39,550
Information	425	2,073	496	177	863	4,034
Financial Activities	1,887	8,632	586	1,003	5,414	17,522
Professional and Business Service	7,834	32,973	3,434	1,630	13,532	59,403
Education and Health Service	20,423	76,884	6,092	13,659	29,192	146,250
Leisure and Hospitality	8,391	21,990	7,207	3,726	18,270	59,584
Other Service	2,834	10,603	1,244	1,891	5,338	21,910
Government	2,579	11,727	871	761	2,631	18,569
TUMF Industrial	26,993	93,166	4,867	7,295	37,013	**169,334**
TUMF Retail	13,346	32,061	5,472	4,564	18,371	**73,814**
TUMF Service	41,794	153,155	19,059	22,086	72,609	**308,703**
TUMF Government/Public Sector	2,579	11,727	871	761	2,631	**18,569**
Total Employment	**84,712**	**290,109**	**30,269**	**34,706**	**130,624**	**570,420**

Source: SCAG 2020 RTP/SCS

EXHIBIT B-2

Western Riverside County Population, Households & Employment (2045) - SCAG 2020 RTP/SCS Horizon Year

SED Type/Zone	Central	Northwest	Pass	San Jacinto	Southwest	Total
Population						
Total Population	**594,678**	**925,228**	**158,040**	**289,439**	**566,491**	**2,533,876**
Households						
Single-Family	133,507	181,827	43,988	70,713	134,863	564,898
Multi-Family	53,555	79,359	14,362	43,654	56,571	247,501
Total Households	**187,062**	**261,186**	**58,350**	**114,367**	**191,434**	**812,399**
Employment						
Farming, Natural Resources and Mining	712	2,212	527	1,218	2,001	6,670
Construction	18,304	48,533	3,186	5,861	20,236	96,120
Manufacturing	6,836	24,624	1,393	1,149	10,335	44,337
Wholesale Trade	6,150	9,048	324	559	6,529	22,610
Retail Trade	16,310	33,656	7,136	6,338	23,489	86,929
Transportation, Warehousing and Utilities	18,227	38,043	2,705	4,771	12,432	76,178
Information	642	2,166	476	191	1,116	4,591
Financial Activities	2,906	9,889	1,229	1,536	6,665	22,225
Professional and Business Service	14,214	41,712	6,016	4,518	21,058	87,518
Education and Health Service	52,764	111,454	13,803	25,739	51,118	254,878
Leisure and Hospitality	13,197	27,739	10,540	8,424	24,641	84,541
Other Service	5,148	13,062	1,532	2,838	6,625	29,205
Government	6,229	18,222	1,176	1,471	3,542	30,640
TUMF Industrial	50,229	122,460	8,135	13,558	51,533	**245,915**
TUMF Retail	16,310	33,656	7,136	6,338	23,489	**86,929**
TUMF Service	88,871	206,022	33,596	43,246	111,223	**482,958**
TUMF Government/Public Sector	6,229	18,222	1,176	1,471	3,542	**30,640**
Total Employment	**161,639**	**380,360**	**50,043**	**64,613**	**189,787**	**846,442**

Source: SCAG 2020 RTP/SCS

EXHIBIT B-3

Western Riverside County Population, Households and Employment (2018 to 2045 Change) - SCAG 2020 RTP/SCS

SED Type/Zone	Central	Northwest	Pass	San Jacinto	Southwest	Total
Population						
Total Population	**186,418**	**147,328**	**59,352**	**101,762**	**133,576**	**628,436**
Households						
Single-Family	50,365	28,930	19,051	31,825	37,320	167,491
Multi-Family	26,666	15,768	5,701	17,599	24,601	90,335
Total Households	**77,031**	**44,698**	**24,752**	**49,424**	**61,921**	**257,826**
Employment						
Farming, Natural Resources and Mining	-87	-1,219	-32	-407	-79	-1,824
Construction	12,059	16,619	1,379	3,794	6,946	40,797
Manufacturing	2,664	-1,242	292	224	1,433	3,371
Wholesale Trade	-2,278	-221	56	13	39	-2,391
Retail Trade	2,964	1,595	1,664	1,774	5,118	13,115
Transportation, Warehousing and Utilities	10,878	15,357	1,573	2,639	6,181	36,628
Information	217	93	-20	14	253	557
Financial Activities	1,019	1,257	643	533	1,251	4,703
Professional and Business Service	6,380	8,739	2,582	2,888	7,526	28,115
Education and Health Service	32,341	34,570	7,711	12,080	21,926	108,628
Leisure and Hospitality	4,806	5,749	3,333	4,698	6,371	24,957
Other Service	2,314	2,459	288	947	1,287	7,295
Government	3,650	6,495	305	710	911	12,071
TUMF Industrial	23,236	29,294	3,268	6,263	14,520	**76,581**
TUMF Retail	2,964	1,595	1,664	1,774	5,118	**13,115**
TUMF Service	47,077	52,867	14,537	21,160	38,614	**174,255**
TUMF Government/Public Sector	3,650	6,495	305	710	911	**12,071**
Total Employment	**76,927**	**90,251**	**19,774**	**29,907**	**59,163**	**276,022**

Source: SCAG 2020 RTP/SCS

Exhibit B-4a - TUMF 2024 Nexus Update
Western Riverside County Population, Households and Employment (2018-2045)

SED Type/Zone	2018	2045	Change	Percent
Total Population	**1,905,440**	**2,533,876**	**628,436**	**33%**
Total Households	**554,573**	**812,399**	**257,826**	**46%**
Single-Family	397,407	564,898	167,491	42%
Multi-Family	157,166	247,501	90,335	57%
Total Employment	**570,420**	**846,442**	**276,022**	**48%**
TUMF Industrial	169,334	245,915	76,581	45%
TUMF Retail	73,814	86,929	13,115	18%
TUMF Service	308,703	482,958	174,255	56%
TUMF Government/Public Sector	18,569	30,640	12,071	65%

Source: SCAG 2020 RTP/SCS

Exhibit B-4b - TUMF 2016 Nexus Update
Western Riverside County Population, Households and Employment (2012-2040)

SED Type/Zone	2012	2040	Change	Percent
Total Population	**1,773,935**	**2,429,633**	**655,698**	**37%**
Total Households	**525,149**	**775,231**	**250,082**	**48%**
Single-Family	366,588	539,631	173,043	47%
Multi-Family	158,561	235,600	77,039	49%
Total Employment	**460,787**	**861,455**	**400,668**	**87%**
TUMF Industrial	120,736	201,328	80,592	67%
TUMF Retail	65,888	101,729	35,841	54%
TUMF Service	253,372	528,092	274,720	108%
TUMF Government/Public Sector	20,791	30,306	9,515	46%

Source: SCAG 2016 RTP/SCS

Exhibit B-4c - TUMF 2016 Nexus Update to 2024 Nexus Update Comparison

Western Riverside County Population, Households and Employment (Existing to Future Change)

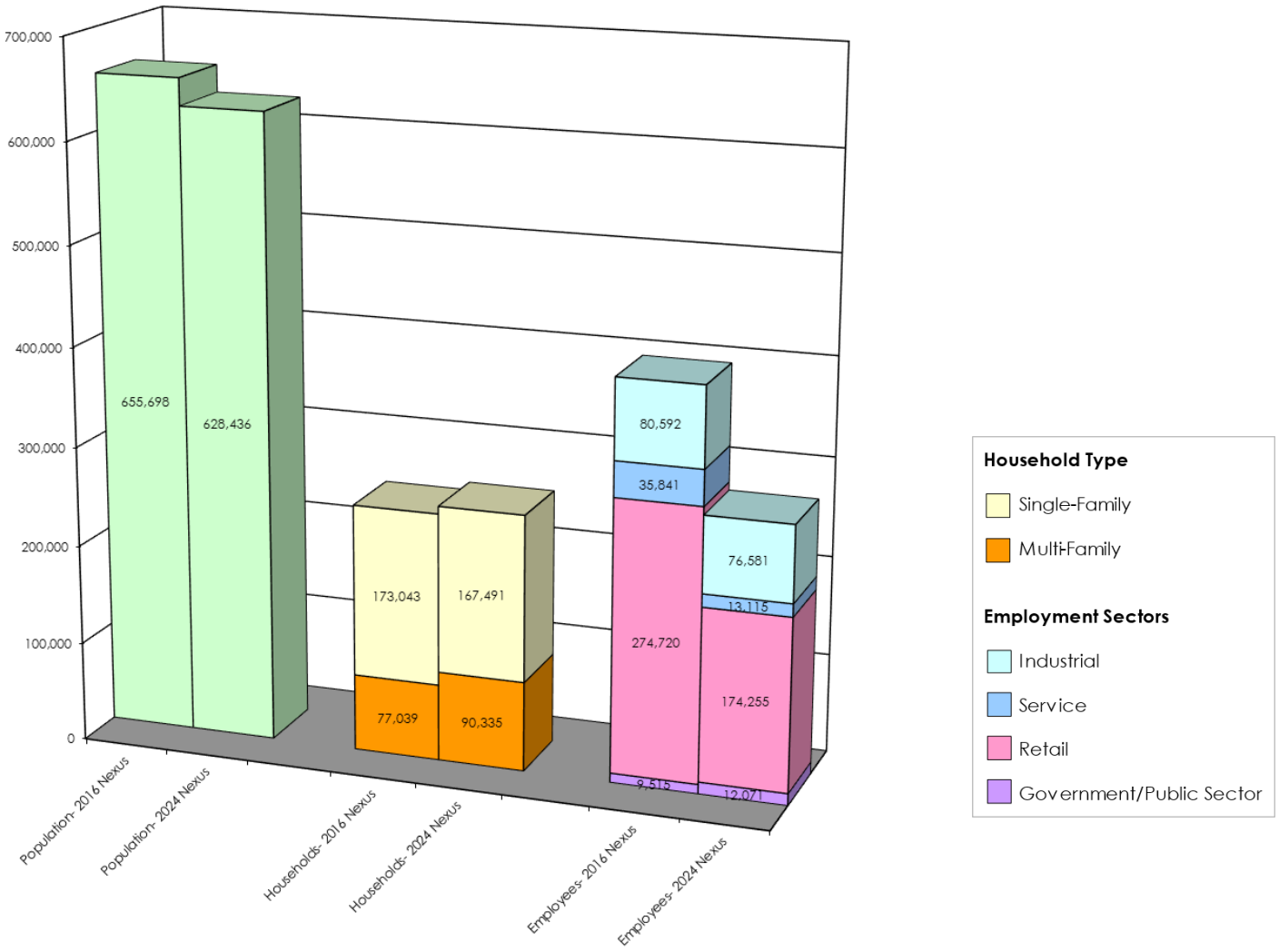
SED Type/Zone	2016 Update (2012-2040)	2024 Update (2018-2045)	Difference	Percent
Total Population	**655,698**	**628,436**	**-27,262**	**-4%**
Total Households	**250,082**	**257,826**	**7,744**	**3%**
Single-Family	173,043	167,491	-5,552	-3%
Multi-Family	77,039	90,335	13,296	17%
Total Employment	**400,668**	**276,022**	**-124,646**	**-31%**
TUMF Industrial	80,592	76,581	-4,011	-5%
TUMF Retail	35,841	13,115	-22,726	-63%
TUMF Service	274,720	174,255	-100,465	-37%
TUMF Government/Public Sector	9,515	12,071	2,556	27%

Source: SCAG 2016 RTP/SCS; SCAG 2020 RTP/SCS

EXHIBIT B-4d

Western Riverside County Population, Households and Employment Change (2012 to 2040 and 2018 to 2045)

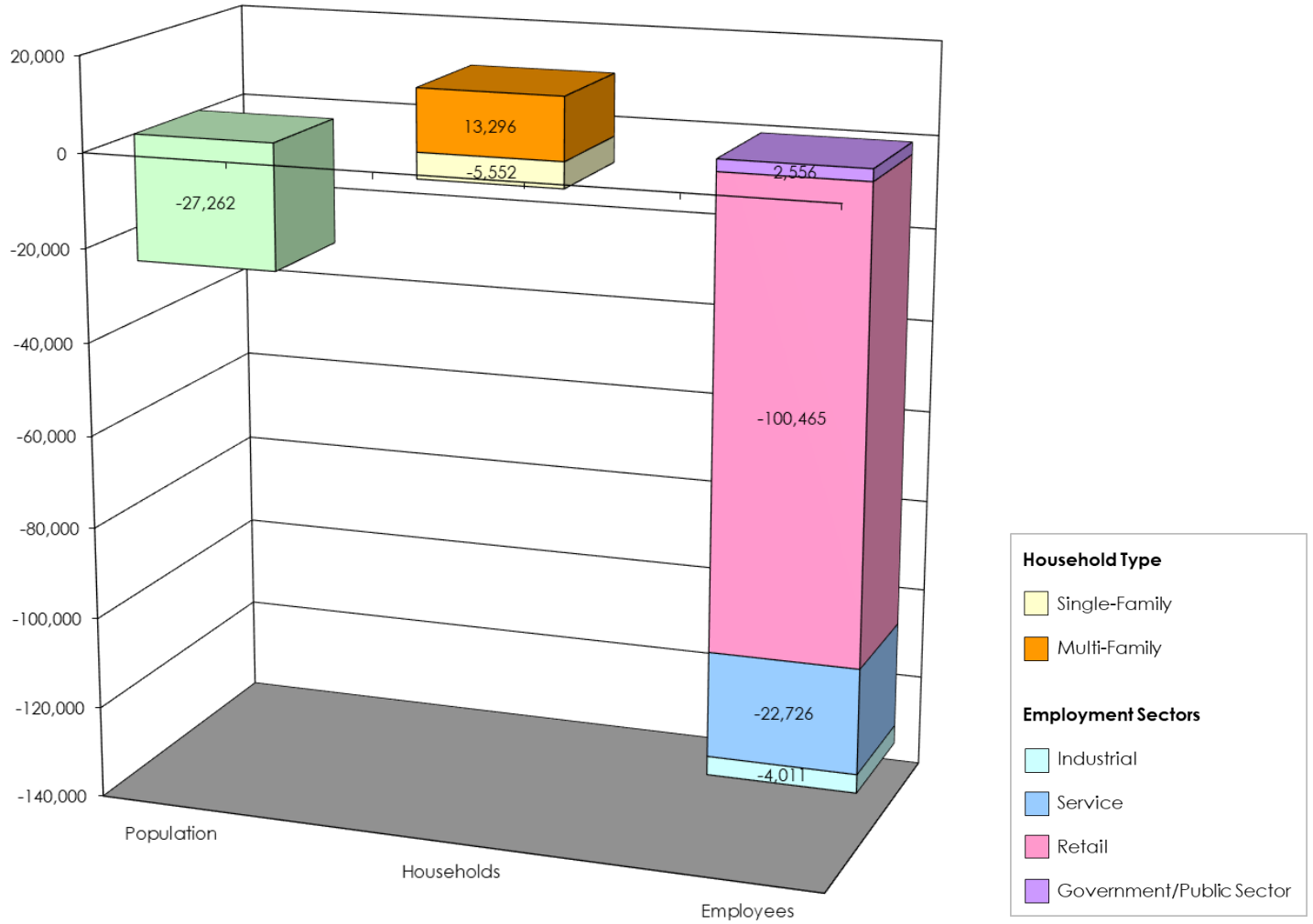
TUMF 2016 Nexus Update Comparison to TUMF 2024 Nexus Update



Sources:
Year 2012 to Year 2040 Growth (2016 Nexus Update): SCAG 2016 RTP/SCS; WSP, April 2016
Year 2018 to Year 2045 Growth (2024 Nexus Update): SCAG 2020 RTP/SCS

EXHIBIT B-4e

Difference in Population, Households and Employment Growth in Western Riverside County
TUMF 2016 Nexus Update Comparison to TUMF 2024 Nexus Update



Source:
Year 2012 to Year 2040 Growth (2016 Nexus Update): SCAG 2016 RTP/SCS; WSP, April 2016
Year 2018 to Year 2045 Growth (2024 Nexus Update): SCAG 2020 RTP/SCS

EXHIBIT B-5a

TUMF Non-Residential Category Detailed NAICS Correspondence Summary

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title
Industrial					
	Farming, Natural Resources and Mining				
		11	**Agriculture, Forestry, Fishing and Hunting**		
				111	Crop Production
				112	Animal Production and Aquaculture
				113	Forestry and Logging
				114	Fishing, Hunting and Trapping
				115	Support Activities for Agriculture and Forestry
		21	**Mining, Quarrying, and Oil and Gas Extraction**		
				211	Oil and Gas Extraction
				212	Mining (except Oil and Gas)
				213	Support Activities for Mining
	Construction				
		23	**Construction**		
				236	Construction of Buildings
				237	Heavy and Civil Engineering Construction
				238	Specialty Trade Contractors
	Manufacturing				
		31-33	**Manufacturing**		
				311	Food Manufacturing
				312	Beverage and Tobacco Product Manufacturing
				313	Textile Mills
				314	Textile Product Mills
				315	Apparel Manufacturing
				316	Leather and Allied Product Manufacturing
				321	Wood Product Manufacturing
				322	Paper Manufacturing
				323	Printing and Related Support Activities
				324	Petroleum and Coal Products Manufacturing
				325	Chemical Manufacturing
				326	Plastics and Rubber Products Manufacturing
				327	Nonmetallic Mineral Product Manufacturing
				331	Primary Metal Manufacturing
				332	Fabricated Metal Product Manufacturing
				333	Machinery Manufacturing
				334	Computer and Electronic Product Manufacturing
				335	Electrical Equipment, Appliance, and Component Manufacturing
				337	Furniture and Related Product Manufacturing
				339	Miscellaneous Manufacturing
	Wholesale Trade				
		42	**Wholesale Trade**		
				423	Merchant Wholesalers, Durable Goods
				424	Merchant Wholesalers, Nondurable Goods
				425	Wholesale Trade Agents and Brokers
	Transportation, Warehousing and Utilities				
		22	**Utilities**		
				221	Utilities
		48-49	**Transportation and Warehousing**		
				481	Air Transportation
				482	Rail Transportation
				483	Water Transportation
				484	Truck Transportation
				485	Transit and Ground Passenger Transportation
				486	Pipeline Transportation
				487	Scenic and Sightseeing Transportation
				488	Support Activities for Transportation
				491	Postal Service
				492	Couriers and Messengers
				493	Warehousing and Storage
Retail					
	Retail Trade				
		44-45	**Retail Trade**		
				441	Motor Vehicle and Parts Dealers
				444	Building Material and Garden Equipment and Supplies Dealers
				445	Food and Beverage Retailers
				449	Furniture, Home Furnishings, Electronics, and Appliance Retailers
				455	General Merchandise Retailers
				456	Health and Personal Care Retailers
				457	Gasoline Stations and Fuel Dealers
				458	Clothing, Clothing Accessories, Shoe, and Jewelry Retailers
				459	Sporting Goods, Hobby, Musical Instrument, Book, and Miscellaneous Retailers

TUMF Non-Residential Category Detailed NAICS Correspondence Summary

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title
Service					
	Information				
		51	**Information**		
				512	Motion Picture and Sound Recording Industries
				513	Publishing Industries
				516	Broadcasting and Content Providers
				517	Telecommunications
				518	Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services
				519	Web Search Portals, Libraries, Archives, and Other Information Services
	Financial Activities				
		52	**Finance and Insurance**		
				521	Monetary Authorities-Central Bank
				522	Credit Intermediation and Related Activities
				523	Securities, Commodity Contracts, and Other Financial Investments and Related Activities
				524	Insurance Carriers and Related Activities
				525	Funds, Trusts, and Other Financial Vehicles
		53	**Real Estate and Rental and Leasing**		
				531	Real Estate
				532	Rental and Leasing Services
				533	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)
	Professional and Business Services				
		54	**Professional, Scientific, and Technical Services**		
				541	Professional, Scientific, and Technical Services
		55	**Management of Companies and Enterprises**		
				551	Management of Companies and Enterprises
		56	**Administrative and Support and Waste Management and Remediation Services**		
				561	Administrative and Support Services
				562	Waste Management and Remediation Services
	Education and Health Services				
		61	**Educational Services**		
				611	Educational Services
		62	**Health Care and Social Assistance**		
				621	Ambulatory Health Care Services
				622	Hospitals
				623	Nursing and Residential Care Facilities
				624	Social Assistance
	Leisure and Hospitality				
		71	**Arts, Entertainment, and Recreation**		
				711	Performing Arts, Spectator Sports, and Related Industries
				712	Museums, Historical Sites, and Similar Institutions
				713	Amusement, Gambling, and Recreation Industries
		72	**Accommodation and Food Services**		
				721	Accommodation
				722	Food Services and Drinking Places
	Other Service				
		81	**Other Services (except Public Administration)**		
				811	Repair and Maintenance
				812	Personal and Laundry Services
				813	Religious, Grantmaking, Civic, Professional, and Similar Organizations
				814	Private Households
Government/Public Sector					
	Government				
		92	**Public Administration**		
				921	Executive, Legislative, and Other General Government Support
				922	Justice, Public Order, and Safety Activities
				923	Administration of Human Resource Programs
				924	Administration of Environmental Quality Programs
				925	Administration of Housing Programs, Urban Planning, and Community Development
				926	Administration of Economic Programs
				927	Space Research and Technology
				928	National Security and International Affairs

Source: SCAG 2020 RTP/SCS
California Employment Development Department (EDD)
US Census Bureau, North American Industry Classification System (NAICS), 2022

EXHIBIT B-5b

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF Category	SCAG RTP/SCS	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
	Employment Categories	NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
Industrial							
	Farming, Natural Resources and Mining						
		11	Agriculture, Forestry, Fishing and Hunting				
				111	Crop Production		
						111110	Soybean Farming
						111120	Oilseed (except Soybean) Farming
						111130	Dry Pea and Bean Farming
						111140	Wheat Farming
						111150	Corn Farming
						111160	Rice Farming
						111191	Oilseed and Grain Combination Farming
						111199	All Other Grain Farming
						111211	Potato Farming
						111219	Other Vegetable (except Potato) and Melon Farming
						111310	Orange Groves
						111320	Citrus (except Orange) Groves
						111331	Apple Orchards
						111332	Grape Vineyards
						111333	Strawberry Farming
						111334	Berry (except Strawberry) Farming
						111335	Tree Nut Farming
						111336	Fruit and Tree Nut Combination Farming
						111339	Other Noncitrus Fruit Farming
						111411	Mushroom Production
						111419	Other Food Crops Grown Under Cover
						111421	Nursery and Tree Production
						111422	Floriculture Production
						111910	Tobacco Farming
						111920	Cotton Farming
						111930	Sugarcane Farming
						111940	Hay Farming
						111991	Sugar Beet Farming
						111992	Peanut Farming
						111998	All Other Miscellaneous Crop Farming
				112	Animal Production and Aquaculture		
						112111	Beef Cattle Ranching and Farming
						112112	Cattle Feedlots
						112120	Dairy Cattle and Milk Production
						112130	Dual-Purpose Cattle Ranching and Farming
						112210	Hog and Pig Farming
						112310	Chicken Egg Production
						112320	Broilers and Other Meat Type Chicken Production
						112330	Turkey Production
						112340	Poultry Hatcheries
						112390	Other Poultry Production
						112410	Sheep Farming
						112420	Goat Farming
						112511	Finfish Farming and Fish Hatcheries
						112512	Shellfish Farming
						112519	Other Aquaculture
						112910	Apiculture
						112920	Horses and Other Equine Production
						112930	Fur-Bearing Animal and Rabbit Production
						112990	All Other Animal Production
				113	Forestry and Logging		
						113110	Timber Tract Operations
						113210	Forest Nurseries and Gathering of Forest Products
						113310	Logging
				114	Fishing, Hunting and Trapping		
						114111	Finfish Fishing
						114112	Shellfish Fishing
						114119	Other Marine Fishing
						114210	Hunting and Trapping
				115	Support Activities for Agriculture and Forestry		
						115111	Cotton Ginning
						115112	Soil Preparation, Planting, and Cultivating
						115113	Crop Harvesting, Primarily by Machine
						115114	Postharvest Crop Activities (except Cotton Ginning)
						115115	Farm Labor Contractors and Crew Leaders
						115116	Farm Management Services
						115210	Support Activities for Animal Production
						115310	Support Activities for Forestry
		21	Mining, Quarrying, and Oil and Gas Extraction				
				211	Oil and Gas Extraction		
						211120	Crude Petroleum Extraction
						211130	Natural Gas Extraction
				212	Mining (except Oil and Gas)		
						212114	Surface Coal Mining
						212115	Underground Coal Mining
						212210	Iron Ore Mining
						212220	Gold Ore and Silver Ore Mining
						212230	Copper, Nickel, Lead, and Zinc Mining
						212290	Other Metal Ore Mining
						212311	Dimension Stone Mining and Quarrying
						212312	Crushed and Broken Limestone Mining and Quarrying
						212313	Crushed and Broken Granite Mining and Quarrying
						212319	Other Crushed and Broken Stone Mining and Quarrying
						212321	Construction Sand and Gravel Mining
						212322	Industrial Sand Mining
						212323	Kaolin, Clay, and Ceramic and Refractory Minerals Mining
						212390	Other Nonmetallic Mineral Mining and Quarrying
				213	Support Activities for Mining		
						213111	Drilling Oil and Gas Wells
						213112	Support Activities for Oil and Gas Operations
						213113	Support Activities for Coal Mining
						213114	Support Activities for Metal Mining
						213115	Support Activities for Nonmetallic Minerals (except Fuels) Mining

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
	Construction						
		23	Construction				
				236	Construction of Buildings		
						236115	New Single-Family Housing Construction (except For-Sale Builders)
						236116	New Multifamily Housing Construction (except For-Sale Builders)
						236117	New Housing For-Sale Builders
						236118	Residential Remodelers
						236210	Industrial Building Construction
						236220	Commercial and Institutional Building Construction
				237	Heavy and Civil Engineering Construction		
						237110	Water and Sewer Line and Related Structures Construction
						237120	Oil and Gas Pipeline and Related Structures Construction
						237130	Power and Communication Line and Related Structures Construction
						237210	Land Subdivision
						237310	Highway, Street, and Bridge Construction
						237990	Other Heavy and Civil Engineering Construction
				238	Specialty Trade Contractors		
						238110	Poured Concrete Foundation and Structure Contractors
						238120	Structural Steel and Precast Concrete Contractors
						238130	Framing Contractors
						238140	Masonry Contractors
						238150	Glass and Glazing Contractors
						238160	Roofing Contractors
						238170	Siding Contractors
						238190	Other Foundation, Structure, and Building Exterior Contractors
						238210	Electrical Contractors and Other Wiring Installation Contractors
						238220	Plumbing, Heating, and Air-Conditioning Contractors
						238290	Other Building Equipment Contractors
						238310	Drywall and Insulation Contractors
						238320	Painting and Wall Covering Contractors
						238330	Flooring Contractors
						238340	Tile and Terrazzo Contractors
						238350	Finish Carpentry Contractors
						238390	Other Building Finishing Contractors
						238910	Site Preparation Contractors
						238990	All Other Specialty Trade Contractors
	Manufacturing						
		31-33	Manufacturing				
				311	Food Manufacturing		
						311111	Dog and Cat Food Manufacturing
						311119	Other Animal Food Manufacturing
						311211	Flour Milling
						311212	Rice Milling
						311213	Malt Manufacturing
						311221	Wet Corn Milling and Starch Manufacturing
						311224	Soybean and Other Oilseed Processing
						311225	Fats and Oils Refining and Blending
						311230	Breakfast Cereal Manufacturing
						311313	Beet Sugar Manufacturing
						311314	Cane Sugar Manufacturing
						311340	Nonchocolate Confectionery Manufacturing
						311351	Chocolate and Confectionery Manufacturing from Cacao Beans
						311352	Confectionery Manufacturing from Purchased Chocolate
						311411	Frozen Fruit, Juice, and Vegetable Manufacturing
						311412	Frozen Specialty Food Manufacturing
						311421	Fruit and Vegetable Canning
						311422	Specialty Canning
						311423	Dried and Dehydrated Food Manufacturing
						311511	Fluid Milk Manufacturing
						311512	Creamery Butter Manufacturing
						311513	Cheese Manufacturing
						311514	Dry, Condensed, and Evaporated Dairy Product Manufacturing
						311520	Ice Cream and Frozen Dessert Manufacturing
						311611	Animal (except Poultry) Slaughtering
						311612	Meat Processed from Carcasses
						311613	Rendering and Meat Byproduct Processing
						311615	Poultry Processing
						311710	Seafood Product Preparation and Packaging
						311811	Retail Bakeries
						311812	Commercial Bakeries
						311813	Frozen Cakes, Pies, and Other Pastries Manufacturing
						311821	Cookie and Cracker Manufacturing
						311824	Dry Pasta, Dough, and Flour Mixes Manufacturing from Purchased Flour
						311830	Tortilla Manufacturing
						311911	Roasted Nuts and Peanut Butter Manufacturing
						311919	Other Snack Food Manufacturing
						311920	Coffee and Tea Manufacturing
						311930	Flavoring Syrup and Concentrate Manufacturing
						311941	Mayonnaise, Dressing, and Other Prepared Sauce Manufacturing
						311942	Spice and Extract Manufacturing
						311991	Perishable Prepared Food Manufacturing
						311999	All Other Miscellaneous Food Manufacturing
				312	Beverage and Tobacco Product Manufacturing		
						312111	Soft Drink Manufacturing
						312112	Bottled Water Manufacturing
						312113	Ice Manufacturing
						312120	Breweries
						312130	Wineries
						312140	Distilleries
						312230	Tobacco Manufacturing
				313	Textile Mills		
						313110	Fiber, Yarn, and Thread Mills
						313210	Broadwoven Fabric Mills
						313220	Narrow Fabric Mills and Schiffli Machine Embroidery
						313230	Nonwoven Fabric Mills
						313240	Knit Fabric Mills
						313310	Textile and Fabric Finishing Mills
						313320	Fabric Coating Mills
				314	Textile Product Mills		
						314110	Carpet and Rug Mills
						314120	Curtain and Linen Mills
						314910	Textile Bag and Canvas Mills
						314994	Rope, Cordage, Twine, Tire Cord, and Tire Fabric Mills
						314999	All Other Miscellaneous Textile Product Mills
				315	Apparel Manufacturing		
						315120	Apparel Knitting Mills
						315210	Cut and Sew Apparel Contractors
						315250	Cut and Sew Apparel Manufacturing (except Contractors)
						315990	Apparel Accessories and Other Apparel Manufacturing
				316	Leather and Allied Product Manufacturing		
						316110	Leather and Hide Tanning and Finishing
						316210	Footwear Manufacturing
						316990	Other Leather and Allied Product Manufacturing

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
				321	Wood Product Manufacturing		
						321113	Sawmills
						321114	Wood Preservation
						321211	Hardwood Veneer and Plywood Manufacturing
						321212	Softwood Veneer and Plywood Manufacturing
						321215	Engineered Wood Member Manufacturing
						321219	Reconstituted Wood Product Manufacturing
						321911	Wood Window and Door Manufacturing
						321912	Cut Stock, Resawing Lumber, and Planing
						321918	Other Millwork (including Flooring)
						321920	Wood Container and Pallet Manufacturing
						321991	Manufactured Home (Mobile Home) Manufacturing
						321992	Prefabricated Wood Building Manufacturing
						321999	All Other Miscellaneous Wood Product Manufacturing
				322	Paper Manufacturing		
						322110	Pulp Mills
						322120	Paper Mills
						322130	Paperboard Mills
						322211	Corrugated and Solid Fiber Box Manufacturing
						322212	Folding Paperboard Box Manufacturing
						322219	Other Paperboard Container Manufacturing
						322220	Paper Bag and Coated and Treated Paper Manufacturing
						322230	Stationery Product Manufacturing
						322291	Sanitary Paper Product Manufacturing
						322299	All Other Converted Paper Product Manufacturing
				323	Printing and Related Support Activities		
						323111	Commercial Printing (except Screen and Books)
						323113	Commercial Screen Printing
						323117	Books Printing
						323120	Support Activities for Printing
				324	Petroleum and Coal Products Manufacturing		
						324110	Petroleum Refineries
						324121	Asphalt Paving Mixture and Block Manufacturing
						324122	Asphalt Shingle and Coating Materials Manufacturing
						324191	Petroleum Lubricating Oil and Grease Manufacturing
						324199	All Other Petroleum and Coal Products Manufacturing
				325	Chemical Manufacturing		
						325110	Petrochemical Manufacturing
						325120	Industrial Gas Manufacturing
						325130	Synthetic Dye and Pigment Manufacturing
						325180	Other Basic Inorganic Chemical Manufacturing
						325193	Ethyl Alcohol Manufacturing
						325194	Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing
						325199	All Other Basic Organic Chemical Manufacturing
						325211	Plastics Material and Resin Manufacturing
						325212	Synthetic Rubber Manufacturing
						325220	Artificial and Synthetic Fibers and Filaments Manufacturing
						325311	Nitrogenous Fertilizer Manufacturing
						325312	Phosphatic Fertilizer Manufacturing
						325314	Fertilizer (Mixing Only) Manufacturing
						325315	Compost Manufacturing
						325320	Pesticide and Other Agricultural Chemical Manufacturing
						325411	Medicinal and Botanical Manufacturing
						325412	Pharmaceutical Preparation Manufacturing
						325413	In-Vitro Diagnostic Substance Manufacturing
						325414	Biological Product (except Diagnostic) Manufacturing
						325510	Paint and Coating Manufacturing
						325520	Adhesive Manufacturing
						325611	Soap and Other Detergent Manufacturing
						325612	Polish and Other Sanitation Good Manufacturing
						325613	Surface Active Agent Manufacturing
						325620	Toilet Preparation Manufacturing
						325910	Printing Ink Manufacturing
						325920	Explosives Manufacturing
						325991	Custom Compounding of Purchased Resins
						325992	Photographic Film, Paper, Plate, Chemical, and Copy Toner Manufacturing
						325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing
				326	Plastics and Rubber Products Manufacturing		
						326111	Plastics Bag and Pouch Manufacturing
						326112	Plastics Packaging Film and Sheet (including Laminated) Manufacturing
						326113	Unlaminated Plastics Film and Sheet (except Packaging) Manufacturing
						326121	Unlaminated Plastics Profile Shape Manufacturing
						326122	Plastics Pipe and Pipe Fitting Manufacturing
						326130	Laminated Plastics Plate, Sheet (except Packaging), and Shape Manufacturing
						326140	Polystyrene Foam Product Manufacturing
						326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
						326160	Plastics Bottle Manufacturing
						326191	Plastics Plumbing Fixture Manufacturing
						326199	All Other Plastics Product Manufacturing
						326211	Tire Manufacturing (except Retreading)
						326212	Tire Retreading
						326220	Rubber and Plastics Hoses and Belting Manufacturing
						326291	Rubber Product Manufacturing for Mechanical Use
						326299	All Other Rubber Product Manufacturing
				327	Nonmetallic Mineral Product Manufacturing		
						327110	Pottery, Ceramics, and Plumbing Fixture Manufacturing
						327120	Clay Building Material and Refractories Manufacturing
						327211	Flat Glass Manufacturing
						327212	Other Pressed and Blown Glass and Glassware Manufacturing
						327213	Glass Container Manufacturing
						327215	Glass Product Manufacturing Made of Purchased Glass
						327310	Cement Manufacturing
						327320	Ready-Mix Concrete Manufacturing
						327331	Concrete Block and Brick Manufacturing
						327332	Concrete Pipe Manufacturing
						327390	Other Concrete Product Manufacturing
						327410	Lime Manufacturing
						327420	Gypsum Product Manufacturing
						327910	Abrasive Product Manufacturing
						327991	Cut Stone and Stone Product Manufacturing
						327992	Ground or Treated Mineral and Earth Manufacturing
						327993	Mineral Wool Manufacturing
						327999	All Other Miscellaneous Nonmetallic Mineral Product Manufacturing

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
				331	Primary Metal Manufacturing		
						331110	Iron and Steel Mills and Ferroalloy Manufacturing
						331210	Iron and Steel Pipe and Tube Manufacturing from Purchased Steel
						331221	Rolled Steel Shape Manufacturing
						331222	Steel Wire Drawing
						331313	Alumina Refining and Primary Aluminum Production
						331314	Secondary Smelting and Alloying of Aluminum
						331315	Aluminum Sheet, Plate, and Foil Manufacturing
						331318	Other Aluminum Rolling, Drawing, and Extruding
						331410	Nonferrous Metal (except Aluminum) Smelting and Refining
						331420	Copper Rolling, Drawing, Extruding, and Alloying
						331491	Nonferrous Metal (except Copper and Aluminum) Rolling, Drawing, and Extruding
						331492	Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum)
						331511	Iron Foundries
						331512	Steel Investment Foundries
						331513	Steel Foundries (except Investment)
						331523	Nonferrous Metal Die-Casting Foundries
						331524	Aluminum Foundries (except Die-Casting)
						331529	Other Nonferrous Metal Foundries (except Die-Casting)
				332	Fabricated Metal Product Manufacturing		
						332111	Iron and Steel Forging
						332112	Nonferrous Forging
						332114	Custom Roll Forming
						332117	Powder Metallurgy Part Manufacturing
						332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)
						332215	Metal Kitchen Cookware, Utensil, Cutlery, and Flatware (except Precious) Manufacturing
						332216	Saw Blade and Handtool Manufacturing
						332311	Prefabricated Metal Building and Component Manufacturing
						332312	Fabricated Structural Metal Manufacturing
						332313	Plate Work Manufacturing
						332321	Metal Window and Door Manufacturing
						332322	Sheet Metal Work Manufacturing
						332323	Ornamental and Architectural Metal Work Manufacturing
						332410	Power Boiler and Heat Exchanger Manufacturing
						332420	Metal Tank (Heavy Gauge) Manufacturing
						332431	Metal Can Manufacturing
						332439	Other Metal Container Manufacturing
						332510	Hardware Manufacturing
						332613	Spring Manufacturing
						332618	Other Fabricated Wire Product Manufacturing
						332710	Machine Shops
						332721	Precision Turned Product Manufacturing
						332722	Bolt, Nut, Screw, Rivet, and Washer Manufacturing
						332811	Metal Heat Treating
						332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers
						332813	Electroplating, Plating, Polishing, Anodizing, and Coloring
						332911	Industrial Valve Manufacturing
						332912	Fluid Power Valve and Hose Fitting Manufacturing
						332913	Plumbing Fixture Fitting and Trim Manufacturing
						332919	Other Metal Valve and Pipe Fitting Manufacturing
						332991	Ball and Roller Bearing Manufacturing
						332992	Small Arms Ammunition Manufacturing
						332993	Ammunition (except Small Arms) Manufacturing
						332994	Small Arms, Ordnance, and Ordnance Accessories Manufacturing
						332996	Fabricated Pipe and Pipe Fitting Manufacturing
						332999	All Other Miscellaneous Fabricated Metal Product Manufacturing
				333	Machinery Manufacturing		
						333111	Farm Machinery and Equipment Manufacturing
						333112	Lawn and Garden Tractor and Home Lawn and Garden Equipment Manufacturing
						333120	Construction Machinery Manufacturing
						333131	Mining Machinery and Equipment Manufacturing
						333132	Oil and Gas Field Machinery and Equipment Manufacturing
						333241	Food Product Machinery Manufacturing
						333242	Semiconductor Machinery Manufacturing
						333243	Sawmill, Woodworking, and Paper Machinery Manufacturing
						333248	All Other Industrial Machinery Manufacturing
						333310	Commercial and Service Industry Machinery Manufacturing
						333413	Industrial and Commercial Fan and Blower and Air Purification Equipment Manufacturing
						333414	Heating Equipment (except Warm Air Furnaces) Manufacturing
						333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturin
						333511	Industrial Mold Manufacturing
						333514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing
						333515	Cutting Tool and Machine Tool Accessory Manufacturing
						333517	Machine Tool Manufacturing
						333519	Rolling Mill and Other Metalworking Machinery Manufacturing
						333611	Turbine and Turbine Generator Set Units Manufacturing
						333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing
						333613	Mechanical Power Transmission Equipment Manufacturing
						333618	Other Engine Equipment Manufacturing
						333912	Air and Gas Compressor Manufacturing
						333914	Measuring, Dispensing, and Other Pumping Equipment Manufacturing
						333921	Elevator and Moving Stairway Manufacturing
						333922	Conveyor and Conveying Equipment Manufacturing
						333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing
						333924	Industrial Truck, Tractor, Trailer, and Stacker Machinery Manufacturing
						333991	Power-Driven Handtool Manufacturing
						333992	Welding and Soldering Equipment Manufacturing
						333993	Packaging Machinery Manufacturing
						333994	Industrial Process Furnace and Oven Manufacturing
						333995	Fluid Power Cylinder and Actuator Manufacturing
						333996	Fluid Power Pump and Motor Manufacturing
						333998	All Other Miscellaneous General Purpose Machinery Manufacturing
				334	Computer and Electronic Product Manufacturing		
						334111	Electronic Computer Manufacturing
						334112	Computer Storage Device Manufacturing
						334118	Computer Terminal and Other Computer Peripheral Equipment Manufacturing
						334210	Telephone Apparatus Manufacturing
						334220	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing
						334290	Other Communications Equipment Manufacturing
						334310	Audio and Video Equipment Manufacturing
						334412	Bare Printed Circuit Board Manufacturing
						334413	Semiconductor and Related Device Manufacturing
						334416	Capacitor, Resistor, Coil, Transformer, and Other Inductor Manufacturing
						334417	Electronic Connector Manufacturing
						334418	Printed Circuit Assembly (Electronic Assembly) Manufacturing
						334419	Other Electronic Component Manufacturing
						334510	Electromedical and Electrotherapeutic Apparatus Manufacturing
						334511	Search, Detection, Navigation, Guidance, Aeronautical, and Nautical System and Instrument Manufacturing
						334512	Automatic Environmental Control Manufacturing for Residential, Commercial, and Appliance Use
						334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables
						334514	Totalizing Fluid Meter and Counting Device Manufacturing
						334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals
						334516	Analytical Laboratory Instrument Manufacturing
						334517	Irradiation Apparatus Manufacturing
						334519	Other Measuring and Controlling Device Manufacturing
						334610	Manufacturing and Reproducing Magnetic and Optical Media

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TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
				335	Electrical Equipment, Appliance, and Component Manufacturing		
						335131	Residential Electric Lighting Fixture Manufacturing
						335132	Commercial, Industrial, and Institutional Electric Lighting Fixture Manufacturing
						335139	Electric Lamp Bulb and Other Lighting Equipment Manufacturing
						335210	Small Electrical Appliance Manufacturing
						335220	Major Household Appliance Manufacturing
						335311	Power, Distribution, and Specialty Transformer Manufacturing
						335312	Motor and Generator Manufacturing
						335313	Switchgear and Switchboard Apparatus Manufacturing
						335314	Relay and Industrial Control Manufacturing
						335910	Battery Manufacturing
						335921	Fiber Optic Cable Manufacturing
						335929	Other Communication and Energy Wire Manufacturing
						335931	Current-Carrying Wiring Device Manufacturing
						335932	Noncurrent-Carrying Wiring Device Manufacturing
						335991	Carbon and Graphite Product Manufacturing
						335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing
				336	Transportation Equipment Manufacturing		
						336110	Automobile and Light Duty Motor Vehicle Manufacturing
						336120	Heavy Duty Truck Manufacturing
						336211	Motor Vehicle Body Manufacturing
						336212	Truck Trailer Manufacturing
						336213	Motor Home Manufacturing
						336214	Travel Trailer and Camper Manufacturing
						336310	Motor Vehicle Gasoline Engine and Engine Parts Manufacturing
						336320	Motor Vehicle Electrical and Electronic Equipment Manufacturing
						336330	Motor Vehicle Steering and Suspension Components (except Spring) Manufacturing
						336340	Motor Vehicle Brake System Manufacturing
						336350	Motor Vehicle Transmission and Power Train Parts Manufacturing
						336360	Motor Vehicle Seating and Interior Trim Manufacturing
						336370	Motor Vehicle Metal Stamping
						336390	Other Motor Vehicle Parts Manufacturing
						336411	Aircraft Manufacturing
						336412	Aircraft Engine and Engine Parts Manufacturing
						336413	Other Aircraft Parts and Auxiliary Equipment Manufacturing
						336414	Guided Missile and Space Vehicle Manufacturing
						336415	Guided Missile and Space Vehicle Propulsion Unit and Propulsion Unit Parts Manufacturing
						336419	Other Guided Missile and Space Vehicle Parts and Auxiliary Equipment Manufacturing
						336510	Railroad Rolling Stock Manufacturing
						336611	Ship Building and Repairing
						336612	Boat Building
						336991	Motorcycle, Bicycle, and Parts Manufacturing
						336992	Military Armored Vehicle, Tank, and Tank Component Manufacturing
						336999	All Other Transportation Equipment Manufacturing
				337	Furniture and Related Product Manufacturing		
						337110	Wood Kitchen Cabinet and Countertop Manufacturing
						337121	Upholstered Household Furniture Manufacturing
						337122	Nonupholstered Wood Household Furniture Manufacturing
						337126	Household Furniture (except Wood and Upholstered) Manufacturing
						337127	Institutional Furniture Manufacturing
						337211	Wood Office Furniture Manufacturing
						337212	Custom Architectural Woodwork and Millwork Manufacturing
						337214	Office Furniture (except Wood) Manufacturing
						337215	Showcase, Partition, Shelving, and Locker Manufacturing
						337910	Mattress Manufacturing
						337920	Blind and Shade Manufacturing
				339	Miscellaneous Manufacturing		
						339112	Surgical and Medical Instrument Manufacturing
						339113	Surgical Appliance and Supplies Manufacturing
						339114	Dental Equipment and Supplies Manufacturing
						339115	Ophthalmic Goods Manufacturing
						339116	Dental Laboratories
						339910	Jewelry and Silverware Manufacturing
						339920	Sporting and Athletic Goods Manufacturing
						339930	Doll, Toy, and Game Manufacturing
						339940	Office Supplies (except Paper) Manufacturing
						339950	Sign Manufacturing
						339991	Gasket, Packing, and Sealing Device Manufacturing
						339992	Musical Instrument Manufacturing
						339993	Fastener, Button, Needle, and Pin Manufacturing
						339994	Broom, Brush, and Mop Manufacturing
						339995	Burial Casket Manufacturing
						339999	All Other Miscellaneous Manufacturing
	Wholesale Trade						
		42	Wholesale Trade				
				423	Merchant Wholesalers, Durable Goods		
						423110	Automobile and Other Motor Vehicle Merchant Wholesalers
						423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers
						423130	Tire and Tube Merchant Wholesalers
						423140	Motor Vehicle Parts (Used) Merchant Wholesalers
						423210	Furniture Merchant Wholesalers
						423220	Home Furnishing Merchant Wholesalers
						423310	Lumber, Plywood, Millwork, and Wood Panel Merchant Wholesalers
						423320	Brick, Stone, and Related Construction Material Merchant Wholesalers
						423330	Roofing, Siding, and Insulation Material Merchant Wholesalers
						423390	Other Construction Material Merchant Wholesalers
						423410	Photographic Equipment and Supplies Merchant Wholesalers
						423420	Office Equipment Merchant Wholesalers
						423430	Computer and Computer Peripheral Equipment and Software Merchant Wholesalers
						423440	Other Commercial Equipment Merchant Wholesalers
						423450	Medical, Dental, and Hospital Equipment and Supplies Merchant Wholesalers
						423460	Ophthalmic Goods Merchant Wholesalers
						423490	Other Professional Equipment and Supplies Merchant Wholesalers
						423510	Metal Service Centers and Other Metal Merchant Wholesalers
						423520	Coal and Other Mineral and Ore Merchant Wholesalers
						423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers
						423620	Household Appliances, Electric Housewares, and Consumer Electronics Merchant Wholesalers
						423690	Other Electronic Parts and Equipment Merchant Wholesalers
						423710	Hardware Merchant Wholesalers
						423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers
						423730	Warm Air Heating and Air-Conditioning Equipment and Supplies Merchant Wholesalers
						423740	Refrigeration Equipment and Supplies Merchant Wholesalers
						423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers
						423820	Farm and Garden Machinery and Equipment Merchant Wholesalers
						423830	Industrial Machinery and Equipment Merchant Wholesalers
						423840	Industrial Supplies Merchant Wholesalers
						423850	Service Establishment Equipment and Supplies Merchant Wholesalers
						423860	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers
						423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers
						423920	Toy and Hobby Goods and Supplies Merchant Wholesalers
						423930	Recyclable Material Merchant Wholesalers
						423940	Jewelry, Watch, Precious Stone, and Precious Metal Merchant Wholesalers
						423990	Other Miscellaneous Durable Goods Merchant Wholesalers

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TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
				424	Merchant Wholesalers, Nondurable Goods		
						424110	Printing and Writing Paper Merchant Wholesalers
						424120	Stationery and Office Supplies Merchant Wholesalers
						424130	Industrial and Personal Service Paper Merchant Wholesalers
						424210	Drugs and Druggists' Sundries Merchant Wholesalers
						424310	Piece Goods, Notions, and Other Dry Goods Merchant Wholesalers
						424340	Footwear Merchant Wholesalers
						424350	Clothing and Clothing Accessories Merchant Wholesalers
						424410	General Line Grocery Merchant Wholesalers
						424420	Packaged Frozen Food Merchant Wholesalers
						424430	Dairy Product (except Dried or Canned) Merchant Wholesalers
						424440	Poultry and Poultry Product Merchant Wholesalers
						424450	Confectionery Merchant Wholesalers
						424460	Fish and Seafood Merchant Wholesalers
						424470	Meat and Meat Product Merchant Wholesalers
						424480	Fresh Fruit and Vegetable Merchant Wholesalers
						424490	Other Grocery and Related Products Merchant Wholesalers
						424510	Grain and Field Bean Merchant Wholesalers
						424520	Livestock Merchant Wholesalers
						424590	Other Farm Product Raw Material Merchant Wholesalers
						424610	Plastics Materials and Basic Forms and Shapes Merchant Wholesalers
						424690	Other Chemical and Allied Products Merchant Wholesalers
						424710	Petroleum Bulk Stations and Terminals
						424720	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)
						424810	Beer and Ale Merchant Wholesalers
						424820	Wine and Distilled Alcoholic Beverage Merchant Wholesalers
						424910	Farm Supplies Merchant Wholesalers
						424920	Book, Periodical, and Newspaper Merchant Wholesalers
						424930	Flower, Nursery Stock, and Florists' Supplies Merchant Wholesalers
						424940	Tobacco Product and Electronic Cigarette Merchant Wholesalers
						424950	Paint, Varnish, and Supplies Merchant Wholesalers
						424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers
				425	Wholesale Trade Agents and Brokers		
						425120	Wholesale Trade Agents and Brokers
	Transportation, Warehousing and Utilities						
		22	Utilities				
				221	Utilities		
						221111	Hydroelectric Power Generation
						221112	Fossil Fuel Electric Power Generation
						221113	Nuclear Electric Power Generation
						221114	Solar Electric Power Generation
						221115	Wind Electric Power Generation
						221116	Geothermal Electric Power Generation
						221117	Biomass Electric Power Generation
						221118	Other Electric Power Generation
						221121	Electric Bulk Power Transmission and Control
						221122	Electric Power Distribution
						221210	Natural Gas Distribution
						221310	Water Supply and Irrigation Systems
						221320	Sewage Treatment Facilities
						221330	Steam and Air-Conditioning Supply
		48-49	Transportation and Warehousing				
				481	Air Transportation		
						481111	Scheduled Passenger Air Transportation
						481112	Scheduled Freight Air Transportation
						481211	Nonscheduled Chartered Passenger Air Transportation
						481212	Nonscheduled Chartered Freight Air Transportation
						481219	Other Nonscheduled Air Transportation
				482	Rail Transportation		
						482111	Line-Haul Railroads
						482112	Short Line Railroads
				483	Water Transportation		
						483111	Deep Sea Freight Transportation
						483112	Deep Sea Passenger Transportation
						483113	Coastal and Great Lakes Freight Transportation
						483114	Coastal and Great Lakes Passenger Transportation
						483211	Inland Water Freight Transportation
						483212	Inland Water Passenger Transportation
				484	Truck Transportation		
						484110	General Freight Trucking, Local
						484121	General Freight Trucking, Long-Distance, Truckload
						484122	General Freight Trucking, Long-Distance, Less Than Truckload
						484210	Used Household and Office Goods Moving
						484220	Specialized Freight (except Used Goods) Trucking, Local
						484230	Specialized Freight (except Used Goods) Trucking, Long-Distance
				485	Transit and Ground Passenger Transportation		
						485111	Mixed Mode Transit Systems
						485112	Commuter Rail Systems
						485113	Bus and Other Motor Vehicle Transit Systems
						485119	Other Urban Transit Systems
						485210	Interurban and Rural Bus Transportation
						485310	Taxi and Ridesharing Services
						485320	Limousine Service
						485410	School and Employee Bus Transportation
						485510	Charter Bus Industry
						485991	Special Needs Transportation
						485999	All Other Transit and Ground Passenger Transportation
				486	Pipeline Transportation		
						486110	Pipeline Transportation of Crude Oil
						486210	Pipeline Transportation of Natural Gas
						486910	Pipeline Transportation of Refined Petroleum Products
						486990	All Other Pipeline Transportation
				487	Scenic and Sightseeing Transportation		
						487110	Scenic and Sightseeing Transportation, Land
						487210	Scenic and Sightseeing Transportation, Water
						487990	Scenic and Sightseeing Transportation, Other
				488	Support Activities for Transportation		
						488111	Air Traffic Control
						488119	Other Airport Operations
						488190	Other Support Activities for Air Transportation
						488210	Support Activities for Rail Transportation
						488310	Port and Harbor Operations
						488320	Marine Cargo Handling
						488330	Navigational Services to Shipping
						488390	Other Support Activities for Water Transportation
						488410	Motor Vehicle Towing
						488490	Other Support Activities for Road Transportation
						488510	Freight Transportation Arrangement
						488991	Packing and Crating
						488999	All Other Support Activities for Transportation
				491	Postal Service		
						491110	Postal Service
				492	Couriers and Messengers		
						492110	Couriers and Express Delivery Services
						492210	Local Messengers and Local Delivery
				493	Warehousing and Storage		
						493110	General Warehousing and Storage
						493120	Refrigerated Warehousing and Storage
						493130	Farm Product Warehousing and Storage
						493190	Other Warehousing and Storage

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		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
Retail							
	Retail Trade						
		44-45	**Retail Trade**				
				441	**Motor Vehicle and Parts Dealers**		
						441110	New Car Dealers
						441120	Used Car Dealers
						441210	Recreational Vehicle Dealers
						441222	Boat Dealers
						441227	Motorcycle, ATV, and All Other Motor Vehicle Dealers
						441330	Automotive Parts and Accessories Retailers
						441340	Tire Dealers
				444	**Building Material and Garden Equipment and Supplies Dealers**		
						444110	Home Centers
						444120	Paint and Wallpaper Retailers
						444140	Hardware Retailers
						444180	Other Building Material Dealers
						444230	Outdoor Power Equipment Retailers
						444240	Nursery, Garden Center, and Farm Supply Retailers
				445	**Food and Beverage Retailers**		
						445110	Supermarkets and Other Grocery Retailers (except Convenience Retailers)
						445131	Convenience Retailers
						445132	Vending Machine Operators
						445230	Fruit and Vegetable Retailers
						445240	Meat Retailers
						445250	Fish and Seafood Retailers
						445291	Baked Goods Retailers
						445292	Confectionery and Nut Retailers
						445298	All Other Specialty Food Retailers
						445320	Beer, Wine, and Liquor Retailers
				449	**Furniture, Home Furnishings, Electronics, and Appliance Retailers**		
						449110	Furniture Retailers
						449121	Floor Covering Retailers
						449122	Window Treatment Retailers
						449129	All Other Home Furnishings Retailers
						449210	Electronics and Appliance Retailers
				455	**General Merchandise Retailers**		
						455110	Department Stores
						455211	Warehouse Clubs and Supercenters
						455219	All Other General Merchandise Retailers
				456	**Health and Personal Care Retailers**		
						456110	Pharmacies and Drug Retailers
						456120	Cosmetics, Beauty Supplies, and Perfume Retailers
						456130	Optical Goods Retailers
						456191	Food (Health) Supplement Retailers
						456199	All Other Health and Personal Care Retailers
				457	**Gasoline Stations and Fuel Dealers**		
						457110	Gasoline Stations with Convenience Stores
						457120	Other Gasoline Stations
						457210	Fuel Dealers
				458	**Clothing, Clothing Accessories, Shoe, and Jewelry Retailers**		
						458110	Clothing and Clothing Accessories Retailers
						458210	Shoe Retailers
						458310	Jewelry Retailers
						458320	Luggage and Leather Goods Retailers
				459	**Sporting Goods, Hobby, Musical Instrument, Book, and Miscellaneous Retailers**		
						459110	Sporting Goods Retailers
						459120	Hobby, Toy, and Game Retailers
						459130	Sewing, Needlework, and Piece Goods Retailers
						459140	Musical Instrument and Supplies Retailers
						459210	Book Retailers and News Dealers
						459310	Florists
						459410	Office Supplies and Stationery Retailers
						459420	Gift, Novelty, and Souvenir Retailers
						459510	Used Merchandise Retailers
						459910	Pet and Pet Supplies Retailers
						459920	Art Dealers
						459930	Manufactured (Mobile) Home Dealers
						459991	Tobacco, Electronic Cigarette, and Other Smoking Supplies Retailers
						459999	All Other Miscellaneous Retailers

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		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
Service							
	Information						
		51	**Information**				
				512	**Motion Picture and Sound Recording Industries**		
						512110	Motion Picture and Video Production
						512120	Motion Picture and Video Distribution
						512131	Motion Picture Theaters (except Drive-Ins)
						512132	Drive-In Motion Picture Theaters
						512191	Teleproduction and Other Postproduction Services
						512199	Other Motion Picture and Video Industries
						512230	Music Publishers
						512240	Sound Recording Studios
						512250	Record Production and Distribution
						512290	Other Sound Recording Industries
				513	**Publishing Industries**		
						513110	Newspaper Publishers
						513120	Periodical Publishers
						513130	Book Publishers
						513140	Directory and Mailing List Publishers
						513191	Greeting Card Publishers
						513199	All Other Publishers
						513210	Software Publishers
				516	**Broadcasting and Content Providers**		
						516110	Radio Broadcasting Stations
						516120	Television Broadcasting Stations
						516210	Media Streaming Distribution Services, Social Networks, and Other Media Networks and Content Providers
				517	**Telecommunications**		
						517111	Wired Telecommunications Carriers
						517112	Wireless Telecommunications Carriers (except Satellite)
						517121	Telecommunications Resellers
						517122	Agents for Wireless Telecommunications Services
						517410	Satellite Telecommunications
						517810	All Other Telecommunications
				518	**Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services**		
						518210	Computing Infrastructure Providers, Data Processing, Web Hosting, and Related Services
				519	**Web Search Portals, Libraries, Archives, and Other Information Services**		
						519210	Libraries and Archives
						519290	Web Search Portals and All Other Information Services
	Financial Activities						
		52	**Finance and Insurance**				
				521	**Monetary Authorities-Central Bank**		
						521110	Monetary Authorities-Central Bank
				522	**Credit Intermediation and Related Activities**		
						522110	Commercial Banking
						522130	Credit Unions
						522180	Savings Institutions and Other Depository Credit Intermediation
						522210	Credit Card Issuing
						522220	Sales Financing
						522291	Consumer Lending
						522292	Real Estate Credit
						522299	International, Secondary Market, and All Other Nondepository Credit Intermediation
						522310	Mortgage and Nonmortgage Loan Brokers
						522320	Financial Transactions Processing, Reserve, and Clearinghouse Activities
						522390	Other Activities Related to Credit Intermediation
				523	**Securities, Commodity Contracts, and Other Financial Investments and Related Activities**		
						523150	Investment Banking and Securities Intermediation
						523160	Commodity Contracts Intermediation
						523210	Securities and Commodity Exchanges
						523910	Miscellaneous Intermediation
						523940	Portfolio Management and Investment Advice
						523991	Trust, Fiduciary, and Custody Activities
						523999	Miscellaneous Financial Investment Activities
				524	**Insurance Carriers and Related Activities**		
						524113	Direct Life Insurance Carriers
						524114	Direct Health and Medical Insurance Carriers
						524126	Direct Property and Casualty Insurance Carriers
						524127	Direct Title Insurance Carriers
						524128	Other Direct Insurance (except Life, Health, and Medical) Carriers
						524130	Reinsurance Carriers
						524210	Insurance Agencies and Brokerages
						524291	Claims Adjusting
						524292	Pharmacy Benefit Management and Other Third Party Administration of Insurance and Pension Funds
						524298	All Other Insurance Related Activities
				525	**Funds, Trusts, and Other Financial Vehicles**		
						525110	Pension Funds
						525120	Health and Welfare Funds
						525190	Other Insurance Funds
						525910	Open-End Investment Funds
						525920	Trusts, Estates, and Agency Accounts
						525990	Other Financial Vehicles
		53	**Real Estate and Rental and Leasing**				
				531	**Real Estate**		
						531110	Lessors of Residential Buildings and Dwellings
						531120	Lessors of Nonresidential Buildings (except Miniwarehouses)
						531130	Lessors of Miniwarehouses and Self-Storage Units
						531190	Lessors of Other Real Estate Property
						531210	Offices of Real Estate Agents and Brokers
						531311	Residential Property Managers
						531312	Nonresidential Property Managers
						531320	Offices of Real Estate Appraisers
						531390	Other Activities Related to Real Estate
				532	**Rental and Leasing Services**		
						532111	Passenger Car Rental
						532112	Passenger Car Leasing
						532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing
						532210	Consumer Electronics and Appliances Rental
						532281	Formal Wear and Costume Rental
						532282	Video Tape and Disc Rental
						532283	Home Health Equipment Rental
						532284	Recreational Goods Rental
						532289	All Other Consumer Goods Rental
						532310	General Rental Centers
						532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing
						532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing
						532420	Office Machinery and Equipment Rental and Leasing
						532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing
				533	**Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)**		
						533110	Lessors of Nonfinancial Intangible Assets (except Copyrighted Works)

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		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
	Professional and Business Services	54	Professional, Scientific, and Technical Services				
				541	Professional, Scientific, and Technical Services		
						541110	Offices of Lawyers
						541120	Offices of Notaries
						541191	Title Abstract and Settlement Offices
						541199	All Other Legal Services
						541211	Offices of Certified Public Accountants
						541213	Tax Preparation Services
						541214	Payroll Services
						541219	Other Accounting Services
						541310	Architectural Services
						541320	Landscape Architectural Services
						541330	Engineering Services
						541340	Drafting Services
						541350	Building Inspection Services
						541360	Geophysical Surveying and Mapping Services
						541370	Surveying and Mapping (except Geophysical) Services
						541380	Testing Laboratories and Services
						541410	Interior Design Services
						541420	Industrial Design Services
						541430	Graphic Design Services
						541490	Other Specialized Design Services
						541511	Custom Computer Programming Services
						541512	Computer Systems Design Services
						541513	Computer Facilities Management Services
						541519	Other Computer Related Services
						541611	Administrative Management and General Management Consulting Services
						541612	Human Resources Consulting Services
						541613	Marketing Consulting Services
						541614	Process, Physical Distribution, and Logistics Consulting Services
						541618	Other Management Consulting Services
						541620	Environmental Consulting Services
						541690	Other Scientific and Technical Consulting Services
						541713	Research and Development in Nanotechnology
						541714	Research and Development in Biotechnology (except Nanobiotechnology)
						541715	Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology)
						541720	Research and Development in the Social Sciences and Humanities
						541810	Advertising Agencies
						541820	Public Relations Agencies
						541830	Media Buying Agencies
						541840	Media Representatives
						541850	Indoor and Outdoor Display Advertising
						541860	Direct Mail Advertising
						541870	Advertising Material Distribution Services
						541890	Other Services Related to Advertising
						541910	Marketing Research and Public Opinion Polling
						541921	Photography Studios, Portrait
						541922	Commercial Photography
						541930	Translation and Interpretation Services
						541940	Veterinary Services
						541990	All Other Professional, Scientific, and Technical Services
		55	Management of Companies and Enterprises				
				551	Management of Companies and Enterprises		
						551111	Offices of Bank Holding Companies
						551112	Offices of Other Holding Companies
						551114	Corporate, Subsidiary, and Regional Managing Offices
		56	Administrative and Support and Waste Management and Remediation Services				
				561	Administrative and Support Services		
						561110	Office Administrative Services
						561210	Facilities Support Services
						561311	Employment Placement Agencies
						561312	Executive Search Services
						561320	Temporary Help Services
						561330	Professional Employer Organizations
						561410	Document Preparation Services
						561421	Telephone Answering Services
						561422	Telemarketing Bureaus and Other Contact Centers
						561431	Private Mail Centers
						561439	Other Business Service Centers (including Copy Shops)
						561440	Collection Agencies
						561450	Credit Bureaus
						561491	Repossession Services
						561492	Court Reporting and Stenotype Services
						561499	All Other Business Support Services
						561510	Travel Agencies
						561520	Tour Operators
						561591	Convention and Visitors Bureaus
						561599	All Other Travel Arrangement and Reservation Services
						561611	Investigation and Personal Background Check Services
						561612	Security Guards and Patrol Services
						561613	Armored Car Services
						561621	Security Systems Services (except Locksmiths)
						561622	Locksmiths
						561710	Exterminating and Pest Control Services
						561720	Janitorial Services
						561730	Landscaping Services
						561740	Carpet and Upholstery Cleaning Services
						561790	Other Services to Buildings and Dwellings
						561910	Packaging and Labeling Services
						561920	Convention and Trade Show Organizers
						561990	All Other Support Services
				562	Waste Management and Remediation Services		
						562111	Solid Waste Collection
						562112	Hazardous Waste Collection
						562119	Other Waste Collection
						562211	Hazardous Waste Treatment and Disposal
						562212	Solid Waste Landfill
						562213	Solid Waste Combustors and Incinerators
						562219	Other Nonhazardous Waste Treatment and Disposal
						562910	Remediation Services
						562920	Materials Recovery Facilities
						562991	Septic Tank and Related Services
						562998	All Other Miscellaneous Waste Management Services

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
	Education and Health Services	61	Educational Services				
				611	Educational Services		
						611110	Elementary and Secondary Schools
						611210	Junior Colleges
						611310	Colleges, Universities, and Professional Schools
						611410	Business and Secretarial Schools
						611420	Computer Training
						611430	Professional and Management Development Training
						611511	Cosmetology and Barber Schools
						611512	Flight Training
						611513	Apprenticeship Training
						611519	Other Technical and Trade Schools
						611610	Fine Arts Schools
						611620	Sports and Recreation Instruction
						611630	Language Schools
						611691	Exam Preparation and Tutoring
						611692	Automobile Driving Schools
						611699	All Other Miscellaneous Schools and Instruction
						611710	Educational Support Services
		62	Health Care and Social Assistance				
				621	Ambulatory Health Care Services		
						621111	Offices of Physicians (except Mental Health Specialists)
						621112	Offices of Physicians, Mental Health Specialists
						621210	Offices of Dentists
						621310	Offices of Chiropractors
						621320	Offices of Optometrists
						621330	Offices of Mental Health Practitioners (except Physicians)
						621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists
						621391	Offices of Podiatrists
						621399	Offices of All Other Miscellaneous Health Practitioners
						621410	Family Planning Centers
						621420	Outpatient Mental Health and Substance Abuse Centers
						621491	HMO Medical Centers
						621492	Kidney Dialysis Centers
						621493	Freestanding Ambulatory Surgical and Emergency Centers
						621498	All Other Outpatient Care Centers
						621511	Medical Laboratories
						621512	Diagnostic Imaging Centers
						621610	Home Health Care Services
						621910	Ambulance Services
						621991	Blood and Organ Banks
						621999	All Other Miscellaneous Ambulatory Health Care Services
				622	Hospitals		
						622110	General Medical and Surgical Hospitals
						622210	Psychiatric and Substance Abuse Hospitals
						622310	Specialty (except Psychiatric and Substance Abuse) Hospitals
				623	Nursing and Residential Care Facilities		
						623110	Nursing Care Facilities (Skilled Nursing Facilities)
						623210	Residential Intellectual and Developmental Disability Facilities
						623220	Residential Mental Health and Substance Abuse Facilities
						623311	Continuing Care Retirement Communities
						623312	Assisted Living Facilities for the Elderly
						623990	Other Residential Care Facilities
				624	Social Assistance		
						624110	Child and Youth Services
						624120	Services for the Elderly and Persons with Disabilities
						624190	Other Individual and Family Services
						624210	Community Food Services
						624221	Temporary Shelters
						624229	Other Community Housing Services
						624230	Emergency and Other Relief Services
						624310	Vocational Rehabilitation Services
						624410	Child Care Services
	Leisure and Hospitality	71	Arts, Entertainment, and Recreation				
				711	Performing Arts, Spectator Sports, and Related Industries		
						711110	Theater Companies and Dinner Theaters
						711120	Dance Companies
						711130	Musical Groups and Artists
						711190	Other Performing Arts Companies
						711211	Sports Teams and Clubs
						711212	Racetracks
						711219	Other Spectator Sports
						711310	Promoters of Performing Arts, Sports, and Similar Events with Facilities
						711320	Promoters of Performing Arts, Sports, and Similar Events without Facilities
						711410	Agents and Managers for Artists, Athletes, Entertainers, and Other Public Figures
						711510	Independent Artists, Writers, and Performers
				712	Museums, Historical Sites, and Similar Institutions		
						712110	Museums
						712120	Historical Sites
						712130	Zoos and Botanical Gardens
						712190	Nature Parks and Other Similar Institutions
				713	Amusement, Gambling, and Recreation Industries		
						713110	Amusement and Theme Parks
						713120	Amusement Arcades
						713210	Casinos (except Casino Hotels)
						713290	Other Gambling Industries
						713910	Golf Courses and Country Clubs
						713920	Skiing Facilities
						713930	Marinas
						713940	Fitness and Recreational Sports Centers
						713950	Bowling Centers
						713990	All Other Amusement and Recreation Industries

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
		72	Accommodation and Food Services				
				721	Accommodation		
						721110	Hotels (except Casino Hotels) and Motels
						721120	Casino Hotels
						721191	Bed-and-Breakfast Inns
						721199	All Other Traveler Accommodation
						721211	RV (Recreational Vehicle) Parks and Campgrounds
						721214	Recreational and Vacation Camps (except Campgrounds)
						721310	Rooming and Boarding Houses, Dormitories, and Workers' Camps
				722	Food Services and Drinking Places		
						722310	Food Service Contractors
						722320	Caterers
						722330	Mobile Food Services
						722410	Drinking Places (Alcoholic Beverages)
						722511	Full-Service Restaurants
						722513	Limited-Service Restaurants
						722514	Cafeterias, Grill Buffets, and Buffets
						722515	Snack and Nonalcoholic Beverage Bars
	Other Service						
		81	Other Services (except Public Administration)				
				811	Repair and Maintenance		
						811111	General Automotive Repair
						811114	Specialized Automotive Repair
						811121	Automotive Body, Paint, and Interior Repair and Maintenance
						811122	Automotive Glass Replacement Shops
						811191	Automotive Oil Change and Lubrication Shops
						811192	Car Washes
						811198	All Other Automotive Repair and Maintenance
						811210	Electronic and Precision Equipment Repair and Maintenance
						811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance
						811411	Home and Garden Equipment Repair and Maintenance
						811412	Appliance Repair and Maintenance
						811420	Reupholstery and Furniture Repair
						811430	Footwear and Leather Goods Repair
						811490	Other Personal and Household Goods Repair and Maintenance
				812	Personal and Laundry Services		
						812111	Barber Shops
						812112	Beauty Salons
						812113	Nail Salons
						812191	Diet and Weight Reducing Centers
						812199	Other Personal Care Services
						812210	Funeral Homes and Funeral Services
						812220	Cemeteries and Crematories
						812310	Coin-Operated Laundries and Drycleaners
						812320	Drycleaning and Laundry Services (except Coin-Operated)
						812331	Linen Supply
						812332	Industrial Launderers
						812910	Pet Care (except Veterinary) Services
						812921	Photofinishing Laboratories (except One-Hour)
						812922	One-Hour Photofinishing
						812930	Parking Lots and Garages
						812990	All Other Personal Services
				813	Religious, Grantmaking, Civic, Professional, and Similar Organizations		
						813110	Religious Organizations
						813211	Grantmaking Foundations
						813212	Voluntary Health Organizations
						813219	Other Grantmaking and Giving Services
						813311	Human Rights Organizations
						813312	Environment, Conservation and Wildlife Organizations
						813319	Other Social Advocacy Organizations
						813410	Civic and Social Organizations
						813910	Business Associations
						813920	Professional Organizations
						813930	Labor Unions and Similar Labor Organizations
						813940	Political Organizations
						813990	Other Similar Organizations (except Business, Professional, Labor, and Political Organizations)
				814	Private Households		
						814110	Private Households

TUMF Non-Residential Category Detailed NAICS Correspondence

TUMF Category	SCAG RTP/SCS Employment Categories	NAICS Two Digit Code		NAICS Three Digit Code		NAICS Six Digit Code	
		NAICS Code	NAICS Title	NAICS Code	NAICS Title	NAICS Code	NAICS Title
Government/Public Sector							
	Government						
		92	**Public Administration**				
				921	**Executive, Legislative, and Other General Government Support**		
						921110	Executive Offices
						921120	Legislative Bodies
						921130	Public Finance Activities
						921140	Executive and Legislative Offices, Combined
						921150	American Indian and Alaska Native Tribal Governments
						921190	Other General Government Support
				922	**Justice, Public Order, and Safety Activities**		
						922110	Courts
						922120	Police Protection
						922130	Legal Counsel and Prosecution
						922140	Correctional Institutions
						922150	Parole Offices and Probation Offices
						922160	Fire Protection
						922190	Other Justice, Public Order, and Safety Activities
				923	**Administration of Human Resource Programs**		
						923110	Administration of Education Programs
						923120	Administration of Public Health Programs
						923130	Administration of Human Resource Programs (except Education, Public Health, and Veterans' Affairs Programs)
						923140	Administration of Veterans' Affairs
				924	**Administration of Environmental Quality Programs**		
						924110	Administration of Air and Water Resource and Solid Waste Management Programs
						924120	Administration of Conservation Programs
				925	**Administration of Housing Programs, Urban Planning, and Community Development**		
						925110	Administration of Housing Programs
						925120	Administration of Urban Planning and Community and Rural Development
				926	**Administration of Economic Programs**		
						926110	Administration of General Economic Programs
						926120	Regulation and Administration of Transportation Programs
						926130	Regulation and Administration of Communications, Electric, Gas, and Other Utilities
						926140	Regulation of Agricultural Marketing and Commodities
						926150	Regulation, Licensing, and Inspection of Miscellaneous Commercial Sectors
				927	**Space Research and Technology**		
						927110	Space Research and Technology
				928	**National Security and International Affairs**		
						928110	National Security
						928120	International Affairs

Source: SCAG 2020 RTP/SCS
California Employment Development Department (EDD)
US Census Bureau, North American Industry Classification System (NAICS), 2022

Appendix C - Western Riverside County Traffic Growth 2018 – 2045

Existing (2018) and future (2045) traffic data were derived from RivCoM. The model area of coverage, level of roadway network and TAZ detail, and application on other regional transportation study efforts represented RivCoM as the appropriate tool for evaluating traffic growth as part of the Nexus Study.

The forecasts of existing and future congestion levels were derived from the Year 2018 Existing and Year 2045 No-Build scenarios, respectively. The 2018 Existing and 2045 No-Build scenarios were developed using RivCoM to model 2018 and 2045 SED, respectively, as derived from the SCAG 2020 RTP/SCS adopted SED forecasts, on the transportation network as it existed in 2021. The 2018 existing transportation network represents the most recent baseline network developed for RivCoM, and only reflects the inclusion of those projects that were funded, committed and under construction at that time, and therefore imminently to be part of the baseline transportation system in 2018. For the purposes of the TUMF network analysis, additional improvements on the TUMF arterial highway network that were either completed or under construction in the period between 2018 and December 2021 were added to the network to create a 2021 existing network. The 2021 existing network was subsequently modeled in RivCoM using both 2018 and 2045 SED to provide the 2018 Baseline and 2045 No-Build scenarios as the basis for comparison and analysis. The 2045 No-Build scenario did not include transportation improvements that are planned as part of the recently adopted SCAG 2020 RTP/SCS on the basis they are uncommitted (meaning that their implementation is dependent on securing future funding and approval). Inclusion of the uncommitted improvements masks the congestion effects of increasing travel. Inclusion of these improvements and the resultant masking is not appropriate for this analysis aimed at identifying the effects of increasing travel if improvements were not built.

The WRCOG TUMF study area was extracted from RivCoM for the purpose of calculating the following measures for Western Riverside County only. Traffic growth impacts for each of the two scenarios were calculated using the TransCAD platform.

- Total daily vehicle miles of travel (VMT),
- Total daily VMT on facilities experiencing LOS E or worse.
- Total daily vehicle hours of travel (VHT), and
- Total combined daily vehicle hours of delay (VHD)

The following formulas were used to calculate the respective values.

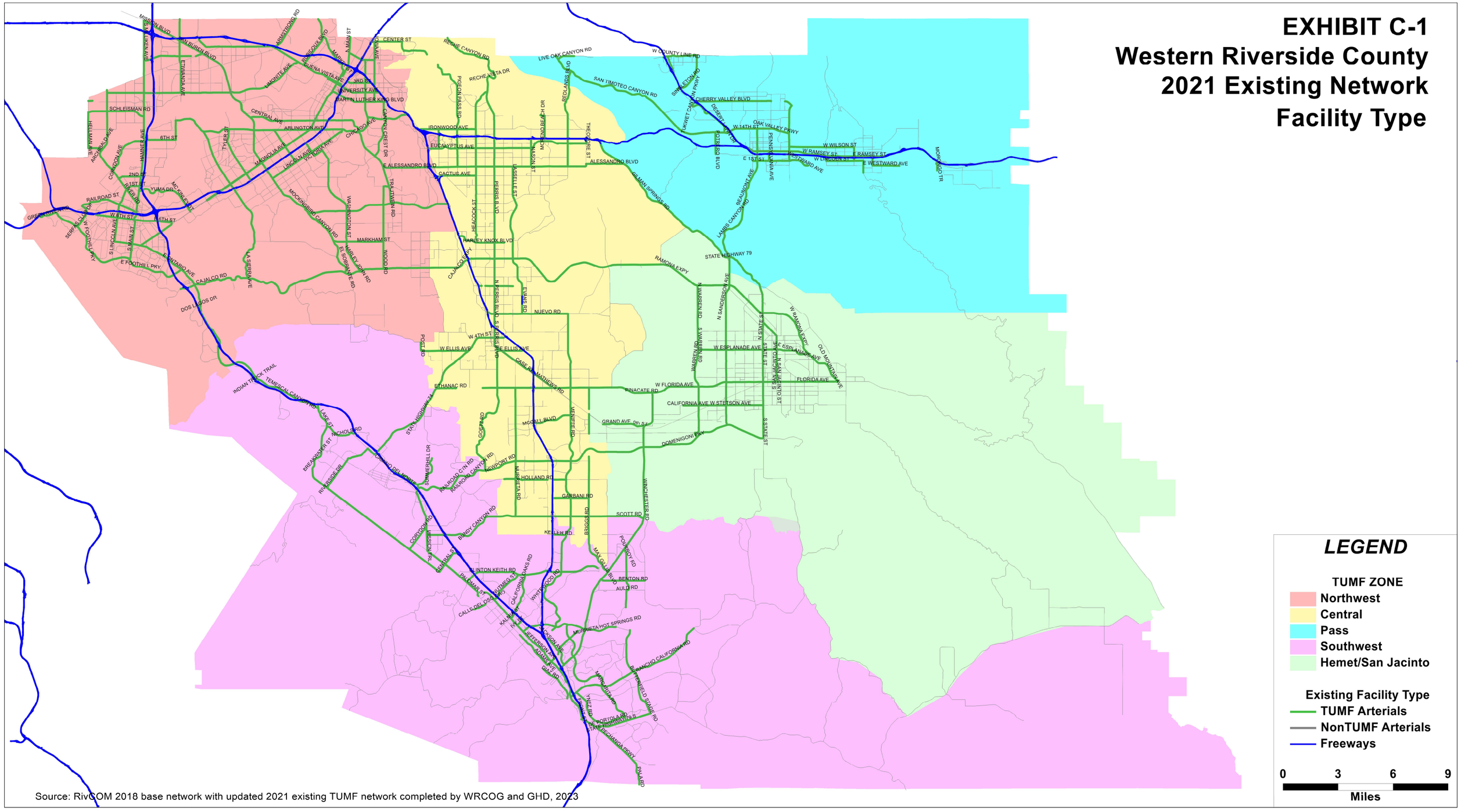
- VMT = Link Distance * Total Daily Volume
- VHT = Average Loaded (Congested) Link Travel Time * Total Daily Volume
- VHD = VHT – (Free-flow (Uncongested) Link Travel Time * Total Daily Volume)
- VMT LOS E or F = VMT (on links where Daily V/C exceeded 0.90)[13]

[13] LOS Thresholds for LOS E are based on the 2010 Edition of the Highway Capacity Manual (Transportation Research Board, National Research Council, Washington, D.C., 2010) LOS Maximum V/C Criteria for Multilane Highways with 45 mph Free Flow Speed (Exhibit 14-5, Chapter 14, Page 14-5).

RivCoM breaks down its roadway network into functional categories called assignment groups. The measures were calculated selectively for all facilities, freeways only, arterials only, and TUMF arterials only by including and excluding different assignment groups and facilities. For the calculation of measures on "all facilities", only the centroid connectors were excluded. Arterial values excluded all mixed-flow to carpool lane connector ramps, freeways, carpool lanes, centroid connectors, and freeway-to-freeway connector ramps, respectively. Freeways were defined as including mixed-flow to carpool lane connector ramps, freeways, carpool lanes, and freeway-to-freeway connector ramps, respectively.

The 2021 Existing Network by Facility Type is included in this Appendix as **Exhibit C-1**. The 2021 existing network was used as the basis for the 2018 Existing and 2045 No-Build scenarios by modeling 2018 and 2045 SED, respectively, on the 2021 existing network using RivCoM to determine the comparative effects of population, household an employment growth in the region. The results of the analysis of existing and future congestion levels are presented for peak periods in **Exhibit C-2** and for daily in **Exhibit C-3** in this Appendix and extracted for the combined peak periods in **Table 3.1** of the study report**.**

EXHIBIT C-1
Western Riverside County
2021 Existing Network
Facility Type



LEGEND

TUMF ZONE
- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

Existing Facility Type
- TUMF Arterials
- NonTUMF Arterials
- Freeways

0 3 6 9
Miles

Source: RivCOM 2018 base network with updated 2021 existing TUMF network completed by WRCOG and GHD, 2023

EXHIBIT C-2

Western Riverside County
Regional Highway System Measures of Performance (2018 - 2045) – Peak Periods

Measures of Performance	AM Peak				PM Peak			
	2018	2045	% Change	% Annual	2018	2045	% Change	% Annual
VMT - Total ALL FACILITIES	10,324,900	13,225,039	28%	0.9%	12,959,824	16,672,215	29%	0.9%
VMT - FREEWAYS	5,877,972	6,720,682	14%	0.5%	7,636,550	8,769,602	15%	0.5%
VMT - ALL ARTERIALS	4,446,928	6,504,357	46%	1.4%	5,323,274	7,902,613	48%	1.5%
TOTAL - TUMF ARTERIAL VMT	**2,793,846**	**3,826,810**	37%	1.2%	**3,423,139**	**4,770,390**	39%	1.2%
VHT - TOTAL ALL FACILITIES	251,133	435,243	73%	2.1%	290,218	480,196	65%	1.9%
VHT - FREEWAYS	120,257	186,102	55%	1.6%	143,535	213,027	48%	1.5%
VHT - ALL ARTERIALS	130,875	249,142	90%	2.4%	146,683	267,169	82%	2.2%
TOTAL TUMF ARTERIAL VHT	**81,578**	**154,106**	89%	2.4%	**92,877**	**166,763**	80%	2.2%
VHD - TOTAL ALL FACILITIES	57,989	177,814	207%	4.2%	50,911	160,242	215%	4.3%
VHD - FREEWAYS	34,221	86,616	153%	3.5%	31,935	84,033	163%	3.6%
VHD - ALL ARTERIALS	23,768	91,198	284%	5.1%	18,977	76,209	302%	5.3%
TOTAL TUMF ARTERIAL VHD	**18,024**	**66,789**	271%	5.0%	**15,225**	**58,074**	281%	5.1%
VMT LOS E & F - TOTAL ALL FACILITIES	2,960,551	6,364,419	115%	2.9%	2,644,519	7,005,063	165%	3.7%
VMT LOS E & F - FREEWAYS	2,435,804	4,276,258	76%	2.1%	2,289,667	5,040,633	120%	3.0%
VMT LOS E & F - ALL ARTERIALS	524,747	2,088,161	298%	5.2%	354,852	1,964,430	454%	6.5%
TOTAL TUMF ARTERIAL VMT w/ LOS E & F	**448,168**	**1,585,571**	254%	4.8%	**317,614**	**1,598,561**	403%	6.2%
% of TUMF ARTERIAL VMT w/ LOS E & F	**16%**	**41%**			**9%**	**34%**		

* Based on RivCoM 2018 network and SCAG 2020 RTP/SCS SED with updated 2021 arterial network completed.

NOTES:

Volume is adjusted by PCE factor
VMT = vehicle miles of travel (the total combined distance that all vehicles travel on the system)

VHT = vehicle hours of travel (the total combined time that all vehicles are traveling on the system)

VHD = vehicle hours of delay (the total combined time that all vehicles have been delayed on the system based on the difference between forecast travel time and free-flow (ideal) travel time)
LOS = level of service (based on forecast volume to capacity ratios).

LOS E or Worse was determined by V/C ratio that exceeds 0.9 thresholds as indicated in the Riverside County General Plan.

EXHIBIT C-3

Western Riverside County
Regional Highway System Measures of Performance (2018 - 2045) – Daily

Measures of Performance	Peak Periods (Total)				Daily			
	2018	2045	% Change	% Annual	2018	2045	% Change	% Annual
VMT - Total ALL FACILITIES	23,284,724	29,897,254	28%	0.9%	41,378,907	53,832,389	30%	1.0%
VMT - FREEWAYS	13,514,522	15,490,284	15%	0.5%	24,642,357	29,200,582	18%	0.6%
VMT - ALL ARTERIALS	9,770,202	14,406,970	47%	1.4%	16,736,551	24,631,807	47%	1.4%
TOTAL - TUMF ARTERIAL VMT	**6,216,985**	**8,597,200**	38%	1.2%	**10,794,415**	**15,170,125**	41%	1.3%
VHT - TOTAL ALL FACILITIES	541,350	915,439	69%	2.0%	893,813	1,433,458	60%	1.8%
VHT - FREEWAYS	263,792	399,128	51%	1.5%	440,073	637,990	45%	1.4%
VHT - ALL ARTERIALS	277,558	516,311	86%	2.3%	453,740	795,469	75%	2.1%
TOTAL TUMF ARTERIAL VHT	**174,455**	**320,869**	84%	2.3%	**285,520**	**496,757**	74%	2.1%
VHD - TOTAL ALL FACILITIES	108,900	338,056	210%	4.3%	131,965	410,511	211%	4.3%
VHD - FREEWAYS	66,156	170,649	158%	3.6%	79,532	208,287	162%	3.6%
VHD - ALL ARTERIALS	42,745	167,407	292%	5.2%	52,434	202,223	286%	5.1%
TOTAL TUMF ARTERIAL VHD	**33,249**	**124,863**	276%	5.0%	**41,025**	**152,200**	271%	5.0%
VMT LOS E - TOTAL ALL FACILITIES	5,605,070	13,369,483	139%	3.3%	6,153,146	16,090,205	161%	3.6%
VMT LOS E - FREEWAYS	4,725,471	9,316,891	97%	2.5%	5,141,215	11,306,348	120%	3.0%
VMT LOS E & F - ALL ARTERIALS	879,599	4,052,592	361%	5.8%	1,011,931	4,783,858	373%	5.9%
TOTAL TUMF ARTERIAL VMT w/ LOS E or worse	**765,782**	**3,184,133**	316%	5.4%	**878,465**	**3,819,635**	335%	5.6%
% of TUMF ARTERIAL VMT w/ LOS E or worse	**12%**	**37%**			**8%**	**25%**		

* Based on RivCoM 2018 network and SCAG 2020 RTP/SCS SED with updated 2021 arterial network completed.

NOTES:

Volume is adjusted by PCE factor
VMT = vehicle miles of travel (the total combined distance that all vehicles travel on the system)
VHT = vehicle hours of travel (the total combined time that all vehicles are traveling on the system)

VHD = vehicle hours of delay (the total combined time that all vehicles have been delayed on the system based on the difference between forecast tr
LOS = level of service (based on forecast volume to capacity ratios).
LOS E or Worse was determined by V/C ratio that exceeds 0.9 thresholds as indicated in the Riverside County Generc

Appendix D - Western Riverside County Bus Transit System Ridership 2023 – 2045

Actual average weekday daily ridership for Riverside Transit Agency (RTA) transit bus services was tabulated for 2023. Forecast average weekday daily ridership for RTA bus transit services was retrieved from the SCAG 2020 RTP/SCS Model for horizon year 2045. The bus transit ridership for 2023 and 2045 was tabulated to represent existing and future regional bus transit trips consistent with the analysis of highway trips described in **Section 3.1** and **Appendix C**. **Table D-1** summarizes the weekday bus transit ridership in Western Riverside County.

TABLE D-1 - Regional Bus Transit Weekday System Ridership

Year	Western Riverside Weekday Projected System Ridership
2023*	16,575
2045**	57,282

Notes: * - 2023 actual average weekday daily ridership provided by RTA staff December 1, 2023

** - 2045 forecast average weekday daily ridership obtained from SCAG 2020 RTP/SCS Model as provided by Fehr and Peers, November 28, 2023

Appendix E - Western Riverside County Regional System of Highways and Arterials Performance Measures

An integral element of the Nexus Study is the designation of the Western Riverside County Regional System of Highways and Arterials (also referred to as the "TUMF Network"). This network of regionally significant highways represents those arterial and collector highway and roadway facilities that primarily support inter-community trips in Western Riverside County and supplement the regional freeway system, and represents the extents of the network of highways and roadways that would be eligible for TUMF funded improvements. The Regional System of Highways and Arterials does NOT include the freeways of Western Riverside County which primarily serve inter-regional trips.

The designation of the Regional System of Highways and Arterials in the original TUMF Nexus Study adopted by the WRCOG Executive Committee in October 2002 was initiated with the identification of highways and roadways that met certain specified guidelines as defined by the WRCOG Public Works Committee. The guidelines are defined in **Section 4.1** of the Nexus Report, and include:

1. Arterial highway facilities proposed to have a minimum of four lanes at future buildout (not including freeways).
2. Facilities that serve multiple jurisdictions and/or provide connectivity between communities both within and adjoining Western Riverside County.
3. Facilities with forecast traffic volumes in excess of 20,000 vehicles per day in the future horizon year.
4. Facilities with forecast volume to capacity ratio of 0.90 (LOS E) or greater in the future horizon year.
5. Facilities that accommodate regional fixed route transit services.
6. Facilities that provide direct access to major commercial, industrial, institutional, recreational or tourist activity centers, and multi-modal transportation facilities (such as airports, railway terminals and transit centers).

The original candidate facilities were identified by overlaying various transportation system and land use plots depicting parameters consistent with those defined by the specified guidelines. These plots included existing and proposed numbers of lanes, network volumes and volume to capacity ratio (LOS) derived from SCAG CTP Model networks developed by Transcore to support the ongoing Western Riverside County CETAP study, and existing land use information provided by SCAG. These plots were included in the Appendices that accompanied the original 2002 TUMF Nexus Study. Fixed route transit service information was provided by the Riverside County Regional Transportation Authority (RTA).

These various data inputs were overlaid and reviewed leading the definition of a segmented skeletal network of highways and roadways for further consideration. The skeletal network was further enhanced to reflect regional connectivity and access to activity center considerations. An initial draft Regional System of Highways and Arterials was developed and subsequently distributed to the County of Riverside and each City in Western Riverside County for review in the context of their respective City General

Plan Circulation Elements, primarily to confirm existing and future number of lanes and appropriateness of the facilities identified. The initial draft network was subsequently revised to consolidate appropriate General Plan Circulation Elements, including the identification of proposed new facilities as alternatives to existing facilities. It should be pointed out that the Regional System of Highways and Arterials does not represent a simple compilation of regional General Plan Circulation Elements, but rather incorporates the elements of regional General Plan Circulation Elements that are necessary for mitigating the cumulative regional traffic impacts of new development within the horizon year of the TUMF program.

The consolidated list of proposed network improvements (along with associated initial cost estimates) was subsequently distributed to each of the WRCOG jurisdictions, individual landowners, and other stakeholders including representatives of the development community through the Building Industry Association (BIA) for review. The review of the consolidated list of improvements (and associated costs) prompted a series of five peer review workshop meetings to specifically review each segment of roadway identified and the associated improvements to mitigate the traffic impacts of new development. One peer review workshop meeting was held for each of the five zones in the WRCOG region with meetings held at the Riverside County Assessor's Office between June 27, 2002 and July 18, 2002. The peer review workshop meetings involved representatives from WRCOG, the respective zone jurisdictions and the BIA. The peer review workshops culminated in the development (by consensus of the groups) of a revised list of proposed network improvements (and associated costs) more accurately reflecting the improvements necessary to mitigate the cumulative regional traffic impacts of new development.

Following the peer review, the initial Regional System of Highways and Arterials was reviewed and endorsed by the TUMF Technical Advisory Committee, the TUMF Policy Committee and the WRCOG Executive Committee and utilized as the basis for developing the original TUMF Nexus Study in October 2002.

For the 2024 update of the TUMF Nexus Study, the Regional System of Highways and Arterials was reassessed. Consistent with the changing rate of new development forecast for Western Riverside County as part of the SCAG 2020 RTP/SCS, including reductions in the overall level of non-residential employment, the review of the TUMF Network as part of the 2024 Nexus Update ensured facilities generally still met the previously described performance guidelines, and/or that the scope and magnitude of specific improvements to the TUMF Network were roughly proportional to the impacts needing to be mitigated. This review process involved the comparison of model outputs for the 2018 Baseline and 2045 No-Build Scenarios on the 2021 Existing arterial network to identify those facilities no longer expected to be impacted substantially by the cumulative effects of traffic growth from new development. This review resulted in various changes in the scope and magnitude of specific improvements previously identified on the TUMF Network. The updated model output plots utilized as the basis for the latest network review are included in this appendix as **Exhibit E-1** through **E-8**. The Regional System of Highways and Arterials is included as **Figure 4.1** in the Nexus Study report.

EXHIBIT E-1
Western Riverside County
2021 Existing Network
Number of Lanes

N
W E
S

LEGEND

TUMF ZONE

- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

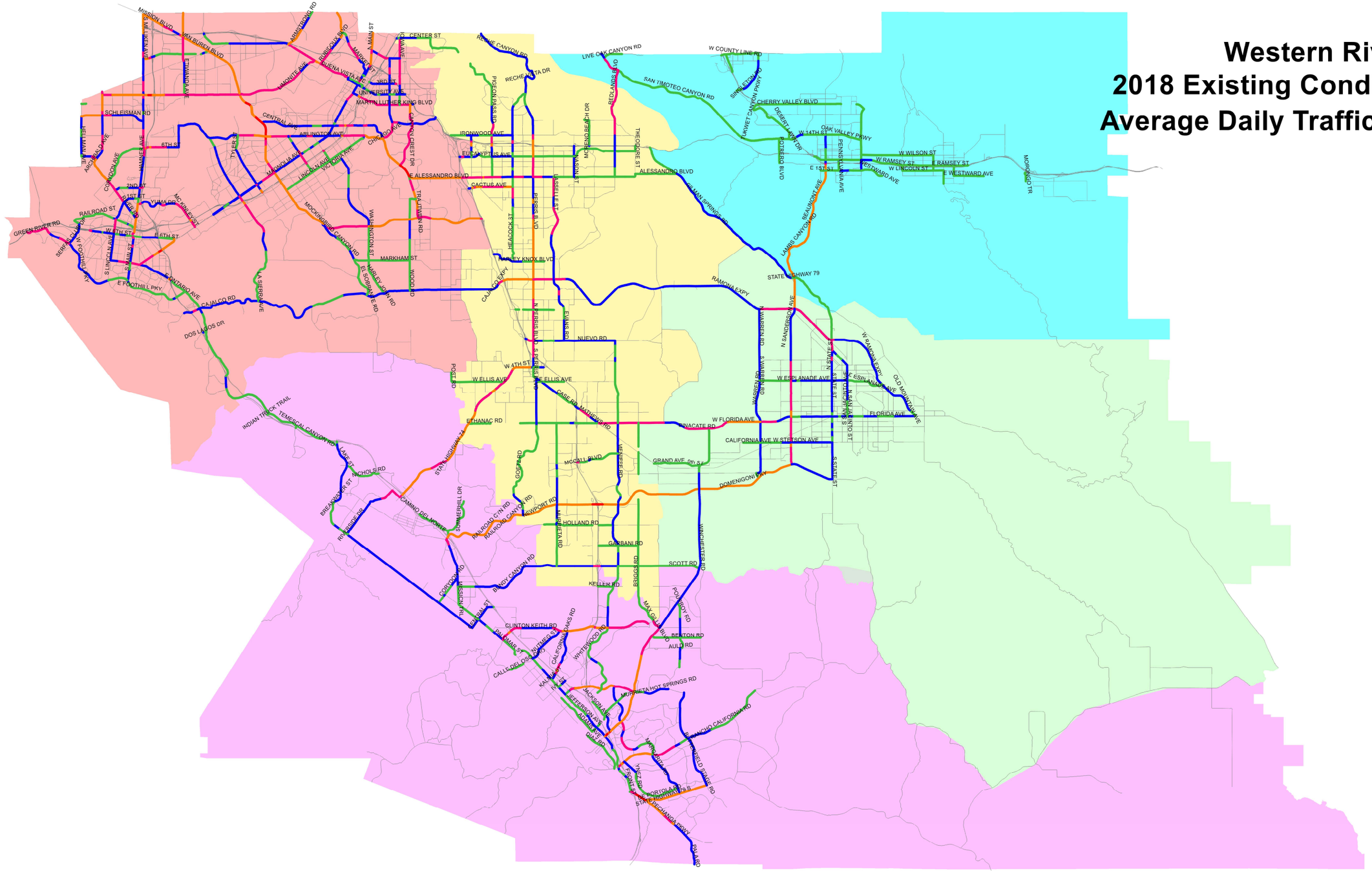
Existing Number of Lanes (Directional)

- 1 lane
- 2 lanes
- 3+ lanes

0 3.3 6.7 10
Miles

Source: RivCOM 2018 base network with updated 2021 existing TUMF network completed by WRCOG and GHD, 2023

EXHIBIT E-2
Western Riverside County
2018 Existing Conditions Scenario
Average Daily Traffic Volume (ADT)



LEGEND

TUMF ZONE

- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

Average Daily Traffic (ADT)

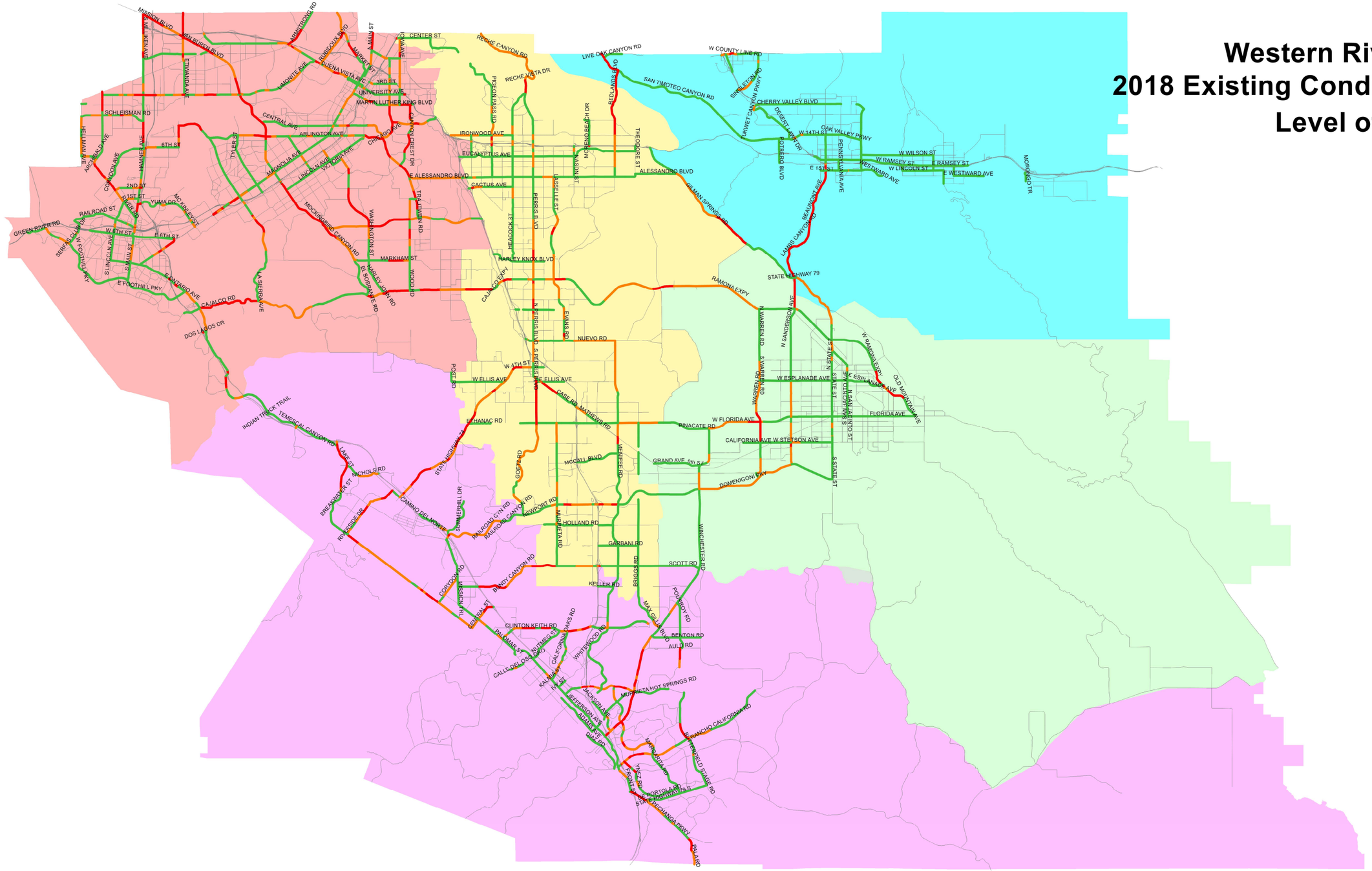
- <10,000
- 10,000-20,000
- 20,000-30,000
- 30,000-50,000
- 50,000+

0 3 6 9

Miles

Source: RivCOM 2018 base network with updated 2021 existing TUMF network and SCAG 2020 RTP/SCS 2018 base year SED

EXHIBIT E-3
Western Riverside County
2018 Existing Conditions Scenario
Level of Service (LOS)



LEGEND

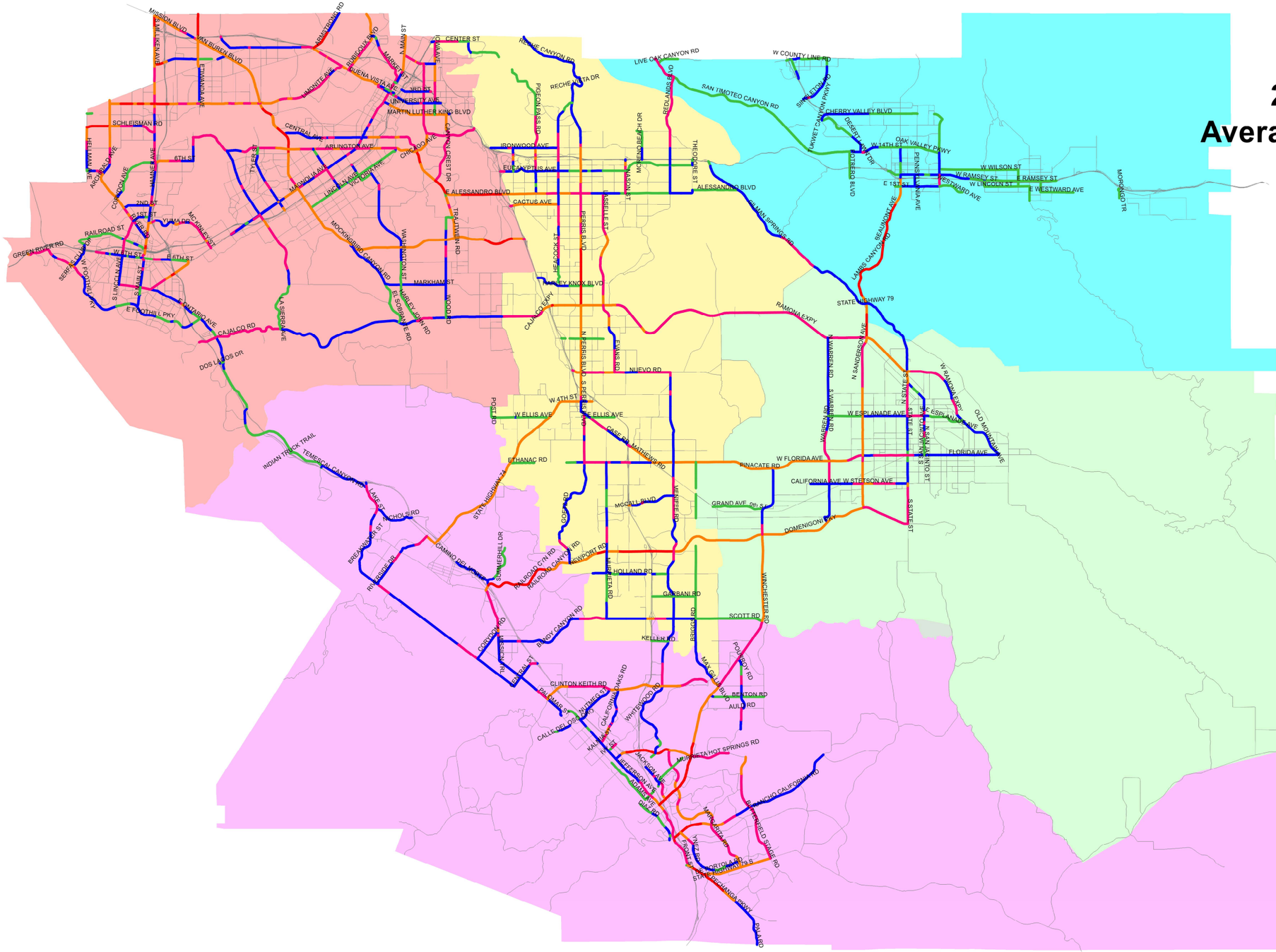
TUMF ZONE
- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

Peak Period LOS
- LOS A or B
- LOS C or D
- LOS E or F

0 3 6 9
Miles

Source: RivCOM 2018 base network with updated 2021 existing TUMF network and SCAG 2020 RTP/SCS 2018 base year SED

EXHIBIT E-4
Western Riverside County
2045 Future No-Build Scenario
Average Daily Traffic Volume (ADT)



LEGEND

TUMF ZONE

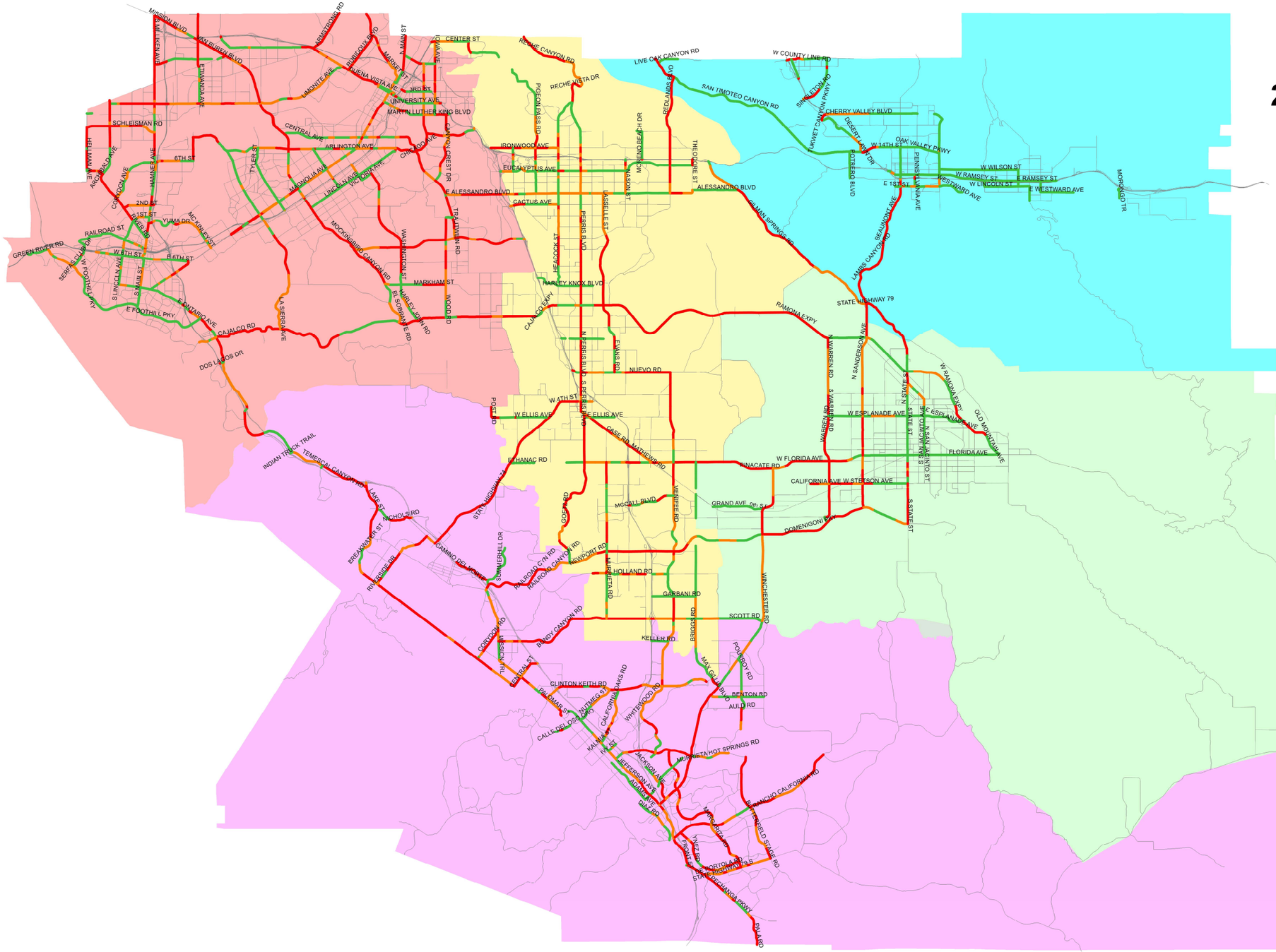
- ■ Northwest
- ■ Central
- ■ Pass
- ■ Southwest
- ■ Hemet/San Jacinto

Average Daily Traffic (ADT)

- — <10,000
- — 10,000-20,000
- — 20,000-30,000
- — 30,000-50,000
- — 50,000+

Source: RivCOM 2018 base network with updated 2021 existing TUMF network and SCAG 2020 RTP/SCS 2045 horizon year SED

EXHIBIT E-5
Western Riverside County
2045 Future No-Build Scenario
Level of Service (LOS)



LEGEND

TUMF ZONE
- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

Peak Period LOS
- LOS A or B
- LOS C or D
- LOS E or F

0 3 6 9
Miles

Source: RivCOM 2018 base network with updated 2021 existing TUMF network and SCAG 2020 RTP/SCS 2045 horizon year SED

EXHIBIT E-6
Western Riverside County
2045 Future TUMF Build Scenario
Number of Lanes

N
W E
S

LEGEND

TUMF ZONE

- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

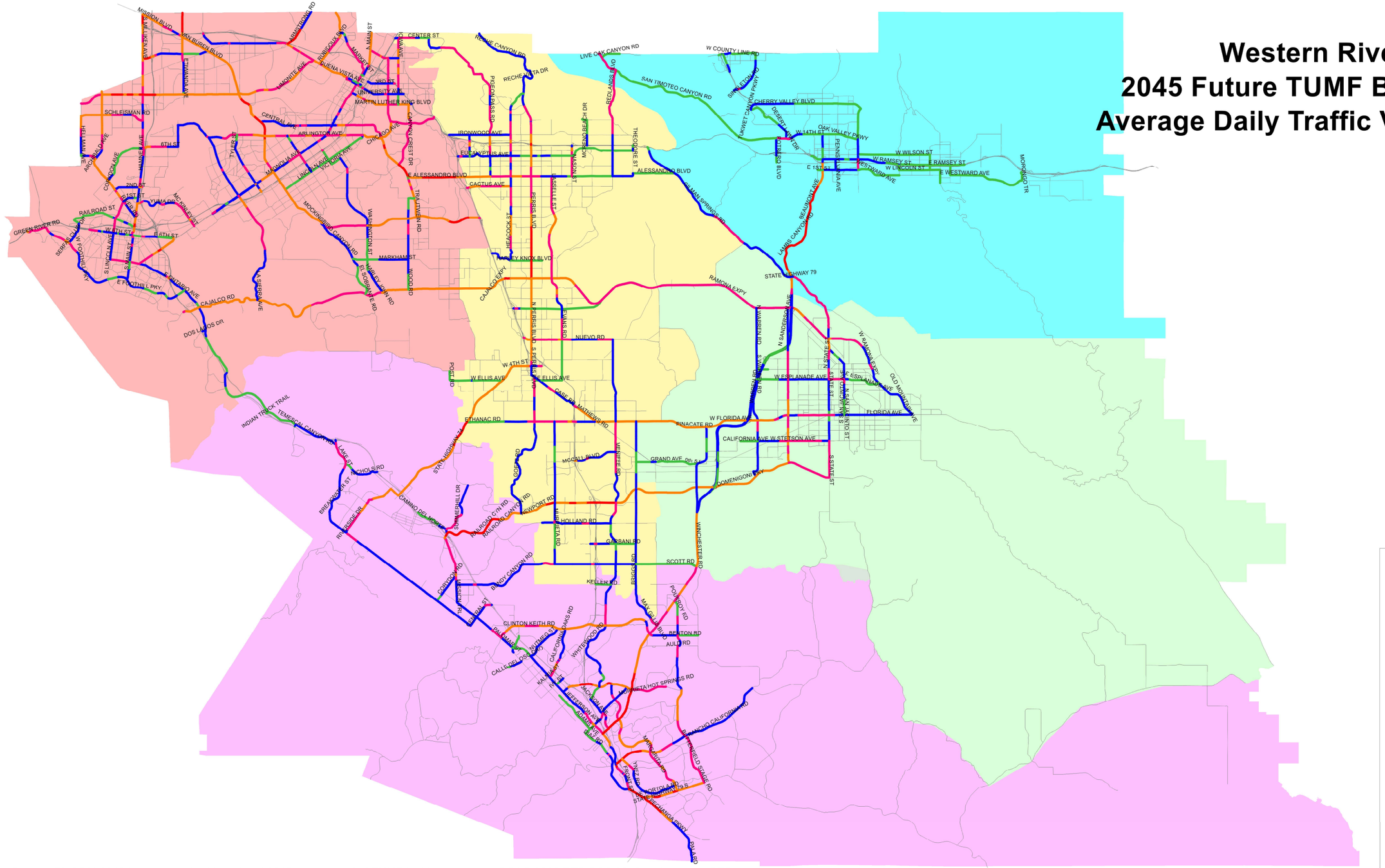
Existing Number of Lanes (Directional)

- 1 lane
- 2 lanes
- 3+ lanes

0 3.3 6.7 10
Miles

Source: RivCOM 2018 base network with updated 2045 recommended TUMF build network and SCAG 2020 RTP/SCS 2045 horizon year SED

EXHIBIT E-7
Western Riverside County
2045 Future TUMF Build Scenario
Average Daily Traffic Volume (ADT)



LEGEND

TUMF ZONE

- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

Average Daily Traffic (ADT)

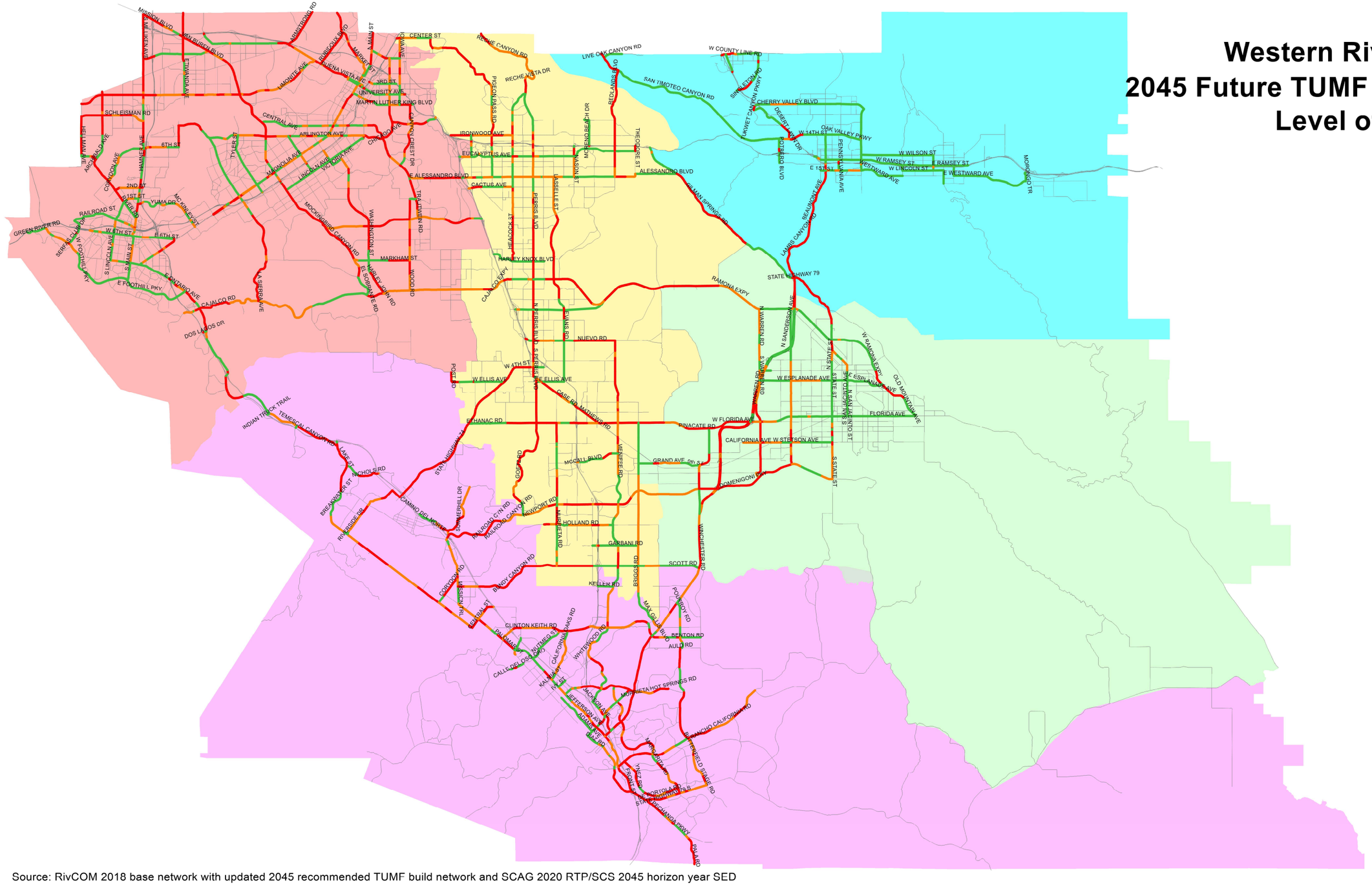
- <10,000
- 10,000-20,000
- 20,000-30,000
- 30,000-50,000
- 50,000+

0 3 6 9

Miles

Source: RivCOM 2018 base network with updated 2045 recommended TUMF build network and SCAG 2020 RTP/SCS 2045 horizon year SED

EXHIBIT E-8
Western Riverside County
2045 Future TUMF Build Scenario
Level of Service (LOS)



LEGEND

TUMF ZONE
- Northwest
- Central
- Pass
- Southwest
- Hemet/San Jacinto

Peak Period LOS
- LOS A or B
- LOS C or D
- LOS E or F

0 3 6 9
Miles

Source: RivCOM 2018 base network with updated 2045 recommended TUMF build network and SCAG 2020 RTP/SCS 2045 horizon year SED

Appendix F - TUMF Network Cost Assumptions

The TUMF program was established as a uniform impact fee program that is applied to mitigate the cumulative transportation impacts of new development on the regional arterial highway system. In establishing the technical basis for TUMF, like any impact fee program, there are two fundamental requirements that must be addressed: establishing a rational nexus for the program; and determining that any fee is roughly proportional to the impact of a proposed development. These requirements are rooted in two well-known legal cases: Nollan v. California Coastal Commission (1987) 483 U.S. 825; and Dolan v. City of Tigard (1994) 512 U.S. 374.

To establish project costs that meet the rough proportionality test for an expansive network of facilities, WRCOG utilizes a conceptual planning level project and cost estimation approach based on typical unit costs for a variety of project types and conditions. These unit costs are intended to reflect a range of values that are typical for the types of projects that are necessary to mitigate the cumulative regional impacts of new development. These unit costs are developed for each typical project type based on actual observed values for the various materials, labor and right-of-way that would typically be required to complete a project. Although the actual materials, labor, right-of-way and associate costs to complete each specific project can be expected to vary based on the particular conditions of each site and project requirements at the time the project is actually implemented, the approach of using typical unit costs as the basis for the TUMF program represents a manageable and appropriate level of detail to establish conceptual project cost estimates that meet the requirement for rough proportionality.

The application of typical unit costs and the associated identification of a maximum TUMF share for each eligible project also provides a framework that protects the program from projects with actual costs that vary significantly from the typical cost estimates used as the program basis. The TUMF program administrative polices limit reimbursement of costs associated with eligible TUMF projects to the lesser of maximum TUMF share identified in the Nexus Study or the actual eligible project costs. In this manner, projects that are completed by participating jurisdictions or developers for less than the maximum TUMF share are reimbursed (or credited) for the actual amount expended, while projects that exceed the maximum TUMF share are only reimbursed (or credited) by the program up to the maximum TUMF share value ensuring that the program is mitigating impacts at a level that is roughly proportional to that typically expected, and is not subject to extreme project costs to address unusual or exceptional local conditions or requirements.

For the purposes of TUMF, unit cost values were developed for various eligible improvement types that all provide additional capacity needed to mitigate the cumulative regional traffic impacts of new development to facilities on the TUMF Network. Eligible improvement types include:

1. Construction of additional Network roadway lanes;
2. Construction of new Network roadway segments;
3. Expansion of existing Network bridge structures;

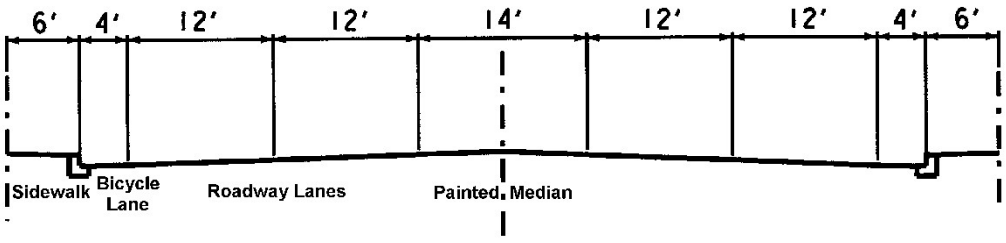
4. Construction of new Network bridge structures;
5. Expansion of existing Network interchanges with freeways;
6. Construction of new Network interchanges with freeways;
7. Grade separation of existing Network at-grade railroad crossings;
8. Expansion of existing Network-to-Network intersections;
9. Infrastructure for Intelligent Transportation Systems (ITS) of Network roadway segments.

Because roadway improvement standards vary considerably between respective jurisdictions, a typical roadway standard for the TUMF Network was recommended by the Public Works Committee (PWC) during the development of the original TUMF Nexus Study adopted by the WRCOG Executive Committee in October 2002 as the basis for developing the TUMF Network cost estimate. The typical roadway standard assumes the following design characteristics that are consistent with the minimum requirements of the Caltrans Highway Design Manual:

- Asphalt concrete pavement and appropriate base material to accomplish up to 12 feet per travel lane plus up to four feet for ancillary treatments (e.g. shoulders, or Class II Bike Lane);
- Concrete curb and gutter and associated drainage (e.g. paved roadway shoulders and/or open swale);
- Storm drains located within curb to curb, and associated transverse portions perpendicular to the roadway and adjoining portions longitudinal to the roadway;
- 14 foot paved and painted median (or dual center left turn lane);
- Traffic signals at intersections with state highways and other major arterials that are also on the TUMF Network;
- Pavement striping and roadway signing, as required;
- 6 foot wide concrete sidewalks and associated curb cuts for ADA access at street crossings.

A cross-section of the Typical Roadway Standard is illustrated in **Figure F-1**.

Figure F-1. Typical Roadway Standard Cross-Section



It is recognized that the typical roadway standard is not appropriate in all potential TUMF Network locations. Where appropriate, typical design standards could be substituted with design elements such as open swale drainage and paved roadway shoulders with no curbing that would typically cost less than the implementation of the

Typical Roadway Standard. Roadway improvements in excess of the Typical Roadway Standard include, but are not limited to:

- Portland concrete cement pavement or other aesthetic pavement types (except at intersections);
- Major rehabilitation or overlay of existing pavement in adjacent roadway lanes;
- Raised barrier medians;
- Parking lanes;
- Roadway tapers outside the extents of the approved project
- Sanitary sewage infrastructure;
- Water systems
- Dry utilities
- Undergrounding infrastructure
- Relocation of non-prior rights utilities
- Storm Drain Systems in excess of draining the roadway
- Landscaping;
- Streetlighting;
- Class I Bike Lanes (e.g. separate bicycle paths)
- Environmental Permitting
- Detection/Retention Basins outside of Street Right-of-Way
- Agency Staff time in excess of 15% of Engineering
- Agency Staff Time in excess of 15% of Construction

These improvements in excess of Typical Roadway Standards are not eligible for TUMF funding and will be the responsibility of the local funding agency.

Unit cost estimates for the implementation of TUMF Network improvements were developed based on the unit cost to accomplish the Typical Roadway Standard. Initial unit cost estimates were developed as part of the original TUMF Nexus in 2002. These original values were adjusted as part of the 2005 Nexus Update to reflect changes in cost based on relevant indices. The unit cost estimates were fully revised as part of the 2009 Nexus Update to capture the full effects of the economic recession on the costs of labor, materials and property acquisition. For the previous 2016 Nexus Update, the unit costs were fully revised. The 2016 Nexus Update reflected the effects of the ongoing recovery from the economic recession that has saw the costs of materials, labor and land acquisition in California rebound from relative historical lows previously observed at the time of the 2009 Nexus Update.

For the 2024 Nexus Update, the unit costs were again fully revised to generate entirely new unit cost values based on the most recent available construction cost, labor cost and land acquisition cost values for comparable projects within and adjacent to Riverside County. The recalculation of the TUMF unit cost components was completed as part of the 2024 Nexus Update to account for the unprecedented materials cost increases, labor shortages and high rate of inflation generally attributable to a combination of the disruption to global supply chains caused by the COVID-19 pandemic and additional tariffs on a range of products imported into the United States. In December 2023, the unit cost values were validated utilizing Caltrans Contract Cost Data and the resultant unit costs are noted in **Exhibit F-2** and summarized in **Table 4.1**.

For simplicity, the roadway unit cost was assumed to provide for the full depth construction (including grading) of 16 feet of new pavement per lane (to accommodate a minimum 12 foot lane and ancillary treatments). The unit cost was assumed to include the following construction elements:

- Sawcut of existing pavement
- Removal of existing pavement
- Roadway excavation and embankment
- 10" thick class 2 aggregate base
- 4.0" thick asphaltic concrete surface
- Concrete curb, gutter and drainage improvements

Roadway unit costs were determined for each unique cost item. The source used to determine the roadway unit costs as part of the 2024 Nexus Update are listed below.

- Caltrans Contract Cost Data 2021-2022
- Projects within Riverside County and Adjacent Counties
- Typical experience for local cities, Western Riverside County
- Michael Baker international (MBI), Structural Group
- MBI, ITS Group
- Caltrans Contract Cost Data 2022-2023

All data described above was initially obtained in October 2022 and refreshed and validated in December 2023.

Right-of-way acquisition costs were determined based on the cost to acquire 18 feet of right-of-way per lane of new roadway improvement. For urban and suburban land use areas, the amount of right-of-way to be acquired as part of the TUMF program was reduced by 75% to account for property already owned by a participating jurisdiction through prior acquisition or dedication. Right-of-way unit costs were assumed to include the following elements:

- Land acquisition
- Documentation and legal fees
- Relocation and demolition costs and condemnation compensation requirements
- Utility relocation
- Direct environmental mitigation

Right-of-way unit costs were determined based on a review of actual property sales within the WRCOG region during the prior 18 month period. The task of determining the valuation per square foot of right-of-way for different land uses was completed by Epic Land Solutions, Inc.

A typical existing condition of each component type was used as a guideline for quantity assessments.

- Terrain 1: Level terrain with 0% profile grade. Construction cost is per lane mile.
- Terrain 2: Rolling Terrain with 1.5 % profile grade. Construction cost is per lane mile.

- Terrain 3: Mountainous Terrain with 3% profile grade. Construction cost is per lane mile.
- Land Use 1, 2 and 3; ROW cost factor per lane mile, for Urban, Suburban and Rural areas respectively.
- Interchange 1: Complex New Interchange/Interchange Modification. Existing complex interchange at I-15 & SR-91 was used as a guideline for quantity assessments.
- Interchange 2: New Interchange/Interchange Modification is assumed to be a New Cloverleaf Interchange consisting of 4 (3 lane) direct ramps and 4 (2 lane) loop ramps.
- Interchange 3: Major Interchange Improvement is assumed to correspond to adding 1 lane to each ramp on a cloverleaf Interchange.
- Bridge: New Bridge cost. Construction cost is per linear foot per lane.
- RRXing 1: New Rail Grade Crossing. Construction cost is per lane per crossing.
- RRXing 2: Widening Existing Grade Crossing. Construction cost is per lane per crossing.
- ITS 1: Infrastructure for Intelligent Transportation Systems (ITS) on TUMF Network roadway segments per route mile

The cost estimating methodology here is intended to provide a Present Value Cost Estimate for the WRCOG Transportation Uniform Mitigation Fee based on year 2023 unit prices. A more detailed description of cost categories is detailed below.

I. Roadway Items

Roadway Excavation:

A unit cost of $38.55 per cubic yard (Source: Local Projects and Caltrans Contract Cost Data) is applied to account for the excavation quantities. Assuming proposed profiles to be at 0% grade, the excavation values are estimated based on the component type as follows:

- Terrain 2 and 3: excavation for one lane (16 feet wide and 4 feet deep) is assumed.

Imported Borrow:

The unit cost used for imported borrow is $20.47 per cubic yard (Source: Local Projects and Caltrans Contract Cost Data). Locations where imported borrow is required are determined from aerial photos.

- Terrain 2 and 3: Excavation for one lane (16 feet wide and 4 feet deep) is assumed.
- Interchanges 1, 2, and 3: Vertical clearance of 24.5 feet is used to calculate the maximum amount of imported borrow at areas adjacent to an undercrossing.
- RRXing 1 and 2: Vertical clearance of 31.5 feet and Bridge approach of 1,000 feet is used to determine the quantity of Imported borrow for this component type.

Clearing and Grubbing:

The unit cost for clearing and grubbing is $12,100.00 per acre (Source: Local Projects and Caltrans Contract Cost Data).

- Terrain 1, 2 and 3: The area of clearing and grubbing is assumed to extend 16 feet for the addition of each new lane.
- Interchange 1 and 2: The area of clearing and grubbing is assumed to extend 40 feet beyond the proposed outside edge of shoulder. The clearing and grubbing width varies depending on the number of added lanes.
- Interchange 3 and Intersection: The area of clearing and grubbing is assumed to extend 16 feet for the addition of each lane.

Development of Water Supply:
A lump sum value is used to account for developing water supply. The lump sum cost is estimated as 10% of the combined cost for roadway excavation and imported borrow (Source: RCTC).

PCC Pavement:
The unit cost for PCC pavement is $354.83 per cubic yard (Source: Local Projects and Caltrans Contract Cost Data).
- Terrain 1, 2 and 3: It is assumed that PCC is used at mainline shoulders. The PCC shoulder pavement is assumed to be 4 inch thick and 4 feet wide.

Asphalt Concrete Type A:
It is assumed that Asphalt Concrete is used at mainline and where ramp and bridge widening is required. A unit cost of $240.62 per cubic yard (Source: Local Projects and Caltrans Contract Cost Data) is used to account for asphalt concrete quantities. The asphalt concrete overlay is assumed to be 4 inch thick.

Aggregate Base:
The unit cost for aggregate base is $73.54 per cubic yard (Source: Local Projects and Caltrans Contract Cost Data). Aggregate base quantities are estimated by means of calculating the areas of additional lanes. The aggregate base layer is considered to be 10 inch thick. It is assumed that aggregate base is used over the entire widening width below the PCC pavement and asphalt concrete layers.

Curb and Gutter:
The unit cost used for curb and gutter is $65.74 per linear foot (Source: Local Projects and Caltrans Contract Cost Data). It is assumed that type A2-6 curb and gutter is used on the entire length of travel way where required.

Project Drainage:
A lump sum value is used to account for project drainage cost of roadway construction. The project drainage cost is estimated as 15% (Source: RCTC project 2007) of combined cost for earthwork and pavement structural section.

Traffic Signals:
The costs for traffic signals are calculated per ramp termini intersection. The unit cost used for traffic signals is $531,086 (Source: Caltrans Contract Cost Data and typical experience, Western Riverside County) per intersection. Traffic signals costs are considered only at the Intersection (Network-to-Network) upgrade.

Striping:
The unit cost used for Striping is $2.58 per linear foot (Source: Local Projects and Caltrans Contract Cost Data). It is assumed that two lines of thermo-plastic striping are required for every lane addition.

Marking:
The unit cost used for marking is $7.31 per square foot (Source: Local Projects and Caltrans Contract Cost Data).

- Terrains 1, 2 and 3: It is assumed that there are 8 arrow markers, 2 Stop sign markers and 4 Bike sign markers.
- Interchanges 1, 2, and 3: It is assumed that there are 2 Type I arrows on each on ramp, and 2 Type IV (L) arrows on each off ramp.
- Intersection (network to network) upgrade: It is assumed that there are 2 right turn arrows and two right lane drop arrows for each lane modification for the interchange upgrade

Pavement Marker:
Type G one-way clear retroreflective pavement markers (Spacing @ 48 feet) were assumed for Terrain 1, 2 and 3 component types only. The unit cost used for pavement marker is $5.06 each (Source: Local Projects and Caltrans Contract Cost Data).

Signage:
The signage unit cost accounts for the costs of one-post signs and two-post signs. The unit cost used for one-post signs and two-post signs are $367.69 and $1,211.58 each, respectively (Source: Local Projects and Caltrans Contract Cost Data). The post sign quantities assumed for each component type is summarized below.

Sign Type	Terrain 1, 2 & 3	Interchange			Intersection
		1	2	3	
One Post Signs	33	14	36	20	3
Two Post Signs	-	4	4	4	0

Intelligent Transportation Systems (ITS):
The unit cost used for ITS is $686,338.50 per route mile (Source: Local Projects and MBI ITS Group). It is assumed that there is no existing ITS infrastructure (with the exception of isolated ITS devices) within the TUMF Network roadway segments and essential ITS infrastructure is furnished and installed. This essential ITS infrastructure includes ethernet switch, fiber jumper, fiber distribution unit, splice enclosure, pull box, new cabinet with foundation, 144 strand single-mode fiber optic (SMFO) cable and 3" conduits.

Minor Items, Roadway Mobilization, and Roadway Additions:
A lump sum value is used to account for minor items, roadway mobilization and roadway additions as described below. These lump sum values are recommended based on provisions in Project Development Procedure Manual (PDPM) and the

date from individual sources presented in the introduction of this report (Source: RCTC)

Items	Unit Cost
Minor Items	10% of earthwork, pavement structure, drainage, specialty items and traffic items.
Roadway Mobilization	10% of earthwork, pavement structure, drainage, specialty items, traffic items and minor items.
Roadway Additions	10% of earthwork, pavement structure, drainage, specialty items, traffic items and minor items.

II. Structure Items

New Bridge:

New interchanges account for construction of a new bridge. The unit cost for a new travel way bridge construction and RRXings1 and 2 (New and Widening of Rail Grade Crossings) is $400.00 per square foot (Source: MBI Structural group). The width of a new bridge is assumed to be 82 feet (4 lanes x 12ft + 10ft shoulder x 2 + 14ft median).

Bridge Widening:

Bridge widenings account for the widening of existing bridges. The unit cost is $500.00 per square foot (Source: MBI Structural group). The width of a bridge widening is assumed to be: 2 lanes x 12ft + 10ft shoulder. The width of an arterial crossing over rail road is assumed to be 16 feet (1 lane x 12ft + 4ft shoulder).

Structural Mobilization:

The cost for structural mobilization is estimated as 10% of total structure item cost (Source: Typical experience).

III. Right of Way Items

The right of way unit cost varies with land use designation. The unit cost for ROW was developed by Epic Land Solutions, Inc. based on a review of actual property sales within the WRCOG region during the prior 18 month period. The area of right of way acquisition for the travel way is calculated per additional lane mile, assuming the width of the right-of-way required to be 18 feet per lane (to accommodate a 12 foot roadway lane, shoulders and ancillary amenities, like storm water drainage). The right of way acquisition for RRXings1 and 2 is calculated based on ROW acquisition for bridge approaches.

Property costs per square foot are derived by reviewing a large sample of recently sold land and improved properties within the greater Riverside area. The properties reviewed are identified specifically from completed semi large to very large infrastructure projects and upcoming projects with preferred alternatives and/or approved environmental reports. For the purposes of the 2022 Nexus Study update, an overall sample of approximately 2,700 properties was used.

The properties were designated as: urban areas (generally considered downtown, or very close to downtown in the larger cities - predominantly Corona and Riverside, with a few parcels in Temecula and Moreno Valley); suburban (primarily considered the greater areas of Hemet, Perris, San Jacinto, Moreno Valley, Lake Elsinore, outer portions of Riverside / Corona, Temecula, Murrieta, Calimesa, Eastvale, Norco, and other cities of relative size and location as those previously mentioned); and rural (considered the exurban areas between Corona / Lake Elsinore and Perris along the SR-74/79, Lake Matthews, between Wildomar and Murrieta, Temecula and Perris and other similar areas) to correspond with the land use classifications used for cost estimating purposes in the TUMF program. The properties were also determined to be partial or full property takes to determine the relative percentage of each in order to appropriately weight the average cost per square foot of each type of property. Specialty cost percentages as a share of total acquisition costs (i.e. relocation and demolition) were also derived from actual costs based on a sample of the Inland Empire projects that Epic Land Solutions, Inc. was directly involved in and therefore able to obtain reliable data.

The result is an estimated average cost per square foot for ROW acquisition by land use classification which is then multiplied by the number of square feet per lane mile to obtain the required ROW to accomplish the TUMF typical cross section. The ROW requirement is then reduced by a factor of 75% for urban and suburban areas based on the collective recommendation of the PWC during the development of the initial program cost estimation methodology to reflect the assumption that a majority of the proposed TUMF facilities in these areas already exist and/or have a substantial portion of the necessary right-of-way already owned by or dedicated to the responsible jurisdiction. As a result, the TUMF program only includes the estimated cost for 25% of the right-of-way that could potentially be required to accomplish the TUMF cross sections for the conceptual improvement projects identified as part of the program in urban and suburban areas.

Maintenance of Traffic:
A lump sum value is used to account for maintenance of traffic cost of roadway construction. The project maintenance of traffic cost is estimated as 5% (Source: RCTC) of the total project cost.

The consolidated unit cost values include typical per mile or lump sum costs for each of the eligible improvement element. These elements include new roadways, bridge improvements, interchange improvements and railroad grade separation construction costs, and right of way acquisition.

The consolidated unit costs as developed for the 2024 Nexus Update are summarized in **Exhibit F-1**. **Exhibit F-2** provides a summary of the unit costs for the various roadway and structures construction elements defined. **Exhibit F-3** provides a summary of the unit costs for the various right of way categories. **Exhibit F-4** provides worksheets showing the detailed unit cost calculation for each TUMF unit cost category related to roadway and structures construction, and right of way acquisition.

The unit cost assumptions were subsequently applied to the TUMF Network improvements identified to mitigate the cumulative regional transportation impacts of future new development. The resultant cost value was tabulated for each unique segment of the network, by improvement type. A separate cost estimate was generated for regional transit improvements based on information provided by RTA and added to the TUMF Network Cost Estimate table.

Supplemental categories have been added to the cost assumptions to better delineate the costs associated with planning and engineering a project, accommodating contingencies, mitigating the cumulate multi-species habitat impacts of TUMF arterial highway improvements in accordance with the adopted Riverside County Multi-Species Habitat Conservation Plan (MSHCP), and administering the TUMF program.

Soft Costs

The TUMF program provides for planning, engineering and contingency costs (collectively referred to as soft costs) for eligible projects to be reimbursed through the program. As indicated in **Table 4.1**, planning costs are considered to include those costs associated with planning, preliminary engineering and environmental assessment of the proposed project, with the eligible amount being 10% of the estimated TUMF eligible construction cost only. Engineering costs are considered to include project study report, design, permitting and construction oversight costs based on 25% of the estimated eligible construction cost only. Contingency is provided based on 10% of the total estimated eligible facility cost.

Soft costs include all reasonable required planning, environmental clearance and mitigation, right-of-way documentation, engineering design, plan, specification and estimate preparation and construction management and oversight costs necessary to accomplish the project. The estimated soft cost factors for planning, engineering and contingency were initially established in 2002 by the WRCOG Public Works Committee, which was responsible for the development of the initial TUMF Nexus Study. The percentage multipliers were established by consensus of the PWC based on the collective experience of members in delivering similar public highway projects. A review of various data sources indicates the cost factors are generally consistent with industry guidance for conceptual cost estimation purposes. The City of Los Angeles, Department of Public Works, Bureau of Engineering *California Multi-Agency CIP Benchmarking Study* (December 2016) indicates that combined design and construction management costs for roadway projects represent, on average, 50% of the total cost of construction[14]. Similarly, the American Association of State Highway and Transportation Officials (AASHTO) *Practical Guide for Estimating* (December 2011) also cites the following average multipliers for a range of planning and engineering activities based on national research as a basis for conceptual cost estimation:

[14] City of Los Angeles, Department of Public Works, Bureau of Engineering *California Multi-Agency CIP Benchmarking Study* (December 2016), Table 3-6 Average Project Delivery Costs by Project Type (% of TCC) (Full Range of TCC).

- Preliminary Engineering Costs (including survey/data collection, design, environmental, utilities and contract administration) – 10% to 25% of total construction cost[15]
- Construction Engineering – 10% to 26% of total construction costs[16]

Furthermore, the contingency rate utilized in the TUMF program is significantly less than the industry norm for conceptual cost estimation purposes. Specifically, Caltrans *Project Development Procedures Manual* (July 2021) advocates for contingency rates of 30% to 50% of total costs to be used at the project feasibility (conceptual planning) phase of project development[17], with contingency rates reduced to 10% for preliminary engineers cost estimates completed during project design[18].

MSHCP

Section 8.5.1 of the Riverside County Integrated Project (RCIP) Multiple Species Habitat Conservation Plan (MSHCP) adopted by the Riverside County Board of Supervisors on June 17, 2003, states that "each new transportation project will contribute to Plan implementation. Historically, these projects have budgeted 3% - 5% of their construction costs to mitigate environmental impacts." This provision is reiterated in the Western Riverside County Multiple Species Habitat Conservation Plan Nexus Fee Study Update Final Report (Economic & Planning Systems, Inc., October 2020) section "6. RCA Non-Fee Revenues" which states "The MSHCP forecast an array of revenue sources, in addition to fee revenue, supporting the conservation program. These sources were anticipated to total about 44 percent of the revenue for the program, including:
• Transportation funding – includes the Measure A sales tax which is authorized through 2039 and other transportation funding sources such as the Transportation Uniform Mitigation Fees (TUMF) charged on new development." Table 23 Annual Non-Fee Revenue Projection in this section indicates that an average of $950,000 in MSHCP revenue was derived annually from TUMF during the three years from FY16/17- 18/19 reflecting a TUMF contribution at 5% of construction costs consistent with the MSHCP as adopted in 2003. To clearly demonstrate compliance with the provisions of the MSHCP, the TUMF program will continue to incorporate a cost element to account for the required MSHCP contribution to mitigate the multi-species habitat impacts of constructing TUMF projects.

[15] AASHTO Technical Committee on Cost Estimating (TCCE) *AASHTO Practical Guide for Estimating* (December 2011), Table 2.4. Preliminary Engineering Costs' Average Percentage Ranges (% of Construction).
[16] AASHTO Technical Committee on Cost Estimating (TCCE) *AASHTO Practical Guide for Estimating* (December 2011), Section 2.2.3.2.3 Construction Engineering, "highway improvement projects in an urban environment".
[17] California Department of Transportation (Caltrans) Division of Design *Project Development Procedures Manual* (July 2021), Chapter 20 – Project Development Cost Estimates, Section 2 – Project Planning Cost Estimates, Article 2 Project Feasibility Cost Estimate, Contingencies.
[18] California Department of Transportation (Caltrans) Division of Design *Project Development Procedures Manual* (July 2021), Chapter 20 – Project Development Cost Estimates, Section 3 – Project Design Cost Estimates, Article 4 Preliminary Engineer's Cost Estimate, Contingencies.

An amount equal to 5% of the construction cost for new TUMF network lanes, bridges and railroad grade separations will continue to be specifically included as part of TUMF program with revenues to be provided to the Western Riverside County Regional Conservation Authority (RCA) for the acquisition of land identified in the MSHCP. The relevant sections of the MSHCP document and the 2020 MSHCP Nexus Report are included in this Appendix as **Exhibits F-5** and **F-6**, respectively.

Similarly, an amount of 4% of the total TUMF eligible network cost is included as part of the TUMF program with revenues to be utilized by WRCOG to cover the direct costs to administer the program. The costs incurred by WRCOG include direct salary, fringe benefit and overhead costs for WRCOG staff assigned to administer the program and support participating jurisdictions, and costs for consultant, legal and auditing services to support the implementation of the TUMF program.

Table 4.1 summarizes the unit cost estimate assumptions used to develop the TUMF network cost estimate, including a comparison of the original TUMF unit cost assumptions and the current revised unit cost assumptions developed as part of the 2009 Update of the TUMF Nexus Study. Cost estimates are provided in year of original values as indicated.

EXHIBIT F-1

2024 TUMF Nexus Update - Arterial Highway Cost Assumptions:

Component Type	Cost Assumptions as published October 18, 2002	Cost Assumption per 2009 Nexus Update October 5, 2009	Cost Assumptions per 2016 Update	Cost Assumptions per 2024 Update	Description
Terrain 1	$550,000.00	$628,000.00	$692,000.00	**$1,132,000**	Construction cost per lane mile - level terrain
Terrain 2	$850,000.00	$761,000.00	$878,000.00	**$1,740,000**	Construction cost per lane mile - rolling terrain
Terrain 3	$1,150,000.00	$895,000.00	$1,064,000.00	**$2,350,000**	Construction cost per lane mile - mountainous terrain
Landuse 1	$900,000.00	$1,682,000.00	$2,509,000.00	**$7,830,000**	ROW cost factor per lane mile - urban areas
Landuse 2	$420,000.00	$803,000.00	$2,263,000.00	**$5,440,000**	ROW cost factor per lane mile - suburban areas
Landuse 3	$240,000.00	$237,000.00	$287,000.00	**$490,000**	ROW cost factor per lane mile - rural areas
Interchange 1	n/a	$43,780,000.00	$50,032,000.00	**$84,190,000**	Complex new interchange/interchange modification cost
Interchange 2	$20,000,000.00	$22,280,000.00	$25,558,000.00	**$43,490,000**	New interchange/interchange modification total cost
Interchange 3	$10,000,000.00	$10,890,000.00	$12,343,000.00	**$22,550,000**	Major interchange improvement total cost
Bridge 1	$2,000.00	$2,880.00	$3,180.00	**$4,800**	Bridge total cost per lane per linear foot
RRXing 1	$4,500,000.00	$4,550,000.00	$6,376,000.00	**$18,200,000**	New Rail Grade Crossing per lane mile
RRXing 2	$2,250,000.00	$2,120,000.00	$2,733,000.00	**$6,900,000**	Existing Rail Grade Crossing per lane mile
ITS	n/a	n/a	n/a	**$686,400**	Infrastructure for ITS of Network roadway segments per route mile
Planning	10%	10%	10%	**10%**	Planning, preliminary engineering and environmental assessment costs based on construction cost only
Engineering	25%	25%	25%	**25%**	Project study report, design, permitting and construction oversight costs based on construction cost only
Contingency	10%	10%	10%	**10%**	Contingency costs, including TUMF program administration based on total segment cost
Administration		3%	4%	**4%**	TUMF program administration based on total TUMF eligible network cost
MSHCP		5%	5%	**5%**	TUMF component of MSHCP based on total TUMF eligible construction cost

EXHIBIT F-2
WRCOG Transportation Uniform Mitigation Fee
2024 Nexus Update Master Unit Cost Summary

I. Roadway Items	Unit	Unit Cost	Notes
Section 1: Earthwork			
Roadway Excavation			
Travel way	cubic yard	$38.55	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 190101
Imported Borrow			
Travel way	cubic yard	$20.47	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 198010
Clearing & Grubbing			
Travel way	acre	$12,100.00	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 170105
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	Same as RCTC
Section 2: Pavement Structural Section			
PCC	cubic yard	$354.83	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 401050
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	$240.62	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 390132
Aggregate Base (Including Bike Lane)	cubic yard	$73.54	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 260203
Curb and Gutter	linear foot	$65.74	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2022/2023 - ITEM 731504
Section 3: Drainage			
Project Drainage	lump sum	15% of Sections 1 and 2	Same as RCTC
Section 4: Specialty Items			
Retaining Walls	square foot	$90.00	Source: MBI structural group
Ramp Realignment	each		
Water Quality and Erosion Control	lump sum	3% of sections 1 to 3	Same as RCTC
Environmental Mitigation	lump sum	3% of sections 1 to 3	Same as RCTC
Section 5: Traffic Items			
Lighting	each	$7,500	Source: RCTC
Traffic Signals	each	$531,086	Typical for public agency projects in Western Riverside County and Caltrans Contract Cost Data 2022/2023
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 846007
Marking - Thermo plastic cross walks & pavement marking	square foot	$7.31	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 840516
Pavement Marker Retroreflective	each	$5.06	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2022/2023 - ITEM 810230
Signage - 1 Post	each	$367.69	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2021/2022 - ITEM 820840
Signage - 2 Post	each	$1,211.58	Source: Ave unit costs from Local Projects and Caltrans Contract Cost Data 2022/2023 - ITEM 820850
Infrastructure for ITS of Network roadway segments	route mile	$686,383.00	Source: Ave unit costs from Local Projects and MBI ITS Team - Assumptions: 3 Traffic Signals per route mile
Section 6: Minor Items	lump sum	10% of sections 1 to 5	Same as RCTC
Section 7: Roadway Mobilization	lump sum	10% of sections 1 to 6	Same as RCTC
Section 8:Roadway Additions	lump sum	10% of sections 1 to 6	Same as RCTC
II. STRUCTURE ITEMS			
Major New Interchange - 2 Lane New Bridge	square foot	$400.00	Interchange/Interchange, Cloverleaf Interchange - Cost provided by MBI Structural Group
New Interchange - 2 Lane New Bridge	square foot	$400.00	Interchange/Interchange, Diamond Interchange - Cost provided by MBI Structural Group
Major Interchange Improvement - 2 Lane Bridge Widening	square foot	$500.00	Interchange/Interchange, Cloverleaf Interchange - Cost provided by MBI Structural Group
Bridge	square foot	$400.00	Cost provided by MBI Structural Group
Structure Mobilization	lump sum	10% of structure cost	Typical for public agency projects in Western Riverside County
III. RIGHT OF WAY ITEMS			
Urban			
Travel Way - Additional lane	square foot	$330	Provided by Epic Land Solutions, Inc.
Suburban			
Travel Way - Additional lane	square foot	$229	Provided by Epic Land Solutions, Inc.
Rural			
Travel Way - Additional lane	square foot	$5	Provided by Epic Land Solutions, Inc.
Utility Relocation	lump sum	10% of ROW	Includes mobilization for one occurrence per lane mile
Total Items		I + II + III	Same as RCTC
Maintenance of Traffic	lump sum	5% of total items	Same as RCTC

EXHIBIT F-3
WRCOG Transportation Uniform Mitigation Fee
2024 Nexus Update Master Property Cost Summary

URBAN	Avg. $ per SF	% of Total Area	Weighted Cost
Commercial			
Part Take	$22	1.4%	$0.30
Full Take	$597	7.9%	$47.40
		9.3%	
Industrial			
Part Take	$29	0.5%	$0.15
Full Take	$267	6.0%	$16.02
		6.5%	
Single Family Residential			
Part Take	$10	16.8%	$1.68
Full Take	$348	66.2%	$230.24
		83.0%	
Multi Family Residential			
Part Take	$27	0.3%	$0.07
Full Take	$307	0.8%	$2.52
		1.1%	
Average Unit Price per Square Foot:			$298.38
Residential & Non-Res. Relocation (7.5%):			$22.38
Demolition (3%)			$8.95
Urban Unit Cost per Square Foot:			**$329.71**

SUBURBAN	Avg. $ per SF	% of Total Area	Weighted Share
Commercial			
Part Take	$17	5.1%	$0.87
Full Take	$425	14.6%	$62.01
		19.7%	
Industrial			
Part Take	$20	0.0288	$0.58
Full Take	$227	0.08645	$19.62
		11.5%	
Single Family Residential			
Part Take	$4	0.24	$0.96
Full Take	$292	0.3866	$112.89
		62.7%	
Multi Family Residential			
Part Take	$14	0.0284	$0.40
Full Take	$313	0.0321	$10.05
		6.1%	
Average Unit Price per Square Foot:			$207.37
Residential & Non-Res. Relocation (7.5%):			$15.55
Demolition (3%)			$6.22
Suburban Unit Cost per Square Foot:			**$229.14**

RURAL	$ per SF
Range of Value of Rural Vacant land sold within last year:	$0.07 - $31.48
Average price per square foot of rural land:	$4.66
Miscellaneous improvements (10%):	$0.46
Rural Unit Cost per Square Foot:	**$5.12**

EXHIBIT F-4
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
Terrain 1 - Level Terrain

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Section 1: Earthwork				
Roadway Excavation				
Travel way	cubic yard	$38.55	0.00	$0
Imported Borrow				
Travel way	cubic yard	$20.47	0.00	$0
Clearing & Grubbing				
Travel way	acre	$12,100.00	1.94	$23,467
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	$0
Section 2: Pavement Structural Section				
Sidewalk				
PCC	cubic yard	$354.83	258.13	$91,593
Travel way				
Asphalt Concrete Type A	cubic yard	$240.62	1,032.53	$248,448
Aggregate Base	cubic yard	$73.54	2,596.98	$190,982
Curb and Gutter	linear foot	$65.74	5,280.00	$347,107
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$135,240
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	10,560.00	$27,245
Marking	square foot	$7.31	211.50	$1,546
Pavement Marker (Type G One-way Clear Retroreflective)	each	$5.06	110.00	$557
Signage - 1 Post (Mainline)	each	$367.69	33.00	$12,134
Total Items				$1,078,318
Maintenance of Traffic		5% of total items	1.00	$53,916
Project Cost / Lane mile				**$1,132,234**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
Terrain 2 - Rolling Terrain

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Section 1: Earthwork				
Roadway Excavation				
Travel way	cubic yard	$38.55	7,739.26	$298,348
Imported Borrow				
Travel way	cubic yard	$20.47	7,739.26	$158,423
Clearing & Grubbing				
Travel way	acre	$12,100.00	1.94	$23,467
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	$45,677
Section 2: Pavement Structural Section				
Sidewalk				
PCC	cubic yard	$354.83	258.13	$91,593
Travel way				
Asphalt Concrete Type A	cubic yard	$240.62	1,032.53	$248,448
Aggregate Base	cubic yard	$73.54	2,596.98	$190,982
Curb and Gutter	linear foot	$65.74	5,280.00	$347,107
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$210,607
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	10,560.00	$27,245
Marking	square foot	$7.31	211.50	$1,546
Pavement Marker (Type G One-way Clear Retroreflective)	each	$5.06	110.00	$557
Signage - 1 Post (Mainline)	each	$367.69	33.00	$12,134
Total Items				$1,656,133
Maintenance of Traffic		5% of total items	1.00	$82,807
Project Cost / Lane mile				**$1,738,940**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
Terrain 3 - Mountainous Terrain

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Section 1: Earthwork				
Roadway Excavation				
Travel way	cubic yard	$38.55	15,478.52	$596,697
Imported Borrow				
Travel way	cubic yard	$20.47	15,478.52	$316,845
Clearing & Grubbing				
Travel way	acre	$12,100.00	1.94	$23,467
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	$91,354
Section 2: Pavement Structural Section				
Sidewalk				
PCC	cubic yard	$354.83	258.13	$91,593
Travel way				
Asphalt Concrete Type A	cubic yard	$240.62	1,032.53	$248,448
Aggregate Base	cubic yard	$73.54	2,596.98	$190,982
Curb and Gutter	linear foot	$65.74	5,280.00	$347,107
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$285,974
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	10,560.00	$27,245
Marking	square foot	$7.31	211.50	$1,546
Pavement Marker (Type G One-way Clear Retroreflective)	each	$5.06	110.00	$557
Signage - 1 Post (Mainline)	each	$367.69	33.00	$12,134
Total Items				$2,233,949
Maintenance of Traffic		5% of total items	1.00	$111,697
Project Cost / Lane mile				**$2,345,646**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update

Landuse 1 - ROW Urban areas

	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
III. RIGHT OF WAY ITEMS				
Urban				
Travel Way	square foot	$329.71	95,040.00	$31,335,419
Project Cost / Lane mile			25%	**$7,833,855**

Landuse 2 - ROW Suburban Areas

	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
III. RIGHT OF WAY ITEMS				
Suburban				
Travel Way	square foot	$229.14	95,040.00	$21,777,847
Project Cost / Lane mile			25%	**$5,444,462**

Landuse 3 - ROW Rural areas

I. Roadway Items	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
III. RIGHT OF WAY ITEMS				
Rural				
Travel Way	square foot	$5.12	95,040.00	$486,605
Project Cost / Lane mile				**$486,605**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
Interchange 1 - Complex New Interchange/Interchange Modification

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Section 1: Earthwork				
Imported Borrow				
Travel way	cubic yard	$20.47	700,000.00	$14,329,000
Clearing & Grubbing				
Travel way	acre	$12,100.00	51.93	$628,349
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	$1,432,900
Section 2: Pavement Structural Section				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	$240.62	13,500.00	$3,248,370
Aggregate Base (Including Bike Lane)	cubic yard	$73.54	34,000.00	$2,500,360
Curb and Gutter	linear foot	$65.74	31,000.00	$2,037,940
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$3,626,538
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	84,250.00	$217,365
Marking	square foot	$7.31	368.00	$2,690
Signage - 1 Post	each	$367.69	14.00	$5,148
Signage - 2 Post	each	$1,211.58	4.00	$4,846
II. STRUCTURE ITEMS				
Complex New Interchange - 2 Lane New Bridge	square foot	$400.00	140,400.00	$56,160,000
Total Items		I + II + III		$84,193,506
Total Project Cost / lane mile				**$84,193,506**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
Interchange 2 - New Interchange/Interchange Modification

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Section 1: Earthwork				
Imported Borrow				
Travel way	cubic yard	$20.47	400,000.00	$8,188,000
Clearing & Grubbing				
Travel way	acre	$12,100.00	25.12	$304,000
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	$818,800
Section 2: Pavement Structural Section				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	$240.62	7,040.00	$1,693,965
Aggregate Base (Including Bike Lane)	cubic yard	$73.54	17,706.67	$1,302,148
Curb and Gutter	linear foot	$65.74	16,000.00	$1,051,840
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$2,003,813
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	43,200.00	$111,456
Marking	square foot	$7.31	368.00	$2,690
Signage - 1 Post	each	$367.69	36.00	$13,237
Signage - 2 Post	each	$1,211.58	4.00	$4,846
II. STRUCTURE ITEMS				
New Interchange - 2 Lane New Bridge	square foot	$400.00	70,000.00	$28,000,000
Total Items		I + II + III		$43,494,795
Total Project Cost / lane mile				**$43,494,795**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
Interchange 3 - Major Interchange Improvement

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Section 1: Earthwork				
Imported Borrow				
Travel way	cubic yard	$20.47	180,000.00	$3,684,600
Clearing & Grubbing				
Travel way	acre	$12,100.00	3.97	$48,000
Develop Water Supply	lump sum	10% of Excavation and Borrow Cost	1.00	$368,460
Section 2: Pavement Structural Section				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	$240.62	3,128.89	$752,873
Aggregate Base (Including Bike Lane)	cubic yard	$73.54	7,869.63	$578,733
Curb and Gutter	linear foot	$65.74	16,000.00	$1,051,840
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$972,676
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	32,000.00	$82,560
Marking	square foot	$7.31	184.00	$1,345
Signage - 1 Post	each	$367.69	20.00	$7,354
Signage - 2 Post	each	$1,211.58	4.00	$4,846
II. STRUCTURE ITEMS				
Major Interchange Improvement - 2 Lane Bridge Widening	square foot	$500.00	30,000.00	$15,000,000
Total Items		I + II + III		$22,553,287
Total Project Cost / lane mile				**$22,553,287**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
Bridge 1 - New Bridge Cost

II. STRUCTURE ITEMS	Unit	Unit Cost	Quantity / lane mile	Cost / lane mile
Bridge	square foot	$400.00	12.00	$4,800
Total Items		I + II + III		$4,800
Total Project Cost / lane mile				**$4,800**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
RRXing 1 - New Rail Grade Crossing

I. ROADWAY ITEMS	**Unit**	**Unit Cost**	**Quantity / lane mile**	**Cost / lane mile**
Section 1: Earthwork				
Imported Borrow				
Travel way	cubic yard	$20.47	17,931.03	$367,048
Section 2: Pavement Structural Section				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	$240.62	782.22	$188,218
Aggregate Base (Including Bike Lane)	cubic yard	$73.54	1,967.41	$144,683
Curb and Gutter	linear foot	$65.74	1,180.00	$77,573
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$116,628
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	1,180.00	$3,044
II. STRUCTURE ITEMS				
Bridge	square foot	$400.00	2,880.00	$1,152,000
III. RIGHT OF WAY ITEMS				
Urban				
Travel Way - Additional lane	square foot	$329.71	49,000.00	$16,155,790
Total Items		I + II + III		$18,204,986
Total Project Cost / lane mile				**$18,204,986**

EXHIBIT F-4 (Continued)
WRCOG Transportation Uniform Mitigation Fee
Cost Assumption Estimate - 2024 Nexus Update
RRXing 2 - Widen Existing Rail Grade Crossing

I. ROADWAY ITEMS	**Unit**	**Unit Cost**	**Quantity / lane mile**	**Cost / lane mile**
Section 1: Earthwork				
Imported Borrow				
Travel way	cubic yard	$20.47	17.78	$364
Section 2: Pavement Structural Section				
Asphalt Concrete Type A (Including Bike Lane)	cubic yard	$240.62	782.22	$188,218
Aggregate Base (Including Bike Lane)	cubic yard	$73.54	1,967.41	$144,683
Curb and Gutter	linear foot	$65.74	1,180.00	$77,573
Section 3: Drainage				
Project Drainage	lump sum	15% of Sections 1 and 2	1.00	$61,626
Section 5: Traffic Items				
Striping - Thermo plastic (1 GP Lane, per direction)	linear foot	$2.58	1,180.00	$3,044
II. STRUCTURE ITEMS				
Bridge	square foot	$400.00	2,880.00	$1,152,000
III. RIGHT OF WAY ITEMS				
Urban				
Travel Way - Additional lane	square foot	$329.71	16,000.00	$5,275,360
Total Items		I + II + III		$6,902,869
Total Project Cost / lane mile				**$6,902,869**

EXHIBIT F-4 (Continued)

WRCOG Transportation Uniform Mitigation Fee

Cost Assumption Estimate - 2024 Nexus Update

Infrastructure for Intelligent Transportation Systems (ITS) on TUMF Network Roadway Segments

I. ROADWAY ITEMS	Unit	Unit Cost	Quantity / route mile	Cost / route mile
Infrastructure for ITS of Network roadway segments	route mile	$686,383.00	1.00	$686,383
Total Items		I + II + III		$686,383
Total Project Cost / route mile				**$686,383**

EXHIBIT F-5

Riverside County Integrated Project (RCIP) Multiple Species Habitat Conservation Plan (MSHCP)
adopted by the Riverside County Board of Supervisors on June 17, 2003

Section 8.0 MSHCP Funding/Financing of Reserve Assembly and Management

8.5 LOCAL FUNDING PROGRAM

The following local funding plan describes the local commitment for funding Reserve Assembly, Management, and Monitoring.

The local funding program includes funding from a variety of sources, including but not limited to, regional funding resulting from the importation of waste into landfills in Riverside County, mitigation for regional public infrastructure projects, mitigation for private infrastructure projects, mitigation for private Development, funds generated by local or regional incentive programs that encourage compact growth and the creation of transit-oriented communities, and dedications of lands in conjunction with local approval of private development projects.

The local funding program will fund the local portion of:

- Land acquisition
- Management
- Monitoring
- Adaptive Management
- Plan administration

8.5.1 Funding Sources

Local funding sources include funding from both public and private developers and regional entities in an effort to spread the financial burden of the MSHCP over a broad base. The mix of funding sources provides an equitable distribution of the cost for local mitigation under the MSHCP. In addition to equitably distributing mitigation for local projects, utilizing a mixture of funding sources will help ensure the long-term viability of the local funding program because a temporary decline in funding from one source may be offset by increases from another. The proposed local funding sources are described below and include:

- Local Development Mitigation Fees
- Density Bonus Fees
- Regional Infrastructure Project Contribution
- Landfill Tipping Fees

- Other Potential New Revenue Sources

➤ Local Development Mitigation Fees

New Development affects the environment directly through construction activity and cumulatively through population bases that result from Development. Government Code Section 66000 et seq. allows cities and counties to charge new Development for the costs of mitigating the impacts of new Development. The Cities and County will implement a Development Mitigation Fee pursuant to the MSHCP; this fee will be one of the primary sources of funding the implementation of the MSHCP. The fee ordinance adopted by the Cities and the County will provide for an annual CPI adjustment based upon the Consumer Price Index for "All Urban Consumers" in the Los Angeles-Anaheim-Riverside Area, measured as of the month of December in the calendar year which ends in the previous Fiscal Year. There will also be a provision for the fee to be reevaluated and revised should it be found to insufficiently cover mitigation of new Development. A fee of approximately $1,500 per residential unit (or an equivalent fee per acre) and $4,800 per acre of commercial or industrial Development was used in the revenue projection shown in *Appendix B-05* of this document. The projected revenues from the Development Mitigation Fee are anticipated to be approximately $540 million over the next 25 years. A nexus study is required to demonstrate that the proposed fee is proportionate to the impacts of the new Development.

➤ Density Bonus Fees

The New Riverside County General Plan creates a number of incentive plans that have the potential both to further the goals of the County's General Plan and to facilitate the implementation of the MSHCP. *Section 8.4.2* above discusses the use of the Rural Incentive Program to aid in the Conservation of lands through non-acquisition means. An additional component of the Incentive Program enables developers to acquire the right to develop at an additional 25% increase in density by providing enhancements to their projects and by paying a "Density Bonus Fee." The fee is anticipated to be $3,000 – $5,000 per additional unit. This program offers a significant incentive to developers when compared with the typical cost of creating a new buildable lot.

The Density Bonus program is new to Riverside County, and it is, therefore, difficult to project annual revenues. The Local Funding Program assumes that between 10% and 20% of the residential units built in the unincorporated County area will participate in the incentive program and that only 50% of the revenues of the program will be committed to the MSHCP, with the remaining portion staying in the local community in which the additional units are located to provide additional

amenities that will help offset the greater density. Of the 330,000 units projected to be built over the next 25 years, 10% (or 33,000 units) are assumed to be built utilizing the Density Bonus Fee resulting in $132,000,000 in revenues of which 50% (or $66,000,000) will be allocated to the MSHCP.

➤ Regional Infrastructure Project Contribution

Regional infrastructure projects directly affect the environment not only through the effect they have on species and their Habitats, but also by facilitating continued new Development. It is appropriate, therefore, for regional infrastructure projects to contribute to Plan implementation . Four general categories of infrastructure projects have been identified:

- Transportation Infrastructure
- Regional Utility Projects
- Local Public Capital Construction Projects
- Regional Flood Control Projects

Transportation Infrastructure

The RCIP has identified the need for approximately $12 billion in new transportation infrastructure to support the Development proposed for the next 25 years. Each new transportation project will contribute to Plan implementation . Historically, these projects have budgeted 3% – 5% of their construction costs to mitigate environmental impacts. The local funding program anticipates that more than one-half of the $12 billion cost of contribution to acquisition of Additional Reserve Lands will be funded locally and will result in approximately $371 million in contribution over the next 25 years as discussed below.

▸ Riverside County's ½ cent sales tax for Transportation

In 1988, Riverside County voters approved a measure to increase local sales tax by ½ cent to fund new transportation projects (Measure A). The sales tax measure is due to be reauthorized in 2002. Under the reauthorization, $121 million will be allocated as local contribution under the MSHCP. (For further information on the sales tax measure, see *Section 13.5* of the MSHCP Implementing Agreement and *Appendix B-07* of this document).

Regional Utility Projects

As Riverside County's population doubles over the next 25 years, new regional utility infrastructure will be required. Since the utilities are not Permittees under the MSHCP, they may choose to mitigate under the Plan or seek their own regulatory permits. In either case, their mitigation will be focused on the objectives of the MSHCP and will contribute to the local implementation funding. No estimate of the number of projects or the scope or costs is available at this time; consequently, no estimate of mitigation funding has been made. The Permittees expect that regional utility projects will contribute to the implementation of the MSHCP and provide an additional contingency should other revenue sources not generate the projected levels of funding or should implementation costs be higher than projected.

Local Public Capital Construction Projects

Local public capital construction projects may include construction of new schools, universities, City or County administrative facilities, jails, courts, juvenile facilities, parks, libraries, or other facilities that serve the public. These projects will be mitigated under the MSHCP and will utilize a per acre mitigation fee based on the fee then in place for private, commercial and industrial Development. No attempt has been made to estimate the number or magnitude of these projects. The Permittees expect that local pubic construction projects will contribute to the implementation of the MSHCP and provide an additional contingency should other revenue sources not generate the projected levels of funding or should implementation costs be higher than projected.

Regional Flood Control Projects

Flood control projects will receive coverage under the MSHCP for both new capital construction and for the maintenance of existing and new facilities. Preliminary estimates from the Riverside County Flood Control and Water Conservation District indicate that they will likely budget approximately $15 M in projects annually. Based on using 3% of capital costs, the District would be expected to contribute approximately $450,000 to $750,000 annually to MSHCP implementation. Since many flood control projects serve existing developed communities and therefore have less impacts than projects adding capacity to serve new Development and may provide some conservation value especially in terms of Constrained Linkages, the District's contributions may average something below the 5% level on average.

➤ Landfill Tipping Fees

Riverside County has utilized revenues from public and private landfills in Riverside County to generate funding for conservation and open space projects for over a decade. In 1990, the County utilized $1 per ton tipping fee assessed all waste deposited in County landfills to fund the acquisition of the Santa Rosa Plateau and approximately $260,000 annually to fund the operation of the County Park and Open Space Districts. More recently, the County has negotiated agreements with two private landfills in the County to commit $1 per ton on all waste imported from outside Riverside County to Conservation within Riverside County.

El Sobrante Landfill

This privately owned landfill was permitted to expand its capacity to 10,000 tons per day in 2001. In approving the landfill expansion, the Riverside County Board of Supervisors authorized fifty cents per ton of the County's portion of the revenue from the landfill expansion to be applied to Conservation in addition to the $1 per ton that was committed under the landfill agreement. The projection of the annual tonnage and revenue for Conservation included in *Appendix B-09* of this document reflects the $1.5 per ton commitment to Conservation. Over the life of the landfill, 60 million tons of imported waste are allowed. Sixty million tons at $1.5 per ton will generate $90 million for Conservation. The Cash Flow Analysis in *Appendix B-10* of this document reflects the annual revenues from the El Sobrante Landfill.

County Landfills

The County Board of Supervisors, beginning in 1990, authorized $1 per ton for all in-county waste deposited in County landfills to go toward habitat and open space Conservation. After adjusting for the debt service on the Santa Rosa Plateau acquisition and an annual commitment to the Park and Open Space District, there is a projected annual balance of $400,000 that can be applied to additional Conservation under the MSHCP. *Appendix B-09* of this document includes a projection of tonnage from in-County waste at County landfills. The Cash Flow Analysis in *Appendix B-10* of this document reflects the annual revenues from the County landfills. Over the next 25 years, County landfills will contribute approximately $10 million to the implementation of the MSHCP.

Eagle Mountain

In 1997, the County approved the use of the old Kaiser mine at Eagle Mountain in eastern Riverside County as a regional landfill to serve primarily Los Angeles County. Subsequently, the Los Angeles County Sanitation District has acquired the rights to the Eagle Mountain Landfill and intends to begin operation of the landfill within the next decade. At this time, litigation is still pending that could prohibit the development of the landfill. The Development Agreement with the County would require the payment of $1 per ton for Conservation if the landfill is developed. Conservation needs in the Coachella Valley would have first priority over the revenues from the Eagle Mountain Landfill; however, some portion of the revenues would be available to support Conservation needs in Western Riverside County. The Permittees expect that the Eagle Mountain Landfill will provide funding to support implementation of the MSHCP over the life of the MSHCP. However, no revenue from the Eagle Mountain Landfill has been projected in the funding program at this time. These potential revenues provide a contingency should other revenue sources not generate the projected levels of funding or should implementation costs be higher than projected.

➤ Potential New Revenue Sources

The County and Cities may levy assessments to pay for services that directly benefit the property on which the fee is levied. Under current law, a local election may be required to initially levy the assessment or to confirm the assessment if a protest is filed. No such assessments are currently projected for the MSHCP. As the MSHCP Conservation Area is developed, however, its value as open space and for recreation opportunities may lend itself to a local funding program for ongoing management and enhancement. In more urban areas, which Western Riverside County will be in 25 years, local voters routinely approve such funding programs.

Other revenue opportunities may be realized over the next 25 years. The County, Cities, and RCA will explore new revenue sources to support the acquisition of the MSHCP Conservation Area and its long-term management and enhancement. A goal of any new fee would be to spread a portion of the costs for the MSHCP across as broad a regional base as possible.

TABLE 8-5
LOCAL PUBLIC/REGIONAL FUNDING SOURCES

Source Anticipated	$ Range	Requirements to Implement	Responsible Party
Private Funding Sources:			
Cities and County Development Mitigation Fees	$539.6M	Approval of County Ordinance Approval of City(ies) Ordinance	County Cities
Density Bonus Fees	$66M	Approval of General Plan	County
Public Funding Sources			
Local Roads	$121M	Approval of Measure A, local agreement on allocation	RCTC/County
Other Transportation	$250M	% of new road construction	RCTC/County
Other infrastructure Projects	$unknown	Project-by-project negotiation	County and Cities
El Sobrante Landfill	$90M	In place	County
County Landfills	$10M	In place	County
Eagle Mountain Landfill	$unknown	In place pending start-up	County
New Regional funding	$unknown	Voter approval	County and Cities
TOTAL LOCAL FUNDS	**$1,076.6M**		

8.6 ADEQUACY OF FUNDING

The Permittees and the Wildlife Agencies will annually evaluate the performance of the funding mechanisms and, notwithstanding other provisions of the MSHCP, will develop any necessary modifications to the funding mechanisms to address additional funding needs. Additionally, this annual evaluation will include an assessment of the funding plan and anticipate funding needs over the ensuing 18 months for the purpose of identifying any potential deficiencies in cash flow. If deficiencies are identified through this evaluation, then the Permittees and the Wildlife Agencies will develop strategies to address any additional funding needs consistent with the terms and conditions of the MSHCP.

EXHIBIT F-6

Western Riverside County Multiple Species Habitat Conservation Plan Nexus Fee Study Update Final Report
Economic & Planning Systems, Inc., October 2020

Final Report

Western Riverside County Multiple Species Habitat Conservation Plan Nexus Fee Study Update

Prepared for:

Western Riverside County Regional Conservation Authority

Prepared by:

Economic & Planning Systems, Inc.

October 2020

EPS #171034

The Economics of Land Use

Economic & Planning Systems, Inc.
1330 Broadway
Suite 450
Oakland, CA 94612
510 841 9190 tel

Oakland
Sacramento
Denver
Los Angeles

www.epsys.com

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1. INTRODUCTION AND KEY FINDINGS

This Updated Nexus Study (2020 Nexus Study) provides the technical justification for changes to the Local Development Mitigation Fee schedule that applies to Local Permittee participants in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan). These changes are necessary to ensure adequate funding of the obligations of the Local Permittees under the MSHCP and the associated Incidental Take Permit and Implementing Agreement. The resulting increased fee revenues will support the continued implementation of the MSHCP and the streamlining of endangered species incidental take permitting for new Western Riverside County development provided under the MSHCP. This Nexus Study is consistent with the requirements of California Government Code 66000 et seq. (the Mitigation Fee Act) that requires specific findings (as well as administration and implementation procedures) for "any action establishing, increasing, or imposing a fee as a condition of approval of a development project by a local agency."

Background

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan), originally adopted in 2004, is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on the conservation of species and their associated habitats in Western Riverside County. The MSHCP was developed in response to the need for future growth opportunities in Western Riverside County while addressing the requirements of the State and federal Endangered Species Acts. The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 as well as a Natural Communities Conservation Plan under the NCCP Act of 2001. The MSHCP streamlines these environmental permitting processes by allowing the participating jurisdictions to authorize "take" of plant and wildlife species identified within the Plan Area. At the same time, Plan implementation provides a coordinated MSHCP Conservation Area and implementation program to preserve biological diversity and maintain the region's quality of life.

The MSHCP and the associated Implementing Agreement and Incidental Take Permit collectively determine a set of conservation actions that must be taken to meet the terms of the Incidental Take Permit and benefit from the regulatory streamlining and other benefits of the MSHCP. This includes the identification of the responsible parties, including the responsibilities of the Local Permittees.[1] One of the key requirements of the MSHCP, Implementing Agreement, and Incidental Take Permit (consistent with the requirements of the federal Endangered Species Act) is the provision of adequate funding by Local Permittees to the Implementing Entity (the Western Riverside County Regional Conservation Authority[2]) to conduct their portion of the conservation actions identified in the MSHCP.

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[1] Local Permittees include the Western Riverside cities, the County of Riverside, County Flood Control and Water Conservation District, County Regional Park and Open-Space District, County Department of Waste Resources, and Riverside County Transportation Commission.

[2] The Western Riverside County Regional Conservation Agency is a Joint Powers Authority established in 2004 to implement the MSHCP.

Section 8.0 of the MSHCP outlines the MSHCP funding/financing approach. It also identified best estimates of Plan implementation costs at the time of Plan adoption, including the local funding commitment that represents a portion of the overall land acquisition, management and monitoring, and Plan administration costs. The Local Funding Program included a mix of funding sources to provide "an equitable distribution of the cost for local mitigation under the MSHCP." The proposed funding sources included Local Development Mitigation Fees (and land dedications), regional infrastructure project public contributions (including contributions to mitigate for transportation infrastructure, regional utility projects, local public capital construction projects, and regional flood control projects), and landfill tipping fees.

Participating cities and the County were each required to implement a Local Development Mitigation Fee under California Government Code Section 66000 et seq. (the "Mitigation Fee Act") and supported by the separate "Final Mitigation Fee Nexus Study Report for the Western Riverside County Multiple Species Habitat Conservation Plan," July 1, 2003 (Original or 2003 Nexus Study). The MSHCP funding chapter notes the need for frequent evaluations of the performance of the funding mechanisms and assessments of the funding plan and the need to make any necessary modifications to the funding mechanisms. The MSHCP also notes that the mitigation fee will need to be "reevaluated and revised should it be found to insufficiently cover mitigation of new development."

In addition to the common practice of updating mitigation fees periodically to account for changing circumstances, the Western Riverside County Regional Conservation Authority (RCA) has determined that significant changes have occurred and/or circumstances have arisen that justify an update to the mitigation fees. These changes include, but are not limited to, the following:

- The need to acquire more land than originally forecast due to the lower than expected land dedication.
- The lower-than-expected levels of non-fee funding from local and regional funding sources.
- The lower than expected levels of residential development.
- The need to diversify land acquisitions away from a focus on the larger, more remote parcels to also acquiring parcels closer to urbanized areas, consistent with the reserve assembly requirements of the MSHCP.

Original and Existing Fee Schedule

All local jurisdictions participating in the MSHCP and obtaining coverage for public and private take in their jurisdictions were required to adopt and implement the 2004 Mitigation Fee Schedule through ordinance and resolution and then to pass through the fee funding (except for any additional administrative charges added by the jurisdictions) to the RCA to fund MSHCP implementation. The ordinances allowed for periodic inflationary increases based on the annual change in the Consumer Price Index for the Los Angeles-Anaheim-Riverside area. In 2018 the Bureau of Labor Statistics implemented a geographic revision, establishing Riverside as its own Core Based Statistical Area. As a result, Riverside was removed from the Consumer Price Index encompassing Los Angeles and Anaheim. Going forward, inflationary increases will be based on the annual change in the Consumer Price Index for the newly established Riverside-San

Bernardino-Ontario area. As outlined in the 2003 Nexus Study (Original Nexus Study), all new development in Western Riverside County is required to pay the mitigation fee.

Table 1 shows the original 2004 Local Development Mitigation Fee schedule and the current 2021 Fee Schedule that reflects periodic inflationary fee adjustments using the indexing process that collectively increased the fees by 35 percent between 2004 and 2020 (this was below the overall inflation index increase over this period).

Table 1 2004 and 2021 MSHCP Fee Schedule

Fee Category	2004 Fee per unit or per acre	2021 Fee per unit or per acre[3]
Residential: Up to 8.0 dwelling units per acre (DUAC)	$1,651	$2,234
Residential: 8.0-14.0 DUAC	$1,057	$1,430
Residential: 14.0+ DUAC	$859	$1,161
Commercial (per acre)	$5,620	$7,606
Industrial (per acre)	$5,620	$7,606

Updated Mitigation Fee Schedules

This 2020 Nexus Study has estimated the increased fee level that would be required to provide sufficient revenues, based on the best available forecasts of future growth, to support the full implementation of the MSHCP, including the completion of all land acquisition and the establishment of the necessary endowment, by 2029 (Year 25 of Plan implementation).[4] Because, as shown below, this would require a major increase in the fee levels, three other scenarios are also considered where different time extensions provide more time for land acquisition.[5] These extensions allow for the costs of Plan implementation (including land acquisitions) to be spread across more development and, as a result, moderate the level of mitigation fee increase required. In addition, the longer extension scenarios require a pace of land acquisition that is more consistent with what has proven to be achievable. All of these fee

[3] Note it is RCA procedure to refer to fees during, for example, Fiscal Year 2020/2021, as the 2021 fee. The 2021 fee became effective July 1, 2020, and applies for the fiscal year of 2020-21 (i.e., until June 30, 2021 when the 2022 Fee begins).

[4] The MSHCP provided a 25-year period of the required land acquisition with the larger 75-year permit term. This is labelled the "No Extension" or "Baseline Scenario" in this Update Study.

[5] The baseline scenario as well as the extension scenarios assume that all land acquisition as well as the full endowment will be completed/ established by the end of the specified implementation/ land acquisition period. Interest from the non-depleting endowment will fund all ongoing costs thereafter.

increases would be consistent with the Mitigation Fee Act and the MSHCP and associated Incidental Take Permit and Implementing Agreement.

The mitigation fee levels shown for each extension scenario are the fee levels required to cover the appropriate portion of the Local Permittee MSHCP implementation costs based on the best information available at this time. The revised mitigation fee levels reflect changes in estimated costs, expected levels of land dedication, and non-fee funding. Consistent with the MSHCP and Original Nexus Study, it is assumed that all new development in Western Riverside County will pay the mitigation fee because, as noted in the MSHCP, "new development affects the environment through construction activity and cumulatively through population bases that result from such development."[6] Importantly, the revised mitigation fee levels also reflect the decision to determine the mitigation fee that applies to different land uses on a consistent per gross acre basis. This approach is considered to provide a clear, consistent, and proportionate method for determining mitigation fees on new development.[7] The 2020 Nexus Study does convert the overarching per gross acre fee into per unit residential fees for different density ranges; this conversion was conducted to provide implementation/administrative consistency for member jurisdictions.

Table 2 Updated MSHCP Implementation Costs and Per Acre Mitigation Fees

Fee Per Acre	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Net Cost	**$912,756,583**	**$902,353,150**	**$892,767,438**	**$883,987,805**
Acres of Development				
Residential	14,026	21,818	29,611	37,403
Nonresidential	6,239	9,705	13,171	16,637
Total	**20,265**	**31,523**	**42,782**	**54,040**
Mitigation Fee per Acre	**$45,041**	**$28,625**	**$20,868**	**$16,358**

Sources: Southern California Association of Governments; Western Riverside County RCA; Economic & Planning Systems, Inc.

[6] Consistent with the Original Nexus Study and the technical analysis in this study update (and as described in more detail in the Fee Implementation Handbook), certain types of public improvements/ infrastructure projects will make mitigation payments calculated as a percent of total improvement cost. All projects are required to make a mitigation payment/contribution (except where exempted as specified in the Ordinance); where no mitigation payment process is specified, the project will pay the updated per acre mitigation fee.

[7] This is the approach taken by the majority of regional Habitat Conservation Plans in California, including the Coachella Valley Multiple Species Habitat Conservation Plan mitigation fee.

As shown in **Table 2**, the required mitigation fee per gross acre of development varies substantially based on level of extension as follows:

- **No Extension**. Under the current structure, where all land acquisition must occur by the end of Year 25 of MSHCP implementation (2029), a mitigation fee of **$45,041 per acre** of development would be required.
- **5-Year Extension**. With a 5-year extension, where all land acquisition must occur by the end of Year 30 of MSHCP implementation (2034), a mitigation fee of **$28,625 per acre** of development would be required.
- **10-Year Extension**. With a 10-year extension, where all land acquisition must occur by the end of Year 35 of MSHCP implementation (2039), a mitigation fee of **$20,868 per acre** of development would be required.
- **15-Year Extension**. With a 15-year extension, where all land acquisition must occur by the end of Year 40 of MSHCP implementation (2044), a mitigation fee of **$16,358 per acre** of development would be required.

For residential development, the per gross acre fee is translated into per residential unit fees by density category to provide for a fee framework that is consistent with the current fee structure. The per residential unit fees are calculated by dividing the per gross acre fee by an assumed typical/ average density for each of the three density ranges (low, medium, and high).[8] The full mitigation fee schedule (for each extension scenario) is shown in **Table 3**, including the per unit residential fees by density category and per gross acre fees for non-residential development. The typical/ average residential densities used to calculate the per-unit residential fees are the same as the density assumptions in the Original Nexus Study.[9]

[8] For example, the $3,635 per unit Residential – Low fee under the 15-year extension is derived by dividing the overall per gross acre mitigation fee of $16,358 (shown in Figure 2) by the assumed typical/average density of Residential Low of 4.5 units/acre.

[9] The Fee Implementation Handbook provides more specifics on how to determine a project's residential density and therefore the appropriate per unit residential fee that applies.

Table 3 Updated Mitigation Fee Schedule by Extension Scenario

Fee Per Unit	Current Fee 2021[1]	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Residential - Low (Up to 8.0 DUAC)[2 3]	$2,234	$10,009	$6,361	$4,637	$3,635
Residential - Medium (8.0-14.0 DUAC)[2 3]	$1,430	$4,170	$2,650	$1,932	$1,515
Residential - High (14.0+ DUAC) [2 3]	$1,161	$1,846	$1,173	$855	$670
Commercial / Industrial (per acre)	$7,606	$45,041	$28,625	$20,868	$16,358

1. Western Riverside County Multiple Species Conservation. Local Development Mitigation Fee Schedule for FY 2020-21 (Effective July 1, 2020 – June 30, 2021), annually adjusted using the Consumer Price Index.

2. Per acre mitigation fees translated into per unit fees based on the following residential densities: for low density, 4.5 units per acre; for medium density, 10.8 units per acre; for high density, 24.4 units per acre, consistent with the assumptions used in Appendix E of the original Nexus Study.

3. DUAC stands for Dwelling Units per Acre.

Sources: Southern California Association of Governments; Western Riverside County RCA; Economic & Planning Systems, Inc.

Key Drivers of Fee Change

The change in Local Development Mitigation Fee is the result of a number of different contributing factors ("moving parts"), fully documented and detailed in **Chapters 2** through **7**. This Nexus Study is based on the most current information available including, for some inputs, recent years of experience from MSHCP implementation. The factors that have had the most significant effect on the Local Development Mitigation Fee calculations are summarized below.

1. **Lower-than-expected land dedications substantially increase the Local Permittee habitat acquisition cost component of MSHCP implementation.** The MSHCP assumed that 41,000 of the 97,000 acres (42 percent) to be conserved by Local Permittee action/funding would be provided at no cost through land dedication associated with development inside the Criteria Cells. Through the first sixteen years of Plan implementation, less than 1,000 acres of the Local Permittee habitat conservation obligations have been generated through these dedications. An additional 10,000 acres of land dedication requirements have been required as part of proposed developments that have yet to occur. Beyond the dedication associated with previously proposed projects, additional land dedication is not expected.[10] As a result, the 2020 Nexus Study assumes the noted 10,000 acres of land dedication is formalized over the next eight years (an average annual land dedication of 1,250 acres per year) prior to the end of the current land acquisition period. No additional land dedication is assumed, even if the acquisition period is extended. As a result, at the end of the current habitat acquisition period (Year 25 of Plan

[10] In September 2016, the RCA revised its fee credit and waiver policy, limiting the likelihood of projects paying fees and dedicating land.

implementation), total land dedication is expected to represent about 11,000 acres and about 11 percent of the Local Permittee land conservation requirement. The RCA therefore needs to directly acquire an additional 30,000 acres of land relative to the expectations of the Original Nexus Study.

2. **Lower than expected regional infrastructure public contributions have reduced the non-fee funding available, increasing the costs to be funded through the mitigation fee.** The MSHCP assumed a substantial level of funding from regional infrastructure project public contributions, including transportation infrastructure, regional utility projects, local public capital construction projects, and regional flood control projects, as well as from landfill tipping fees. While the Measure A sales tax has provided substantial funding as expected, other revenue sources, on aggregate, have provided (and are expected to continue to provide) substantially less funding than forecast in the 2003 Nexus Study. As a result, mitigation fees will need to cover about 91 percent of Local Permittee MSHCP implementation costs relative to the original assumption of about 56 percent.

3. **The change towards a consistent "per gross developed acre" fee basis provides a more consistent approach for all land use development types.** The 2003 Nexus Study used an "Equivalent Benefit Unit" approach to distributing mitigation costs between different land use categories. This Nexus Study adjusts the fee calculation to the more commonly used per gross acre basis. Under this approach, the new Local Development Mitigation Fees are all based on one "across the board" per gross acre fee determination. Non-residential development then pays this per acre fee, while per unit residential fees by density category are derived from this common per gross acre fee.[11] This change evens out some of the prior differences in mitigation fee levels.

4. **The estimates of average per acre land values have not changed substantially, so they have had a limited effect on the change in mitigation fees.** The original MSHCP implementation cost estimate was based on an average land value of about $13,100 per acre. This was based on research on land transactions of parcels with different land use designations and sizes in 2001/2002. The land valuation analysis conducted for this Nexus Study estimated a planning-level land value of about $14,300 per acre based on land transactions primarily in the 2014 to 2017 period (inflated to 2019-dollar terms). As a result, land value estimates have not changed substantially in nominal dollar terms since the Original Nexus Study. This estimated per acre land value is above the cost of most RCA transactions to date, though the average land values of future RCA land acquisition are expected to increase due to the increasing need to purchase more expensive land in "linkage" areas.

[11] Similar to the Original Nexus Study, all new development in Western Riverside County is required to pay the mitigation fee (or otherwise provide the necessary mitigation). The conversion from per gross acre to per unit fees for residential development is conducted to provide administrative continuity for member agencies.

Organization of Report

This Nexus Study includes several chapters. **Chapter 1**, this chapter, describes the purpose and need for this Nexus Study, the recommended changes in the Local Development Mitigation Fee, and the key drivers of these changes. **Chapters 2** through **7** provide the technical analysis that supports the updated fees and nexus findings. **Chapter 2** summarizes the purpose of and basis for the MSHCP, the conservation requirements of the MSHCP, and the financing strategy and approach developed to implement the MSHCP in 2004. **Chapter 3** describes the conservation achievements to date, identifies the remaining conservation requirements, and identifies expected land dedication. **Chapter 4** provides the development forecast used in the calculation of the updated mitigation fees. **Chapter 5** provides the estimates of MSHCP implementation costs, including land acquisition, management and monitoring, program administration, and endowment. **Chapter 6** describes the historical levels of non-fee revenues available to help fund Local Permittee MSHCP implementation costs. **Chapter 7** brings together the technical analysis in **Chapters 2** through **6** to estimate the updated 2020 Local Development Mitigation Fees. **Chapter 8** provides the nexus findings required under the Mitigation Fee Act as require to establish the updated fees. Finally, **Chapter 9** highlights some of the administration and implementation requirements under the Mitigation Fee Act, recognizing that the Fee Implementation Handbook provides more specific guidance to the RCA and its partner agencies on the implementation of the mitigation fee program.

2. MSHCP POLICIES, GOALS, AND FINANCING STRATEGY

MSHCP Purpose, Basis, and Goals

In response to the need to maintain future growth opportunities in Western Riverside County while addressing the requirements of the state and federal Endangered Species Acts, the County and the Riverside County Transportation Commission initiated the Riverside County Integrated Project (RCIP) in 1999. The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is one part of the RCIP that includes:

- **Updated County General Plan.** Addresses the required general plan elements such as land use, circulation, housing and open space, and conservation and includes programs to implement the MSHCP, enhance transit alternatives, and encourage development of mixed-use centers.
- **Community and Environment Transportation Acceptability Process**. Identifies future transportation corridors in Western Riverside and provides needed environmental documentation to allow preservation of future right-of-ways.
- **MSHCP**. The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP or Plan) is a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) focusing on the conservation of species and their associated habitats in Western Riverside County. The MSHCP conserves vulnerable plant and animal species and their associated habitats in Western Riverside County and supports economic development.

The MSHCP was adopted in 2003 by the Riverside County Board of Supervisors. Subsequently, all of the Western Riverside cities, the County of Riverside, County Flood Control and Water Conservation District, County Regional Parks and Open-Space District, County Department of Waste Resources, Riverside County Transportation Commission, California Department of Transportation, California Department of Parks and Recreation, California Department of Fish and Game, the US Fish and Wildlife Service and the RCA signed an Implementing Agreement for the MSHCP. The Implementing Agreement includes terms to ensure MSHCP-implementation, defines remedies and recourses should any of the parties of the Agreement fail to perform obligations, and provides assurances that, as long as the MSHCP is being implemented, the Wildlife Agencies will not require additional mitigation from the Permittees.[12]

The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act of 1973 as well as a Natural Communities Conservation Plan under the NCCP Act of 2001. The MSHCP streamlines these environmental permitting processes by allowing the participating jurisdictions to authorize "take" of plant and wildlife species identified within the Plan Area. At the same time, Plan implementation provides a coordinated MSHCP Conservation Area and implementation program to preserve biological diversity and maintain the region's quality of life.

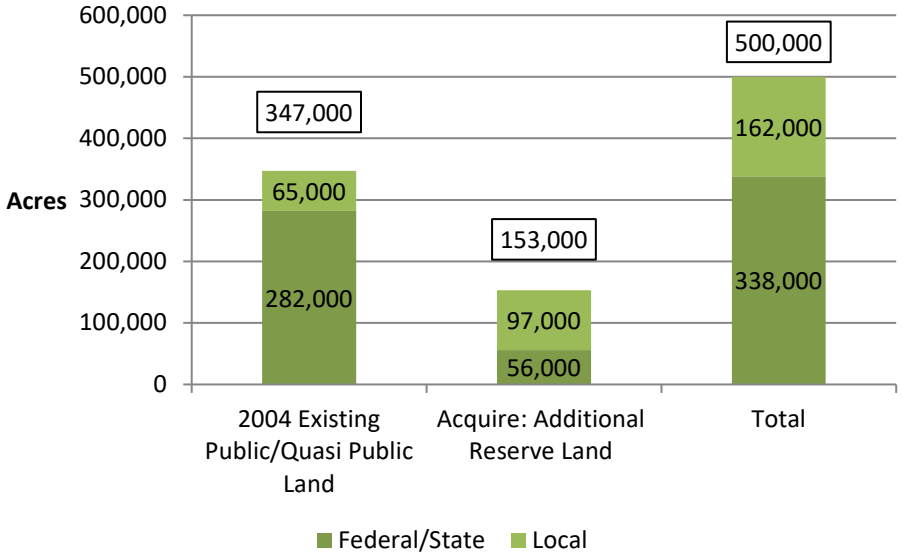
[12] The Wildlife Agencies include the US Fish and Wildlife Service and the California Department of Fish and Wildlife and the Permittees include all of the other parties to the Implementing Agreement.

The MSHCP and the associated Implementing Agreement and Incidental Take Permit collectively determine a set of conservation actions, and the associated responsible parties, that must be taken to meet the terms of the Incidental Take Permit and benefit from the regulatory streamlining and other benefits of the MSHCP. This includes the identification of the responsibilities of the Local Permittees.[13]

MSHCP Conservation Requirements

The goal of the MSHCP is to enhance and maintain biological diversity and ecosystems processes while allowing future economic growth. The MSHCP calls for an MSHCP Conservation Area of 500,000 acres and focuses on the conservation of 146 species.

Figure 1 State of Conservation in 2003: Conserved Land, Additional Reserve Land to be Acquired, and Total MSHCP Conservation Area Needed



As shown in **Figure 1**, when the MSHCP was adopted, existing public and quasi-public conservation lands covered 347,000 acres, leaving a need for 153,000 acres of land, called Additional Reserve Land (ARL), to meet the goals of the MSHCP (see **Figure 1**). The MSHCP specifies that responsibility for the conservation of the 153,000-acre Additional Reserve Lands is shared by the local development process (97,000 acres) and state and federal purchases (56,000).

[13] Local Permittees include the Western Riverside cities, the County of Riverside, County Flood Control and Water Conservation District, County Regional Park and Open Space District, County Department of Waste Resources, and Riverside County Transportation Commission.

Table 4 MSHCP Goals by Area Plan

Area Plan	Total Area of Criteria Cells	Low End of Goal	High End of Goal	Midpoint
Cities of Riverside and Norco	1,756	90	240	165
Eastvale	665	145	290	220
Elsinore	28,946	11,700	18,515	15,110
Harvest Valley / Winchester	820	430	605	515
Highgrove	1,452	345	675	510
Jurupa	5,476	890	1,870	1,380
Lake Mathews / Woodcrest	11,673	3,215	5,470	4,340
Lakeview / Nuevo	14,682	6,650	10,235	8,445
Mead Valley	7,703	1,885	3,635	2,760
Reche Canyon / Badlands	26,000	10,520	15,610	13,065
REMAP	78,423	41,400	58,470	49,935
San Jacinto Valley	32,828	11,540	19,465	15,500
Southwest Area	66,076	22,500	36,360	29,430
Sun City / Menifee Valley	2,059	1,120	1,585	1,355
Temescal Canyon	10,007	3,485	5,800	4,645
The Pass	22,652	8,540	13,925	11,230
Total	**311,218**	**124,455**	**192,750**	**158,605**

The MSHCP includes methods to determine whether the goals of the Plan are being met. One of the methods is measuring the extent to which conservation acquisitions are moving toward acquisition goals by each Area Plan.[14] Area Plans are established in the County's General Plan and are used in the MSHCP as a common geographic unit in Western Riverside County. The MSHCP established low, high, and midpoint acquisition goals for each Area Plan based on biological needs. The midpoint acquisition goals for each Area Plan range from 165 to nearly 49,935 acres, as shown in **Table 4**. The midpoint goals sum to 158,605 which represents 5,605 acres more than are needed to fulfill the MSHCP goals. As a result, acquisitions in some Area Plans can fall below the mid-point targets while the total ARL can still achieve the 153,000-acre goal.

MSHCP Financing Strategy

One of the key requirements of the MSHCP, Implementing Agreement, and Incidental Take Permit (consistent with the requirements of the federal Endangered Species Act) is the provision of adequate funding by Local Permittees to the Implementing Entity (the Regional Conservation Authority) to conduct the conservation actions identified in the MSHCP as the responsibility of the Local Permittees.

[14] Other geographic units include Rough Steps, city jurisdictions, and Area Plan subunits. For the purposes of this analysis, Area Plans have been selected as the primary unit of analysis because they are the middle-sized unit (smaller than Rough Steps and larger than Area Plan subunits) and have not changed over time (unlike jurisdictions, several of which have incorporated since the adoption of the MSHCP.

Section 8.0 of the MSHCP addresses "MSHCP Funding/Financing of Reserve Assembly and Management." This section provides best estimates of Plan implementation costs at the time of Plan adoption, including the local funding commitment – the portion of Plan implementation costs that represents the Local Permittees' portion of the overall land acquisition, management, monitoring, adaptive management, and Plan administration costs. Section 8.5 describes the Local Funding Program. The Local Funding Program included a mix of funding sources to provide "an equitable distribution of the cost for local mitigation under the MSHCP." The proposed funding sources included Local Development Mitigation Fees, density bonus fees, regional infrastructure project public contributions (including transportation infrastructure, regional utility projects, local public capital construction projects, and regional flood control projects), and landfill tipping fees. Key components of the overall MSHCP implementation and funding strategy are highlighted below:

- The Regional Conservation Authority would implement the MSHCP with funding from different sources.
- The permanent protection of 97,000 acres in Additional Reserve Lands by Year 25 of the Plan (2029) would be achieved through direct purchase of habitat lands by the RCA using local funding and through the HANS dedication process.[15]
- Local funding sources would fund the ongoing management and maintenance costs of the local portion of the Additional Reserve Lands acquired through local funding (97,000 acres by end of acquisition period).
- Local funding sources would fund monitoring activities on the pre-Plan local conservation and all the new Additional Reserve Lands (500,000 acers by end of acquisition period).
- The permanent protection of 56,000 acres in Additional Reserve Lands by Year 25 would be achieved using state/federal funding sources or contributions.
- State and federal funding sources would fund the management and maintenance costs of the State/federal portion of the required Additional Reserve Lands.
- Local Development Mitigation Fees (on private development) would fund the Local Permittee MSHCP implementation costs that were not funded by other local/regional funding sources or public contributions for public development project mitigation.
- The overall permit period was set at 75 years. Once habitat acquisition was completed by Year 25, remaining funds along with newly created revenue sources were to be used to fund

[15] Section 6.1.1 of the MSHCP describes the HANS process. The Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process applied to any property owner applying for a discretionary permit for land within a Criteria Area/Criteria Cell. Under the process, the County determined whether portions of the property are needed for conservation and then may send their evaluation to the RCA for Joint Project Review (JPR). During JPR, the project applicant negotiated the terms of the development and conservation of the project. The applicant also paid fees on the new development. This approach was refined when a new fee credit policy, adopted in 2016, provided for fee credits where appropriate lands are dedicated.

monitoring and management as well as to fund the establishment of an endowment to cover ongoing post-permit costs (beyond Year 75).

Importantly, the MSHCP funding chapter notes that frequent evaluations of the performance of the funding mechanisms and assessments of the funding plan will occur and that any necessary modifications to the funding mechanisms will be developed.

MSHCP Implementation Costs and Funding Sources

The original estimated costs and proposed funding sources were documented in the MSHCP and are summarized in **Table 5**. These were developed based on research and analysis conducted as part of MSHCP development.

As shown, Plan implementation costs over the first 25 years of implementation were estimated at about $950 million in 2004-dollar terms. Key assumptions driving the implementation cost estimates included:

- **Dedications**. Direct acquisition using local funding sources would be required to acquire 56,000 acres, with 41,000 acres (or 42 percent) of the required local habitat protection coming through HANS dedication.
- **Land Cost**. Average land value of $13,100 per acre for Additional Reserve Lands purchased by the RCA.
- **Management and Monitoring**: Management and monitoring costs included three key components as follows: Reserve Management, Adaptive Management, and Biological Monitoring.[16]
- **Program Administration**. RCA program administration costs would average about $1.2 million each year in 2004 dollars during the 25-year period where land acquisition was required.
- **Cost Distribution**. Overall, land acquisition costs were estimated at 77 percent of total implementation costs, with management and monitoring at 20 percent, and program administration at 3 percent (see **Figure 2**).

[16] See Chapter 5 of the MSHCP for a description of these activities.

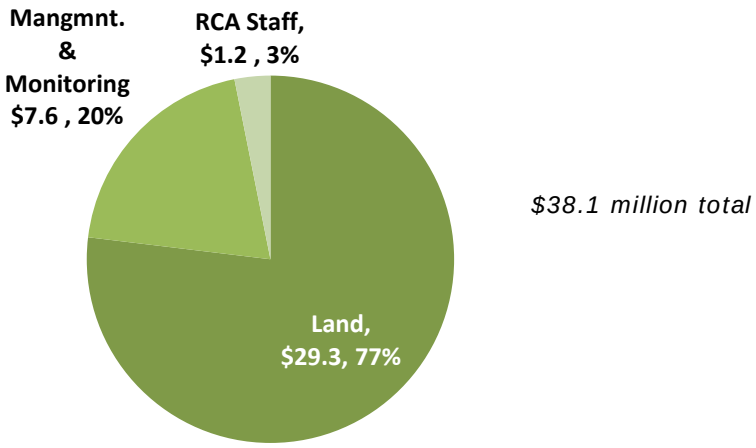
Table 5 2004 Estimates: MSHCP Implementation Costs and Funding Sources

Item	Total for 2004 - 2028 (Years 1 - 25)	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements			
Preservation Requirement	97,000 acres	3,880 acres	na
HANS Dedication	41,000 acres	1,640 acres	na
Local Permittee Acquisition	56,000 acres	2,240 acres	na
Local Permittee MSHCP Implementation Costs			
Land (1)	$733,600,000	$29,344,000	76.91%
Management & Monitoring	$190,200,000	$7,608,000	19.94%
RCA Staff	$30,000,000	$1,200,000	3.15%
Other Costs	na	na	na
Endowment	*not included*	*not included*	na
Total Costs	**$953,800,000**	**$38,152,000**	**100.0%**
Local Revenues			
Private Development Mitigation Fees	$539,600,000	$21,584,000	50.1%
Density Bonus Fees	$66,000,000	$2,640,000	6.1%
Regional Transportation Infra. (2)	$250,000,000	$10,000,000	23.2%
Local Roads (Measure A)	$121,000,000	$4,840,000 (3)	11.2%
Tipping Fees (4)	$100,000,000	$4,000,000	9.3%
Miscellaneous Revenues (5)	$0	$0	0.0%
Total Revenues	**$1,076,600,000**	**$43,064,000**	**100%**

(1) Average land value per acre assumed to be $13,100 per acre.
(2) Public contributions at specificed % of new road construction.
(3) $121 million to be provided over 10 years, so $12.1 million annually over that period.
(4) Includes $90 million from El Sobrante Landfill and $10 million from other County landfills.
(5) Other potential revenues, including public contributions from other public projects, tipping fees from Eagle Mountain Landfill, and potential new voter-approved regional funding were noted but not estimated.

Source: Chapter 8 of MSHCP; Economic & Planning Systems.

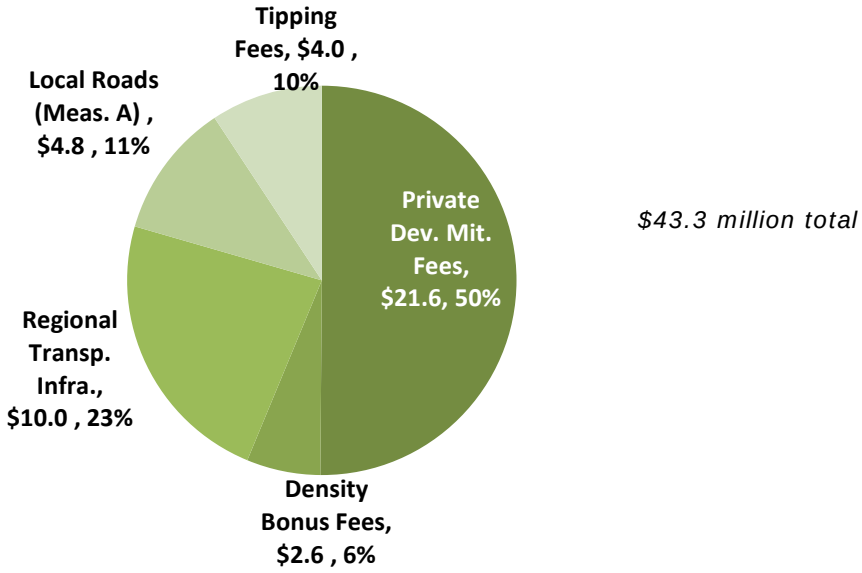
Figure 2 MSHCP Estimated Annual Costs in Millions, 2004 Dollars



As also shown in **Table 5**, MSHCP funding from local/regional sources was estimated to be about $1.0 billion in 2004 dollars through Year 25, sufficient to cover the implementation costs over this period. Key assumptions driving the funding estimates included:

- **Measure A**. Measure A (local sales tax transportation funding measure) would provide $121 million over 10 years in 2004-dollar terms.
- **Regional Transportation Funding**. Public contributions from regional transportation infrastructure projects would provide an average of $10 million each year or $250 million through Year 25.
- **Tipping Fees**. Landfill tipping fees would provide about $100 million in revenue over 25 years, about $4 million each year, primarily from the El Sobrante landfill.
- **Mitigation Fees**. Private development fees, including private development mitigation fees and density bonus fees, would generate over $600 million over the first 25 years, about $24 million annually.
- **Development Forecast and Participation**. The forecast of private development fees was based on a preliminary fee schedule and the forecast of 336,000 new residential units (13,440 units each year) and 371 acres each year of commercial and industrial development. All new development was assumed to pay the private development mitigation fee with a portion paying the density bonus fee.
- **Other Funding Options**. Potential additional funding might come through contributions from other local/regional public entities, other landfills, or new voter-approved funding initiatives.
- **Funding Distribution**. Overall, about 55 percent of the estimated funding was expected to be generated by private development fees, with 45 percent from other funding sources.

Figure 3 MSHCP Estimated Annual Revenues in Millions, 2004 Dollars



Development Mitigation Fees and Calculation

The MSHCP notes that "new development affects the environment directly through construction activity and cumulatively through population bases that result from Development." As a result, the cities and County are required to implement a Local Development Mitigation Fee that was expected to represent one of the primary sources of funding for the implementation of the MSHCP. The MSHCP indicates that the Local Development Mitigation Fee will be adopted under California Government Code Section 66000 et seq. (the "Mitigation Fee Act") that "allows cities and counties to charge new development for the costs of mitigating the impacts of new development."

The MSHCP identified preliminary estimates of Local Development Mitigation Fees and indicated that these mitigation fees were expected to generate the majority of funding for Local Permittee obligations. The MSHCP noted that, under the Mitigation Fee Act, "a nexus study is required to demonstrate that the proposed fee is proportionate to the impacts of new development." The Mitigation Fee Act also includes a number of reviewing and reporting requirements. The MSHCP also notes that the fee will need to be "reevaluated and revised should it be found to insufficiently cover mitigation of new development."

A nexus study entitled "Final Mitigation Fee Nexus Study Report for the Western Riverside County Multiple Species Habitat Conservation Plan" was completed on July 1, 2003 (2003/Original Nexus Study). This nexus study conducted a detailed analysis of the costs of implementing the Plan, identified the Local Permittee funding obligations, determined the portion to be funded through the Local Development Mitigation Fee, and made the necessary nexus findings under the Mitigation Fee Act. The MSHCP and 2003 Nexus Study both indicated that all new development in the Western Riverside County Plan Area affects covered species and habitat and so the Local Development Mitigation Fees would apply to all new development in participating jurisdictions in Western Riverside County.

Mitigation Fee Schedule and Adjustments

All local jurisdictions participating in the MSHCP and obtaining coverage for public and private take in their jurisdictions were required to adopt and implement this mitigation fee schedule through ordinance and resolution and then to pass through the fee funding (minus any additional administrative charges) to the RCA to fund MSHCP implementation. Indexed-increases based on the annual change in the Consumer Price Index for the Los Angeles-Anaheim-Riverside area were provided for in the ordinances to allow modest adjustments in mitigation fees to respond to inflationary cost increases. Due to the geographic revision implemented by the Bureau of Labor Statistics, going forward indexed-adjustments will be based on the annual change in the Consumer Price Index for the Riverside-San Bernardino-Ontario area.

Table 6 shows the original 2004 Local Development Mitigation Fee schedule and current 2021 Fee schedule that reflects periodic inflationary fee adjustments using the indexing process.

Table 6 2004 and 2021 MSHCP Fee Schedule

Fee Category	2004 Fee per unit or per acre	2021 Fee per unit or per acre
Residential: Up to 8.0 dwelling units per acre (DUAC)	$1,651	$2,234
Residential: 8.0-14.0 DUAC	$1,057	$1,430
Residential: 14.0+ DUAC	$859	$1,161
Commercial (per acre)	$5,620	$7,606
Industrial (per acre)	$5,620	$7,606

3. Habitat Protection to Date and Future Conservation Scenario

The RCA has achieved substantial levels of habitat protection to date using the funding sources established and the associated variable flows of incoming revenues. The level of habitat protection achieved, because of lower levels of funding and land dedication than expected, has however fallen behind the pace of protection forecast in the Original Nexus Study. This chapter summarizes the achieved protection to (1) establish both the scale of future acquisitions required to meet the overall Additional Reserve Land (ARL) goals, (2) consider the annual pace of habitat protection through acquisitions and dedications in absolute terms and relative to the original MSHCP forecasts, and (3) inform the development of the Conservation Scenario that forms the baseline (project description) for estimating future MSHCP implementation costs and associated funding requirements and updated mitigation fees.

Habitat Protection Accomplishments Through 2019

Between the start of the MSHCP program and the end of 2019, the most recent full calendar year, about 40 percent of the 153,000-acre ARL target has been achieved, totaling almost 62,000 acres in acquisitions, easements, or dedications (see **Table 7**).[17] As shown of the 97,000 acres in Local Permittee ARL obligation about 40,200 acres had been protected by the end of 2019. Of the 56,000 acres in State/Federal ARL obligation, about 21,600 acres have been protected to date.

Table 7 Conservation Through End of 2019

Party	Need	Conserved 2000-2003	Conserved 2004 - 2019	Total Conserved 2000 - 2019	Remaining Need 2020-2043
Local	97,000	4,531	35,681	40,212	56,788
State + Fed	56,000	12,408	9,200	21,608	34,392
Total	**153,000**	**16,939**	**44,881**	**61,820**	**91,180**

Sources: Western Riverside County Regional Conservation Authority MSHCP Annual Reports; RCA information on 2019 purchases; Economic & Planning Systems, Inc.

Conservation Goals and Progress

The MSHCP anticipated that acquisition would take place for 25 years, through the end of 2029, with 97,000 acres conserved through local means and 56,000 acres conserved with State/federal funding. To achieve this goal, an average of 6,120 acres of conservation is required each year,

[17] Note that while the MSHCP was adopted in 2004, certain conservation which took place between 2000 and 2003 was counted toward the MSHCP reserve.

including an average of 3,880 annually from local funding sources/dedications and 2,240 annually from State and federal conservation.

Figure 4 illustrates how steady progress would result in achievement of the ARL goals by 2029. **Figure 5** shows actual progress toward the goals, through 2019. More than 21,000 acres have been conserved through State/federal means, and over 40,000 acres have been conserved through local actions. These totals sum to about 40 percent of the total ARL goal of 153,000 acres. As shown in **Figure 5**, with 16 years of the 25-year acquisition period completed, the ARL acquisitions have fallen behind the pace forecast in the Original Nexus Study. Protection through the end of 2019 represents 63 percent of the original forecast (65 percent for Local obligations and 60 percent for State/federal obligations). For the Local Permittee obligations, as discussed further below, the lower level of land dedication relative to the original forecasts account for much of the habitat protection gap that has emerged over the last 16 years.

Figure 4 MSHCP Conservation Goals, 2019 and 2029 Goals Highlighted

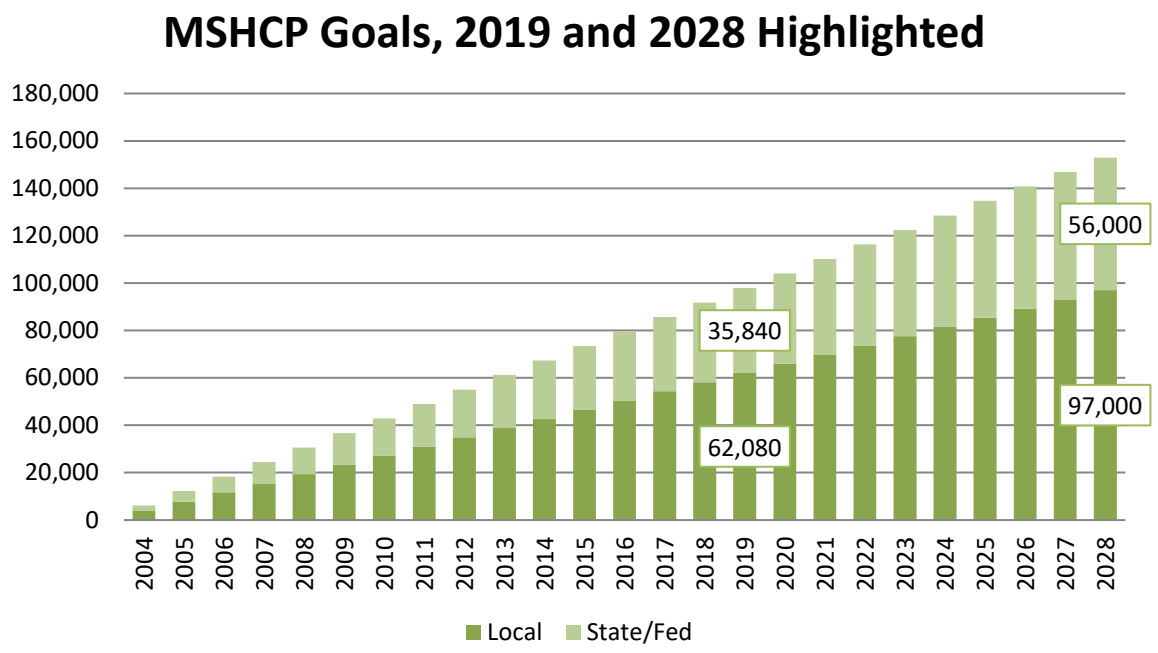
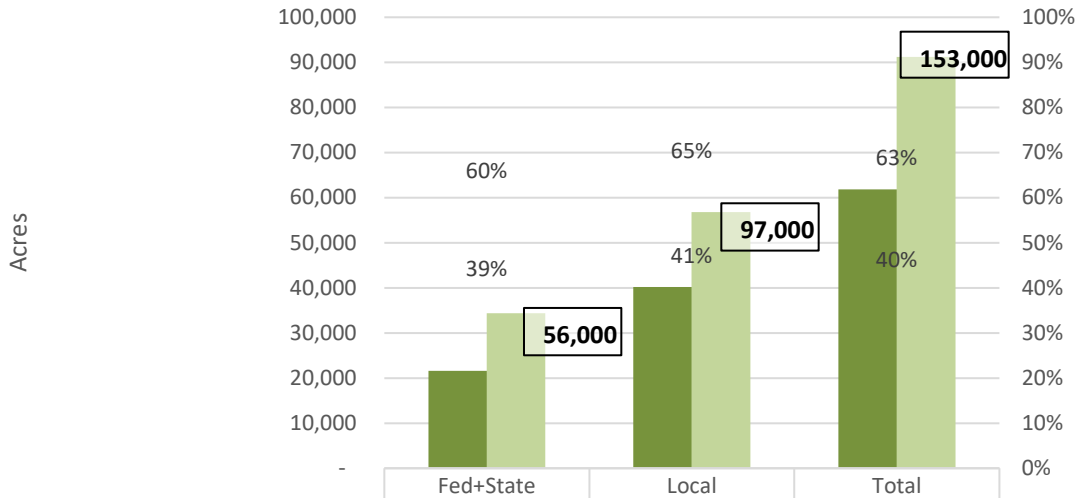


Figure 5 Progress Towards ARL Through End of 2019



	Fed+State	Local	Total
Acqu. through 2019	21,608	40,212	61,820
Remaining Need	34,392	56,788	91,180
% of 2019 Expected Goal Achieved	60%	65%	63%
% of Total Goal Achieved	39%	41%	40%

Sources: Western Riverside County Regional Conservation Authority; Economic & Planning Systems, Inc.

Land Dedications

The MSHCP envisioned a conservation program where land and easements would be purchased by the RCA and land would be dedicated to the RCA through the development process.[18] In addition, the potential for no-cost and low-cost donations for tax benefit purposes was also created. The MSHCP did not assume donations or conservation easement acquisitions as part of its financial analysis (this is appropriate given the limited number of such transactions). The MSHCP did, however, anticipate that 41,000 acres would be conserved through dedications, 56,000 acres through purchases on behalf of local permittees, and 56,000 acres through purchases conducted by or funded by federal and State agencies/sources for a total of 153,000 acres.

For the local portion of the goal (97,000 acres), this translates into about 42 percent of the goal conserved via dedications associated with the development review process—called Habitat Evaluation and Acquisition Negotiation Strategy (HANS)—and the other 58 percent purchased by the RCA from willing sellers. The level of dedication is a key assumption for the MSHCP implementation cost estimate as each acre dedicated through HANS is one fewer acre which must be conserved through land acquisitions at market values.

The HANS process was established to apply to developments proposed within the Criteria Cells of the MSHCP Study Area. The Criteria Cells represent areas with high conservation values relative to the areas outside of the Criteria Cells. The HANS process was designed to indicate what conservation (dedication) may be needed from new development from a biological needs

[18] This process is known as the Habitat Evaluation and Acquisition Negotiation Strategy (HANS).

perspective. Subsequent to that technical analysis, applicants could then proceed to the Joint Project Review (JPR) process during which the parties negotiate an implementation plan for the project, consistent with the HANS findings. The applicants would also pay mitigation fees on the actual development. To date, a modest amount of land (less than 1,000 acres) has been conserved via the HANS/JPR method compared to the 26,000 acres that was forecast to have occurred by this point in the MSHCP implementation.

While very little land has been dedicated to the RCA through HANS/JPR, several projects went through the HANS/JPR process and have agreements in place for dedication/conservation of lands, but the start date (if any) for these projects is unknown (i.e., may be far in the future). These projects cover about 35,000 acres in the Criteria Cells and, under the JPR agreements, have set aside about 30 percent of that total or about 10,000 acres for conservation/dedication.

The adoption of Resolution No. 2016-003 in September 2016 revised the RCA's fee credit and waiver policy. This resolution indicated that MSHCP fee credit should be provided in exchange for land that contributes to reserve assembly. As a result, after the adoption of this resolution, new development is not be expected to pay mitigation fees and dedicate land in the manner originally envisioned in the MSHCP limiting the likelihood of the types of dedications envisioned in the Original Nexus Study.

Future Conservation Scenario

This updated financial analysis, nexus study, and mitigation fees estimate require a base description of the additional habitat protection required. In subsequent chapters, cost estimates are developed in reference to, and in application to, this conservation scenario to develop the overall implementation costs and the associated funding required, both in aggregate and through time during the land acquisition period of the program. Four questions are of particular importance:

1. **Remaining Habitat Protection.** The amount of habitat protection required to meet the MSHCP requirements.

2. **Dedications.** The amount of land dedication assumed to occur through the HANS/JPR process over the habitat protection period and the associated amount of habitat that must be acquired.

3. **Time Frame.** The period over which habitat protection goals must be met.

4. **Land Characteristics.** The characteristics of the land to be protected to meet MSHCP requirements (e.g., goals by Area Plan, habitat cores and linkages etc., land use designations and parcel sizes).

The answers to question 1 are provided in the data above (see **Table 7**). The answer to question 4 is provided in the subsequent chapter on land costs, with illustrative answers coming from RCA data and GIS analysis. The answer to question 2 is addressed below and is based on information on accomplishments to date (described above), discussions with RCA staff, the current Fee Waiver and Credit Policy, and an assessment of realistic opportunities and expectations. Finally, question 3 raises the issue of whether an extension to the MSHCP land acquisition implementation period should be provided. As described below, three different

extension scenarios (5-, 10-, and 15-year extension scenarios) are evaluated, as well as the baseline, "No Extension Scenario," to indicate the outcomes under different scenarios.

Habitat Protection, Land Dedication, and Conservation Scenarios

As shown in **Table 8**, there is a total of about 91,200 acres of land protection still required to complete the land protection obligations under the MSHCP and to bring the Additional Reserve Lands to 153,000 acres. Of this, the State/federal requirements is for about 34,400 acres, while the Local Permittee requirement is for about 56,800 acres.

The experience of the last 16 years indicates that the MSHCP was overly optimistic in terms of land dedications, assuming that 41,000 acres would be dedicated to the RCA. As noted above, about 10,000 acres of potential future land dedication is associated with a range of previously proposed projects. Based on historical information on actual, dedications agreements on proposed projects, current RCA policy, and consultations with RCA staff, minimal additional dedication is expected or assumed. This analysis, therefore, assumes that the prior agreement concerning dedications, summing to about 10,000 acres, will be secured over the next eight years and prior to the end of the current habitat protection period. Even if the implementation period were extended, no extra land dedication is forecast to occur.

As a result, and as shown in **Table 8**, a total of about 46,800 acres of Additional Reserve Land acquisition is required by Local Permittees for MSHCP implementation once the forecast of dedications is incorporated. As shown in **Table 8**, the required average annual pace of habitat protection varies considerably under the different acquisition period extension scenarios, as described below: [19]

- **Baseline / No Extension Scenario.** As currently structured, RCA is required to complete land acquisition by the end of Year 25 of Plan implementation in 2029. This provides nine (9) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 5,200 acres each year.
- **5-Year Extension.** With a 5-year extension to the acquisition period, the RCA would be required to complete land acquisitions by the end of Year 30 of Plan implementation in 2034. This provides fourteen (14) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 3,300 acres each year.
- **10-Year Extension.** With a 10-year extension to the acquisition period, the RCA would be required to complete land acquisitions by the end of Year 35 of Plan implementation in 2039. This provides nineteen (19) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 2,500 acres each year.

[19] As a point of reference, the historical pace of Local Permittee-driven habitat protection has been somewhat above 2,000 acres each year with availability of funding being an important determinant of the pace of acquisition. The pace of State/federal-driven acquisition has averaged about 1,000 acres each year.

- **15-Year Extension.** With a 15-year extension to the acquisition period, the RCA would be required to complete land acquisitions by the end of Year 40 of Plan implementation in 2044. This provides twenty-four (24) years to protect the 47,000 acres through direct land acquisition (distinct from the assumed dedications), an average annual acquisition pace of about 2,000 acres each year.

Table 8 Required Acquisition Acres to Achieve ARL Goals

Entity/Item	Through 2019	2020-End of Acquisition Period	Years Remaining	Annual Conservation Acres Required	Total Acres
NO EXTENSION					
State/Federal	21,608	34,392	9	3,821	56,000
Local					
HANS Dedication (1)	715	10,000	9	1,111	10,715
Net Local Acquisition	39,497	46,788	9	5,199	86,285
Total Local Conservation	40,212	56,788	9	6,310	97,000
State/Federal + Local = ARL Goal	**61,820**	**91,180**	**9**	**10,131**	**153,000**
5 YEAR EXTENSION					
State/Federal			14	2,457	56,000
Local					
HANS Dedication	*See above*		14	714	10,715
Net Local Acquisition			14	3,342	86,285
Total Local Conservation			14	4,056	97,000
State/Federal + Local = ARL Goal			**14**	**6,513**	**153,000**
10 YEAR EXTENSION					
State/Federal			19	1,810	56,000
Local					
HANS Dedication	*See above*		19	526	10,715
Net Local Acquisition			19	2,463	86,285
Total Local Conservation			19	2,989	97,000
State/Federal + Local = ARL Goal			**19**	**4,799**	**153,000**
15 YEAR EXTENSION					
State/Federal			24	1,433	56,000
Local					
HANS Dedication	*See above*		24	417	10,715
Net Local Acquisition			24	1,950	86,285
Total Local Conservation			24	2,366	97,000
State/Federal + Local = ARL Goal			**24**	**3,799**	**153,000**
20 YEAR EXTENSION					
State/Federal			29	1,186	56,000
Local					
HANS Dedication	*See above*		29	345	10,715
Net Local Acquisition			29	1,613	86,285
Total Local Conservation			29	1,958	97,000
State/Federal + Local = ARL Goal			**29**	**3,144**	**153,000**

1. About 10,000 acres of potential future land dedication is associated with a range of previously proposed projects. Based on historical information on actual, dedications agreements on proposed projects, current RCA policy, and consultations with RCA staff, minimal additional dedication is expected or assumed beyond these agreements. This analysis, therefore, assumes that the prior agreements concerning dedications will occur with future dedications summing to about 10,000 acres. The precise timing of these dedications is uncertain, but are assumed to occur over the next eight years. Average annual numbers in this table are shown distributed across the full remaining acquisition period of each extension scenario.

Shading indicates acreage to be acquired with fee revenue.

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

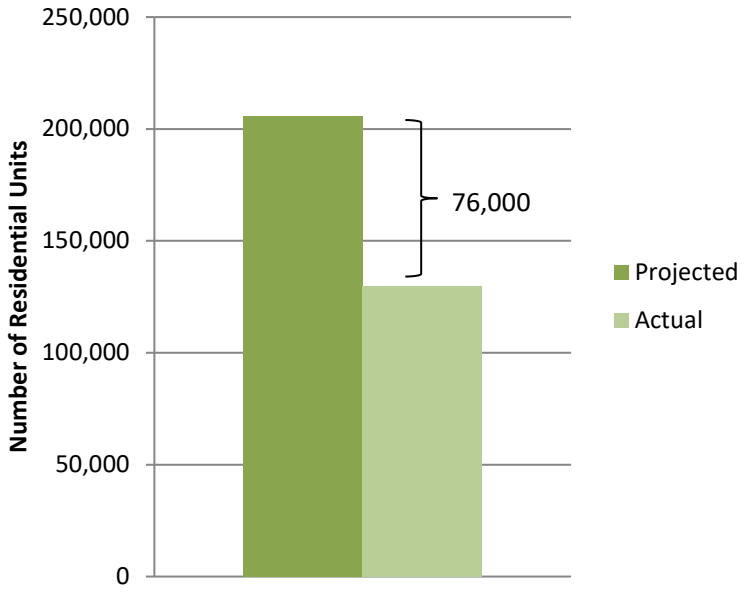
4. FORECASTS OF DEVELOPMENT, DEDICATION, FEE PAYMENT

Future development within Western Riverside County will both reduce land available for conservation while also serving as a primary funding mechanism for habitat acquisitions. This chapter identifies forecasts of future growth in Western Riverside County and develops an associated forecast of land development that is a key component of the fee calculation.

Historic Development and HCP Fees

The MSHCP anticipated that 13,000 to 14,000 residential units and about 370 commercial and industrial acres would be developed on average annually. Specifically, between 2005 and 2019, 206,000 residential units were expected in the Plan Area. A review of new units in the Plan Area indicates about 130,000 units were developed over the period (see **Figure 6**), about 37 percent below the forecast.[20] While the substantial volatility in the real estate market over the period (including the housing boom, deep recession, and modest recovery) may explain some of this difference, the slower pace of development means that fee revenues have been similarly constrained relative to the original revenue projections.

Figure 6 Residential Unit Development, Western Riverside County, 2005-2019



Source: California Department of Finance; MSHCP Projections

[20] Actual units developed have been derived from the California Department of Finance (DOF), Demographics Unit information through January 1, 2019. Note that the DOF reports data by city and for the entire Riverside County unincorporated area. Western Riverside's portion of the total unincorporated area has been derived based on the area's historic share of unincorporated County, taking into account the incorporations of new cities that occurred in Western Riverside County since MSHCP Plan adoption (Eastvale, Jurupa Valley, Menifee, and Wildomar).

Growth Projections

SCAG Forecasts in Context

The Southern California Association of Governments (SCAG) is a Metropolitan Planning Organization (MPO)[21] representing six counties, 191 cities and more than 18 million residents. MPOs, such as SCAG are charged under California Senate Bill 375 with developing Sustainable Community Strategies (SCSs) as part of regional transportation plans. SCAG's SCS includes population, household, and job projections through 2040 by city and unincorporated area. SCAG consults with local governments within the region, including the Western Riverside Council of Governments (WRCOG) which represents Western Riverside County, to develop the projections. SCAG adopted the 2012-2040 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS) in 2016. The 2016 RTP/SCS forms the basis of the SCAG projections; EPS extrapolated an annual growth rate from the SCAG projections and, assuming consistent development trends through 2050, applied the rate in order to estimate development projections through 2050.

SCAG forecasts for the future, on an annualized basis, were compared with the MSHCP's original forecast along with historical information (when available) as described further below:

- **Residential Development Forecast**. **Figure 7** shows, for Western Riverside County, the annual residential unit count for SCAG projections through 2050, MSHCP projections through 2029, and residential units produced in Western Riverside County between 2005 and 2019. As shown, the SCAG projections suggest about 8,750 units each. This is similar to the average annual historic pace of growth between 2005 and 2019 of about 9,260 units, but well below the original MSHCP projections of about 13,400 units each year. Based on the similarity between the historical average and the SCAG forecast, the SCAG forecast is considered a reasonable basis for determining the future pace of residential development and associated residential land development (based on assumed densities of development).

- **Commercial Development Forecast**. The SCAG jobs forecast of about 15,000 jobs each year was converted into an annual gross amount of commercial/industrial development using the employment density and FAR assumptions used in the most recent Transportation Uniform Mitigation Fee (TUMF) update documents. As shown in **Figure 8**, this results in a forecast of about 690 acres of commercial/industrial land development each year (representing an overall average of about 21 jobs per acre of development), considerably above the original MSHCP projections of about 370 acres each year. The higher SCAG number, however, appears reasonable given recent and ongoing trends in Western Riverside County where substantial amounts of new logistics/distribution development have occurred covering substantial land areas and, as such, is considered reasonable as the basis of the future forecast of commercial/industrial land development.

[21] Federal law requires that an urbanized area with a population of at least 50,000 be guided by a regional entity known as an MPO. California's Senate Bill 375 expands the role of the State's 18 MPOs to include regional plans that help the State reach its greenhouse gas reduction targets by encouraging compact development and new development near public transit.

Figure 7 New Housing Units per Year, SCAG and MSHCP Projections and Historic Production (2005-2019)

SCAG (2012-2040) and MSHCP Projections (2004-2029) and Historic Production (2005-2019)

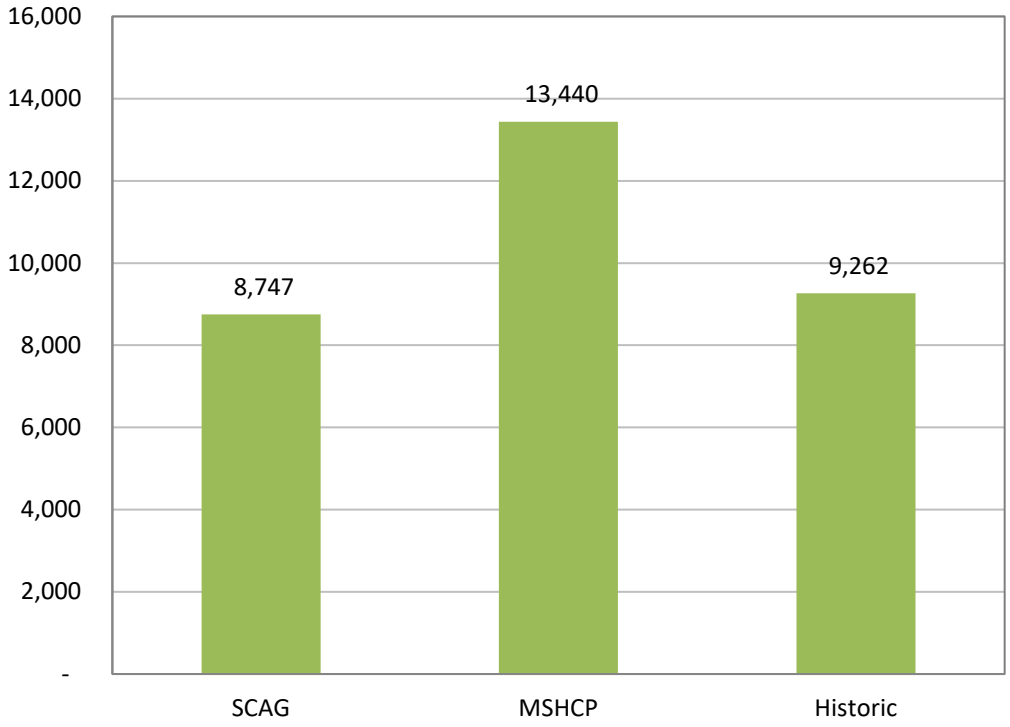
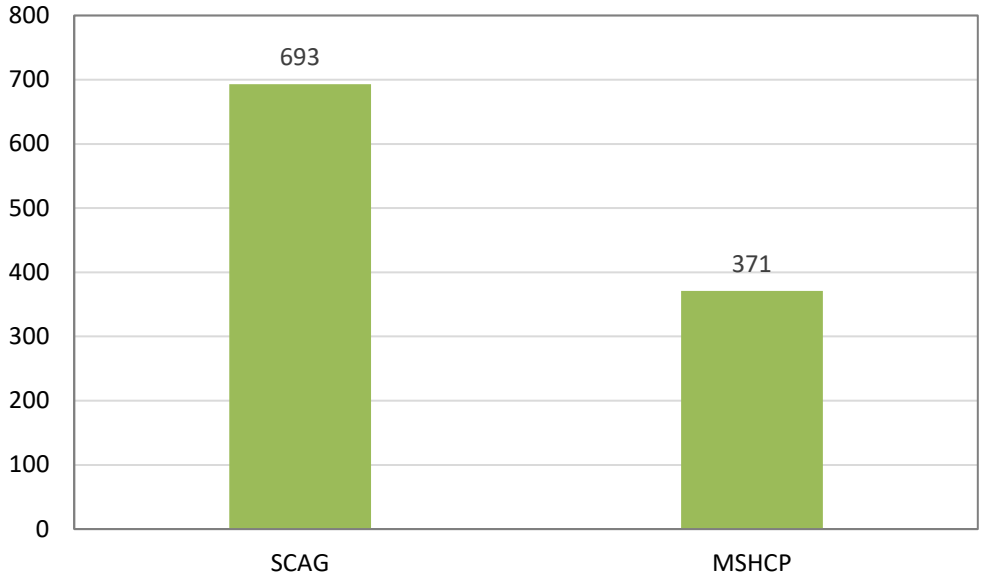


Figure 8 Newly Developed Commercial Acres per Year

SCAG (2012-2040) and MSHCP Projections



Note: SCAG job projections converted into acres by EPS

Forecasts for Fee Calculation

For this fee program update, the SCAG projections are considered a reasonable basis for forecasting future land development. Because all new development is expected to pay the mitigation fee, all of the forecasted household and job growth is converted into a land development forecast that is, in turn, used to calculate the mitigation fees. **Table 9** shows SCAG's overall projections for households and employment in Western Riverside County between 2012 and 2050, and **Table 10** shows the implied average annual land development rates, and, in turn, the overall level of residential and commercial/industrial land development that would be expected to occur through the end of the land acquisition period for each of the extension scenarios.[22] As shown, all scenarios assume an overall average annual land development of 2,252 acres each year, including 693 acres in commercial/industrial land development and 1,558 acres in annual residential land development.[23]

- **Baseline / No Extension Scenario**. Under the no extension scenario, a total of 20,265 acres of land development is expected to occur during the remaining Plan implementation period of nine (9) years and would pay the mitigation fees.
- **5-Year Extension**. Under the 5-year extension to the acquisition period, a total of 31,523 acres of land development is expected to occur during the remaining Plan implementation period of 14 years and would pay the mitigation fees.
- **10-Year Extension**. Under the 10-year extension to the acquisition period, a total of 42,782 acres of land development is expected to occur during the remaining Plan implementation period of 19 years and would pay the mitigation fees.
- **15-Year Extension**. Under the 15-year extension to the acquisition period, a total of 54,040 acres of land development is expected to occur during the remaining Plan implementation period of 24 years and would pay the mitigation fees.

[22] Under the MSHCP, all new development is required to pay the mitigation fee and contribute to funding the implementation of the MSHCP except where specifically exempted in the Ordinance.

[23] The 1,558 acres of residential land development was derived based on the forecasted 8,747 residential units each year and assumptions concerning distribution by density category and an average density level. More specifically, consistent with the recent TUMF analysis assumptions, 70 percent of new residential units are assumed to be in the low density category (less than 8 units per acre) with an average of 4.5 units/acre, 20 percent are assumed to be the medium density category (8 to 16 units per acre) with an average of 10.8 units/acre, and 10 percent are assumed to be the high density category (over 16 units per acre) with an average of 24.4 units/acre. The unit per acre factors are consistent with those indicated in the Original Nexus Study. The overall implied average residential density is 5.6 units/gross acre.

Table 9 Projected Growth in Western Riverside County, through 2050

SCAG	Western Riverside MSHCP Plan Area	
	Households	Employment
2012	530,970	463,833
2040 Projection	775,882	869,792
2050 Projection (1)	863,350	1,014,777
New Households/Jobs Expected by 2050	332,380	550,944
Average Annual	8,747	14,499

(1) SCAG projections forecast growth through 2040. EPS assumes the annual growth rate from 2012 to 2040 remains constant through 2050 and applies the rate to an additional 10 years in order to project growth through 2050.

Sources: Southern California Association of Governments; Economic & Planning Systems, Inc.

Table 10 Projected Developed Acres in Western Riverside County, by Extension Scenario

SCAG	Western Riverside MSHCP Plan Area		
	Residential	Non Residential	Total
No Extension			
Proportionate Share 2020-2028[1]	78,722 Households	130,487 Jobs	
New Development to Acres[2]			
Acres of New Development Through 2028	14,026 Acres	6,239 Acres	**20,265 Acres**
Acres per Year	1,558 Acres	693 Acres	**2,252 Acres**
5 Year Extension			
Proportionate Share 2020-2034[1]	122,456 Households	202,979 Jobs	
New Development to Acres[2]			
Acres of New Development Through 2034	21,818 Acres	9,705 Acres	**31,523 Acres**
Acres per Year	1,558 Acres	693 Acres	**2,252 Acres**
10 Year Extension			
Proportionate Share 2020-2038[1]	166,190 Households	275,472 Jobs	
New Development to Acres[2]			
Acres of New Development Through 2038	29,611 Acres	13,171 Acres	**42,782 Acres**
Acres per Year	1,558 Acres	693 Acres	**2,252 Acres**
15 Year Extension			
Proportionate Share 2020-2043[1]	209,924 Households	347,965 Jobs	
New Development to Acres[2]			
Acres of New Development Through 2043	37,403 Acres	16,637 Acres	**54,040 Acres**
Acres per Year	1,558 Acres	693 Acres	**2,252 Acres**

(1) SCAG forecasts from the 2016 Report have been used for all cities in Western Riverside County. The projections for the entire unincorporated area in Riverside have been split into just the Western part of the County through a review of WRCOG's recent proportion of unincorporated growth, compared to the whole County.

(2) Conversion from household projections to residential acres of developed land is based on expected development mix and average residential density by land use type, with an average residential density of 5.6 DUAC. Similarly, conversion from job projections to nonresidential acres of developed land is based on distribution of jobs by workspace type and average employment density by land use type, with an average nonresidential density of 21 jobs per land acre. Residential density assumptions are based on data from the Census and California Department of Finance; Employment density assumptions are based on SCAG data.

Sources: California Department of Finance; US Census Bureau; Southern California Association of Governments; Economic & Planning Systems, Inc.

5. MSHCP IMPLEMENTATION COSTS

This chapter describes the analysis and assumptions that underpin the estimation of the total remaining MSHCP implementation costs in 2019 dollars. Key cost factors evaluated include land costs, management and monitoring costs, administration and professional services costs, and endowment costs. Together these cost components form the total MSHCP implementation costs. Because the duration allowed for land acquisition and endowment establishment affect several of these cost items, distinct total implementation cost estimates are provided for all scenarios (i.e., Baseline/ No Extension and the three extension scenarios).

Land Costs

Planning-level estimates of the per acre values associated with potential Additional Reserve Land (ARL) acquisitions are a critical input into the estimation of total land acquisition costs associated with Plan implementation. Land acquisition costs represented the majority of the original estimates of MSHCP implementation costs. This chapter provides planning-level estimates of per acre land conservation costs in 2019-dollar terms based on available information. In combination with assumptions concerning the characteristics of the Additional Reserve Lands to be acquired and potential levels of dedication, the per acre land value estimates drive the estimate of overall land acquisition costs.

Actual per acre habitat conservation costs may vary from the average planning-level estimates presented in this chapter for a number of reasons, including differences in the specific characteristics of the actual parcels acquired as well as fluctuations in economic, real estate, and land market conditions over time. Individual transactions will require appraisals to establish their value at the time of acquisition based on parcel characteristics and pertinent market conditions at the time of appraisal. Over time, per acre and overall cost estimates typically change for a number of reasons as discussed further in **Chapter 9**.

MSHCP / Original Nexus Study

The initial adoption of the mitigation fees was based on a nexus study completed in July 2003 that included a land valuation analysis that was completed in December 2002. The land valuation analysis assumed the acquisition of vacant and unentitled lands in the Criteria Cells. The land value analysis provided planning-level estimates of per acre land values by grouped land use designation and by Area Plan. Planning-level land value estimates were based on sales comparables. The land value estimates indicated per acre land values that were primarily driven by differentiation in land use category. The land use designation categories represent groupings of the broad number of land use designations present in the Study Area. **Table 11** summarizes the per-acre land value ranges and resulting averages. Based on this analysis, an overall weighted average of $13,100 per acre was applied in the MSHCP financial sections in the Original Nexus Study.

Table 11 Per-Acre Land Value Estimates—2003 Dollars (2003 Nexus Study)

Land Use Designation	Value Range	Resulting Average *
Open Space	$2,500 to $10,000 per acre	$ 8,000 per acre
Rural/Agricultural	$5,000 to $25,000 per acre	$11,000 per acre
Community Development	$20,000 to $80,000 per acre	$45,000 per acre
Overall (1)	**$2,500 to $80,000 per acre**	**Varied (1)**

** Per acre values rounded to the nearest 1,000.*
(1) Reported overall average land value per acre depends on mix of land types. Number varies by documents, though $13,100 per acre was overall value applied in the MSHCP financing sections.

Source: Original 2003 Nexus Study

RCA Experience to Date

Table 12 summarizes average RCA land acquisition costs to date. Including land purchased shortly before the MSHCP was adopted through the end of 2018, costs for Local Permittee land acquisitions summed to $352.5 million in nominal dollar terms, an average of $9,400 per acre. However, for the year 2018, about 2,100 acres were acquired at the higher average per acre cost of $13,200 per acre.

Table 12 Local Conservation Costs Through 2018

Item	Pre-MSHCP through 2018	2018
Total Acres Acquired (1)	37,547	2,066
Total Cost (millions)	$352.5	$27.4
Cost per Acre (Nominal $s)	$9,400	$13,200

(1) Includes all acres purchased; does not include acres conserved via easement.

Sources: Western Riverside County Regional Conservation Authority MSHCP Annual Report 2018; Economic & Planning Systems, Inc.

To date, the overall historical level of per acre land acquisition expenditures is well below the original 2004 per acre land value estimates. The cost of RCA acquisitions during this timeframe were kept relatively low by concentrating more on lower cost parcels (larger parcels in remote areas with limited development potential). In 2018, as in the future, the average cost per acre is expected to be higher than this historical average due to the characteristics of land still needing to be acquired.

New Land Value Analysis and Conclusions

New 2019 per acre land value estimates were developed based on recent historical transactions as reported in the sales comparables sections of appraisals conducted for RCA acquisitions. This data set provided a substantial inventory of over 150 land sales between 2012 and 2017 that supported conclusions concerning per acre land values by key land value characteristic.

Similar to the Original Nexus Study, land values were determined to be substantially affected by land use designation and by parcel size. Land values were developed for twelve different value categories based on combinations of three land use designations and four different size ranges.

Based on the land valuation data and detailed GIS analysis by RCA staff, parcels were divided into three groups of development potential based on their land use designation:[24]

- **Open Space.** Low development potential land use designations included open space, rural mountainous, and rural residential.
- **Rural.** Medium development potential land use designations include agriculture and rural communities land use designations.
- **Community Development.** High development potential land use designations include all community development designations, including residential, non-residential, and other community development designations.

In addition to these three land use designation groupings reflecting different levels of development potential, parcels were also divided by parcel size. The land value information indicated a per acre value distinction between the following parcels sizes:

- Parcels less than 5 acres.
- Parcels between 5 and 20 acres.
- Parcels between 20 and 80 acers.
- Parcels over 80 acres.

Based on the analysis of the sales comparables, **Table 13** shows the planning level per acre land value by land use designation grouping/size range in 2017 dollars.

Table 13 Planning Level Per Acre Land Value Estimates by Category

Land Use Designation	Per Acre Land Value ($ / Acre)[1]			
	Less than 5 Acres	5 - 19.99 Acres	20 - 79.99 Acres	80 + Acres
Open Space	$11,761	$5,091	$3,949	$1,866
Rural	$33,363	$11,553	$8,337	$5,531
Community Development	$177,414	$76,050	$72,369	$24,335

1. Most land sale comparables used for pricing are from 2013 to 2017 and were converted to 2017 dollars using BLS CPI adjustments for the Los Angeles-Riverside-Orange County area.

Sources: Economic & Planning Systems, Inc.

[24] RCA staff developed a consistent set of land use designation categories across different jurisdictions in the Study Area for the purposes of this study. These formed the basis of the development potential categories.

The average land value per acre for future RCA acquisitions is dependent on the different land values per acre as well as the expected distribution of future acquisitions. The actual land to be acquired is uncertain and is dependent on the availability of land through willing sellers. However, based on the conservation needs by Area Plan, the suitable land available for protection, as well as the specific linkages that must be created between the core reserve areas, RCA staff provided sufficient information for EPS to develop a general expression of parcels by characteristic to support the land value analysis. An illustration of the expected distribution of acres by land use designation and size range is provided in **Table 14**.

Table 14 Illustrative Distribution of Land Acquisitions by Land Use and Size

Land Use Designation	Conservation Scenario (Acres) (1)				*Total*
	Less than 5 Acres	5 - 19.99 Acres	20 - 79.99 Acres	80 + Acres	
Open Space	535	1,531	3,626	4,654	10,346
Rural	1,901	17,241	26,802	29,428	75,371
Community Development	638	1,707	3,613	4,384	10,342
Total Purchases by Acreage	**3,074**	**20,479**	**34,041**	**38,466**	**96,059**

1. Conservation scenario analysis was conducted in 2017 so overall acres acquired more than those required as of end of 2019.

Sources: RCA; Economic & Planning Systems, Inc.

Applying the per acre land values in **Table 13** to the illustrative land conservation distribution in **Table 14** provides an estimate of the aggregate land value, supporting the estimate of the average planning level land value per acre in 2017-dollar terms (see **Table 15**).

Table 15 Aggregate Land Value of Remaining Areas (2017 dollars)

Land Use Designation	Land Comparables by Acres				*Total*
	Less than 5 Acres	5 - 19.99 Acres	20 - 79.99 Acres	80 + Acres	
Open Space	$6,292,633	$7,795,633	$14,319,467	$8,682,942	*$37,090,674*
Rural	$63,411,345	$199,183,566	$223,437,526	$162,777,034	*$648,809,470*
Community Development	$113,198,910	$129,817,405	$261,456,200	$106,682,740	$611,155,254
Total Cost of Purchases	**$182,902,887**	**$336,796,603**	**$499,213,192**	**$278,142,716**	***$1,297,055,399***
% of Total	**14%**	**26%**	**38%**	**21%**	***100%***

1. This table is the average land value per acre multiplied by the Conservation Scenario. See **Table E-1** and **E-2**.

Sources: RCA; Economic & Planning Systems, Inc.

As shown in **Table 15**, the aggregate land value of the approximately 96,000 acres remaining to be protected as part of the MSHCP as of 2017 is estimated at about $1.3 billion in 2017 dollars. This represents an average land value of about $13,500 per acre. To convert this land value into 2019 dollars terms (similar to the rest of the analysis), EPS indexed the value to about $14,300 per acre in 2019-dollar terms.[25]

Other Costs—Administration, Management, and Monitoring

Program administration, reserve management, and reserve monitoring are required functions that require annual funding. The forecasts for each of these cost categories are described below.

Administration and Professional Service Costs

The Western Riverside County Regional Conservation Authority is responsible for implementing the MSHCP. Since 2004, RCA staff members have directed the acquisition, management, and monitoring of the local portion of the Additional Reserve Land (ARL) required by the MSHCP, monitored State and federal Public/Quasi-Public lands and the State and federal portions of the ARL, and undertook all of the administrative tasks associated with maintaining the permit.

Costs categorized in this fee study under MSHCP administration include all RCA staff costs and other costs like building rents and average expenditures on non-acquisition related professional services that are not anticipated to vary as the size of the ARL increases. The forecast for the acquisition period assumes that these costs will remain at approximately $4.2 million in constant 2019 dollars, increasing with inflation but not increasing as the size of the ARL grows (see **Table 16**). This includes salaries and benefits of about $2.3 million annually and about $1.5 million in professional services, supplies, and other costs.

[25] Two years of inflation (2017 – 2019) based on by BLS CPI adjustment for Riverside-San Bernardino-Ontario Metro Area.

Table 16 Administrative and Professional Services Costs

Expenditures	RCA FY16/17- 18/19 3-Year Average of Actuals	CPI Adjusted to 2019$[1]
Total Salaries and Employee Benefits	**$2,219,261**	**$2,288,495**
Professional Services and Supplies		
Environmental		
Legal	$394,320	$406,621
Auditing, Accounting & Financial Services	$101,717	$104,891
GIS Services	$10,000	$10,312
Personnel Services	$13,920	$14,354
Real Estate Services	$653,774	$674,169
Other Services	$247,979	$255,715
Subtotal	**$1,421,710**	**$1,466,062**
Other Charges	$388,145	$400,254
Total	**$4,029,116**	**$4,154,811**

(1) Three year average CPI-adjusted by one year, the average of the annual CPI adjustments for the three years.

Sources: Western Riverside County Regional Conservation Authority; Bureau of Labor Statistics;

Management and Monitoring

Reserve Management

The MSHCP describes reserve management activities focused on maintaining and improving habitat conditions and ecosystem functions including habitat and landscape-based activities and species-specific activities. For the purposes of this analysis, the average per acre cost estimate for Reserve Management as reported in the RCA actual spending for FY 2018-19 has been used to inform cost projections through the full acquisition period. Because RCA staff and relevant contractors have indicated that the current spending on staff capacity is not adequate to accomplish necessary management with existing land holdings, additional staffing and associated expenditures have been added to the current reserve management expenditures. Specifically, three new full time equivalent (FTE) positions are added to the current 2019 spending for reserve management. Overall, the 2019 per acre reserve management cost of $25.39 per acre was adjusted to $32.70 per acre (2019 dollars) to account for three new mid-level park ranger FTEs. While as of the end of 2019 about 40,200 acres were under management, ultimately, reserve management activities will cover the entire 97,000 acres to be acquired by the RCA.

Biological Monitoring

The purpose of biological monitoring is to provide Reserve Managers with information and data upon which reserve management decisions will be made. According to the MSHCP, the monitoring program must provide "sufficient, scientifically reliable data for Reserve Managers to assess the MSHCP's effectiveness at meeting resource objectives and achieving or maintaining a

healthy MSHCP Conservation Area in perpetuity." Unlike the RCA's reserve management activities which are limited to local ARL acres, the RCA will ultimately be responsible for monitoring all 500,000 acres of the reserve lands mandated under the MSHCP. The acreage currently being monitored totals roughly 408,000 acres. For the purposes of this analysis, the $1.1 million annual cost estimate based on FY 2018-19 actual spending was used to inform cost projections through the full acquisition period. Because current staff capacity is not adequate to accomplish necessary biological monitoring with existing land holdings, to address the additional land acquisitions, two new full time equivalent (FTE) positions are added to the current 2019 spending for reserve monitoring. The 2019 per acre reserve monitoring cost of $2.67 was adjusted to $3.01 (2019 dollars) to account for two new entry-level biologist FTEs. (see **Table 17**). This constant dollar per acre cost was assumed to apply throughout the period of implementation.

Reserve Management and Biological Monitoring Costs

Table 17 summarizes estimated per acre costs for reserve management and monitoring in 2019 dollars. Applying these per acre costs (in 2019 dollars) to current acreage under management and monitoring projects results in annual costs of $1.32 million and $1.23 million, respectively. The annual reserve management and biological monitoring costs increase as new acquisitions occur.

Table 17 Management and Monitoring Anticipated Costs in 2004 and 2019 Dollars

Item	Actual FY 2019 Spending
Reserve Management[1]	
Acres under Management	40,212
Existing Reserve Management Expenses	$1,021,000
Additional Staff Capacity Required[3]	$294,000
Total Reserve Management Expenses	$1,315,000
$/Acre	$32.70
$/Acre without additional staff capacity	$25.39
Biological Monitoring[2]	
Acres being Monitored	408,820
Existing Biological Monitoring Expenses	$1,092,000
Additional Staff Capacity Required[3]	$140,000
Total Biological Monitoring Expenses	$1,232,000
$/Acre	$3.01
$/Acre without additional staff capacity	$2.67

1. Reserve Management costs include Parks & Open Space contract fees, maintenance of motor vehicles, and HOA dues.

2. Biological Monitoring costs include SAWA contract fees, office and computer supplies, training, private mileage reimbursement, building rent, and rental vehicles/fuel.

3. Current staff capacity is not sufficient to accomplish necessary management and monitoring. An Expanded staff capacity scenario envisions adding 3 FTE mid-level park rangers to Reserve Management and 2 FTE entry-level biologists to Reserve Monitoring, with salaries and benfits of $98,000 and $70,000

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Endowment Funding

The overall permit period was set at 75 years, ending in 2079. To cover ongoing management and monitoring costs beyond the duration when mitigation fees will be collected, the establishment of a non-depleting endowment is required. In other words, the endowment must be sufficient such that expected average interest revenues (after inflation and transaction costs) can cover the ongoing costs associated with administration, management and monitoring in perpetuity. This section summarizes the estimated cost of establishing this endowment under the different scenarios. A key assumption is that the endowment must be fully established by

the end of the land acquisition period as it is assumed that no more mitigation fees will be collected at that time.[26]

For the purposes of this analysis, we have assumed that habitat management and habitat monitoring costs continue in full, while administration costs are reduced by half following the end of the land acquisition period. All of these costs then continue in perpetuity. As a result and as shown in **Table 18**, the endowment is sized to cover the expected annual management and monitoring costs and 50 percent of the administration costs, totaling $6.8 million (2019 dollars) once all lands have been acquired.

Table 18 Annual Implementation Cost Estimate (2019$)

Cost Categories	Annual Cost by Last Year of Land Acquisition Period	Adjustment	Annual Post-Land Acquisition Cost
Ongoing Habitat Management	$3,172,063	100%	$3,172,063
Ongoing Habitat Monitoring	$1,506,776	100%	$1,506,776
Administration[1]	$4,154,811	50%	$2,077,406
Total	**$8,833,650**		**$6,756,244**

1. Adminsitration includes salaries and benefits, accounting, auditing and reporting, contracts, etc.. Assumes less administration is needed following the land acquisition period; ongoing adminsitrative needs include oversight, auditing and reporting, and board staffing.

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Consistent with many regional habitat conservations plans, the average annual net, real (allowing for inflation and institutional fees) interest rate is assumed to be three (3) percent.[27] Under all extension scenarios, the total required endowment funding is $225.2 million. Because the longer extension periods provide more time for the accrual of interest revenues, the net endowment cost (that must be funded by mitigation fees) is different for each scenario. **Table 19** shows the consistent total endowment funding required by scenario as well as the different levels of aggregate endowment interest and associated net endowment funding requirement. For a detailed time-series accounting of endowment funding by extension scenario, see **Appendix II**.

[26] It is important to note that the RCA has collected a distinct set of endowment funds for situations where specific conservation activities are required over-and-above the core activities covered by this endowment calculation.

[27] This assumes that the implementing entity can use investment vehicles that may be not be typical for Riverside County.

Table 19 Endowment Funding (2019$), by Extension Scenario

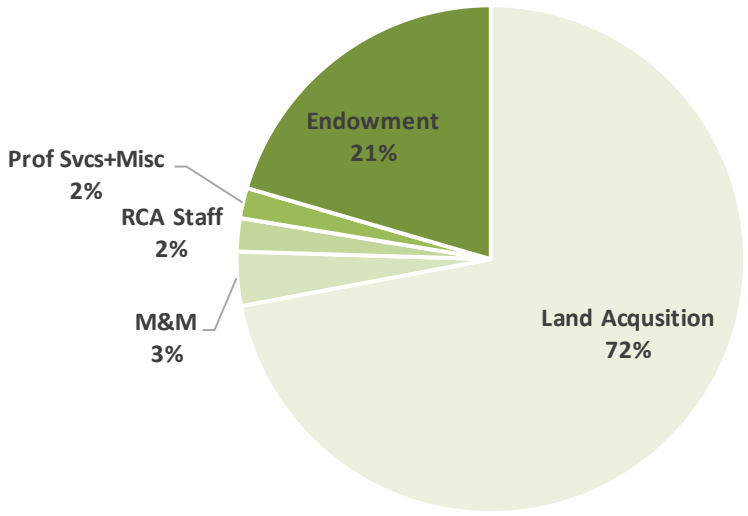
Item	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Total Endowment Funding Required	$225,208,133	$225,208,133	$225,208,133	$225,208,133
(Less) Endowment Interest	($25,695,187)	($40,679,628)	($54,846,349)	($68,206,990)
Net Endowment Funding Required	$199,512,947	$184,528,506	$170,361,785	$157,001,144

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Total Implementation Costs

Implementation costs include land costs, administrative and professional services expenses, management and monitoring costs, and the required net endowment funding. The remaining MSHCP implementation costs, as described in detail in the preceding sections, are all estimated in 2019 constant dollar terms. Under the Baseline/ No Extension scenario, as shown in **Figure 9**, the $702 million in estimated land acquisition costs make up 72 percent of the total implementation cost of $974 million. Administrative costs total about 4 percent of total costs, management and monitoring sum to 3 percent of total implementation costs, and the endowment constitutes 21 percent of total costs.

Figure 9 Comparison of Costs by Category



Total implementation costs vary by extension scenario. Land acquisition costs are the same for all scenarios. Administrative, management and monitoring costs increase the longer the acquisition period is extended, but the endowment funding required decreases the longer the

acquisition period is extended. As shown in **Table 20**, total implementation costs range from $890 million to $967 million depending on the extension period. Although total costs over time increase with longer extension periods the per-year implementation costs decrease with longer extension periods, as shown in **Table 21**. For a detailed time-series of all implementation costs excepting the endowment, see **Appendix I**.

Table 20 Total Implementation Costs (2019$*), by Extension Scenario

Local Permittee MSHCP Implementation Costs	Total for 2020 - 2028 No Extension	Total for 2020 - 2033 5-Yr Extension	Total for 2020 - 2038 10-Yr Extension	Total for 2020 - 2043 15-Yr Extension
Land [1]	$701,931,902	$701,931,902	$701,931,902	$701,931,902
Management & Monitoring	$33,582,193	$51,646,790	$69,711,387	$87,775,983
RCA Staff [2]	$20,596,453	$32,038,927	$43,481,401	$54,923,875
Professional Services and Supplies [2]	$13,194,561	$20,524,873	$27,855,185	$35,185,497
Loan Repayment [3]	$2,000,000	$2,000,000	$2,000,000	$2,000,000
Other Costs [2 4]	$3,602,285	$5,603,554	$7,604,824	$9,606,093
Net Endowment Funding Required	$199,512,947	$184,528,506	$170,361,785	$157,001,144
Total Costs	**$974,420,341**	**$998,274,552**	**$1,022,946,483**	**$1,048,424,494**

1. Land value estimates at $14,288 per acre in 2019 dollar terms.
2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
3. RCA has "Other Long Term Obligations" totaling $5 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of $1 million starting in FY 2018.
4. Includes rents and all other miscellaneous expenses.
NOTE: In some cases numbers may not perfectly sum due to rounding.

Sources: Western Riverside County RCA; Economic & Planning Systems, Inc.

* All costs are provided in constant 2019 dollar terms. Costs will change over time due to inflation and other factors. These changes will be addressed through the fee indexing/ updating process that will include automatic inflation-indexed fee changes annually based on the regional Consumer Price Index and periodic comprehensive updates to the Nexus Study.

Table 21 Average Annual Implementation Costs (2019$), by Extension Scenario

Local Permittee MSHCP Implementation Costs	Average Annual			
	2020 - 2028 No Extension	2020 - 2033 5-Yr Extension	2020 - 2038 10-Yr Extension	2020 - 2043 15-Yr Extension
Land [1]	$77,992,434	$50,137,993	$36,943,784	$29,247,163
Management & Monitoring	$3,731,355	$3,689,056	$3,669,020	$3,657,333
RCA Staff [2]	$2,288,495	$2,288,495	$2,288,495	$2,288,495
Professional Services and Supplies [2]	$1,466,062	$1,466,062	$1,466,062	$1,466,062
Loan Repayment [3]	$222,222	$142,857	$105,263	$83,333
Other Costs [2 4]	$400,254	$400,254	$400,254	$400,254
Net Endowment Funding Required	$22,168,105	$13,180,608	$8,966,410	$6,541,714
Total Costs	**$108,268,927**	**$71,305,325**	**$53,839,289**	**$43,684,354**

1. Land value estimates at $14,288 per acre in 2019 dollar terms.
2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
3. RCA has "Other Long Term Obligations" totaling $5 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of $1 million starting in FY 2018.
4. Includes rents and all other miscellaneous expenses.
NOTE: In some cases numbers may not perfectly sum due to rounding.

Sources: Western Riverside County RCA; Economic & Planning Systems, Inc.

6. RCA NON-FEE REVENUES

MSHCP Forecast of Non-Fee Revenues

The MSHCP forecast an array of revenue sources, in addition to fee revenue, supporting the conservation program. These sources were anticipated to total about 44 percent of the revenue for the program, including:

- **Transportation funding** – includes the Measure A sales tax which is authorized through 2039 and other transportation funding sources such as the Transportation Uniform Mitigation Fees (TUMF) charged on new development. Note that the MSHCP envisioned up to $121 million of Measure A money to the HCP.
- **Other infrastructure projects** – funding from this source was not quantified in the MSHCP but reflected the expectation that local public construction projects such as schools, administrative facilities, libraries, jails, and other projects like flood control and utility projects would mitigate the construction through the payment of a per-acre fee.[28] Since MSHCP adoption, the standard contribution has been three to five percent of total project costs.
- **Landfill contributions** – Landfill tipping fees have been used in the County since the 1990 for conservation programs. Under county permitting of landfills, the County has committed to divert portions of tipping fees to MSHCP implementation.

Table 22 and **Figure 10** summarizes the revenue forecasts under the MSHCP. Including the fee revenues, these sources totaled $1.07 billion or an estimated average almost $43 million per year for 25-years (in 2004 dollars). Excluding fee revenues, a total of $18.84 million in annual revenues were forecast, including Measure A funding, $10 million each year from other transportation projects, and $4.0 million from land fill contributions.

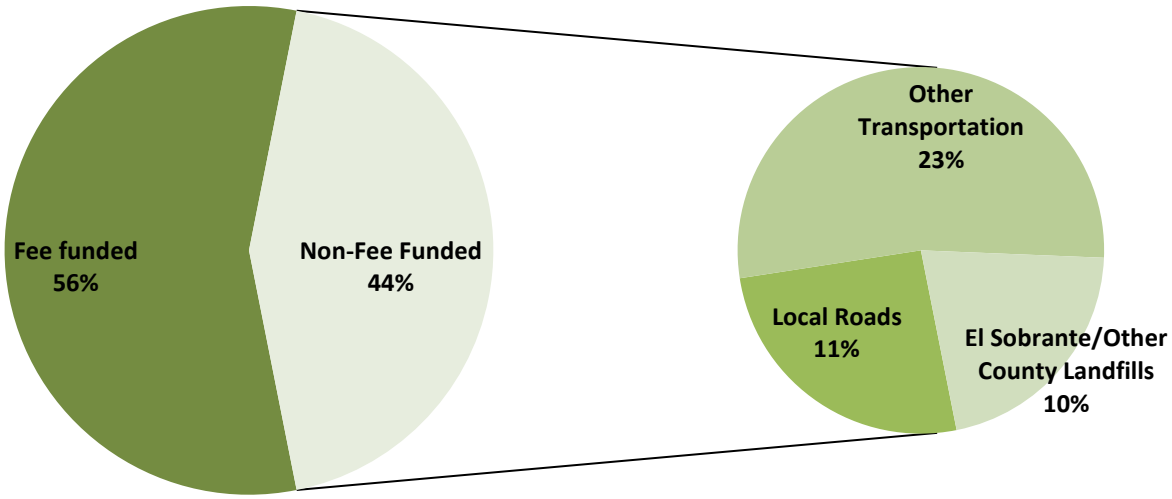
As described further below, at this point, the average annual funding from non-fee revenues sources are well below the MSCHP forecast. Measure A, a voter-approved ½ cent sales tax measure did provide substantial funding as envisioned (though is now fully used/ allocated) and, collectively, the other non-fee funding sources are well beyond what was originally envisioned.

[28] See Chapter 8.5.1 Funding Sources in the MSHCP.

Table 22 2004 MSHCP Anticipated Funding Sources

MSHCP Anticipated Funding Source	Estimate (millions)	% of Total	Avg/Yr (millions over 25 years)
Fee Funded Sources:			
Cities and County Development Mitigation Fees	$539.6	50%	$21,584,000
Density Bonus Fees	$66.0	6%	$2,640,000
Non-Fee Funded Sources	$605.6		$24,224,000.0
Public Funding Sources			
Local Roads (Measure A)	$121.0	11%	$4,840,000
Other Transportation	$250.0	23%	$10,000,000
Other infrastructure Projects	unknown	0%	$0
El Sobrante Landfill	$90.0	8%	$3,600,000
County Landfills	$10.0	1%	$400,000
Eagle Mountain Landfill	unknown	0%	$0
New Regional funding	unknown	0%	$0
Non-Fee Funded Sources	$471.0		$18,840,000
Total, Local Funds	$1,076.6	100%	$43,064,000

Figure 10 2004 MSHCP Anticipated Funding Sources



New Forecast of Non-Fee Revenues

Non-fee revenues to the RCA are projected to be $6.85 million annually in 2019 dollars. This estimate was derived from a line by line review of the major revenue items for a 3-year period from FY 2016-17 to FY 2018-19, projections by collection entities (e.g., TUMF revenue), and recent dynamics likely to affect the revenue source (e.g., greater diversion of trash to recycling

will likely reduce tipping fees). The estimates have been inflated from a three-year average to 2019 dollars, as detailed in **Table 23**.

Table 23 Annual Non-Fee Revenue Projection (2019$s)

Non-Fee Revenue Item	RCA FY16/17- 18/19 3-Year Average of Actuals	CPI Adjusted to 2019$
Transportation Mitigation[1]		
TUMF Revenue-Developer Fees	$950,000	$979,637
Subtotal	**$950,000**	**$979,637**
Tipping Fee	**$3,865,728**	**$3,986,326**
Public Project Mitigation		
PSE Mitigation Fee[2]	NA	$500,000
Other Gov MSHCP Infrastructure	$284,570	$293,448
Other Gov MSHCP Civic Projects	$93,629	$96,550
Flood Control District	$293,084	$302,227
Subtotal	**$671,283**	**$1,192,225**
Other Revenue		
Interest and Other Sources	$467,073	$481,644
Rents	$80,531	$83,043
Joint Project Review Fees	$124,762	$128,654
Subtotal	**$672,365**	**$693,341**
Total Revenue	**NA**	**$6,851,529**

1. All Measure A funding was provided prior to 2020 and the associated obligations have been met.
2. Participating Special Entities fees. This does not include Developer Mitigation Fees. These fees vary widely year over year, $500,000 is used as an annual average per the recommendation of RCA staff.

Sources: Western Riverside County Regional Conservation Authority; Economic & Planning Systems, Inc.

7. MITIGATION FEE CALCULATION

The revised Local Development Mitigation Fee is based on a generally similar methodology to the Original Nexus Study that ensures the fee level is proportional to the development impact. This methodology looks at the remaining conservation requirements associated with Local Permittee obligations under the MSHCP and associated Incidental Take Permit and Implementing Agreement, determines the remaining Local Permittee implementation cost, subtracts out reasonable estimates of non-fee revenues and other contributions, to determine the overall fee-funding obligation. This obligation is then divided among the new development forecast to determine the required mitigation fee. In others words, the original 2003 and updated 2020 Local Development Mitigation Fee estimates are the outcome of the following formula (the 2003 and 2020 Nexus Studies differ in their process of allocating funding required between land uses):

1. **Implementation Costs**
   minus
2. **Non-Fee Funding**
   equals
3. **Outstanding Funding Required**
   divided by
4. **Development Forecast**
   equals
5. **Local Development Mitigation Fee Schedule**

Table 24 summarizes the estimated Net Implementation Costs, Expected Acres of Development, and the associated per gross acre mitigation fee. As shown, the average mitigation fee per gross acre decreases with each extension as similar levels of net implementation costs are spread across more development. **Tables 25** through **28** provide the detailed calculations that determine the total net MSHCP implementation costs shown in **Table 24**. As noted in **Chapter 1**, for residential development, the per-gross-acre fee is translated into a per-unit fee schedule for administrative continuity.

Table 24 MSHCP Implementation Costs and Per Acre Mitigation Fees

Fee Per Acre	No Extension	5-Year Extension	10-Year Extension	15-Year Extension
Net Cost	**$912,756,583**	**$902,353,150**	**$892,767,438**	**$883,987,805**
Acres of Development				
Residential	14,026	21,818	29,611	37,403
Nonresidential	6,239	9,705	13,171	16,637
Total	**20,265**	**31,523**	**42,782**	**54,040**
Mitigation Fee per Acre	**$45,041**	**$28,625**	**$20,868**	**$16,358**

Sources: Southern California Association of Governments; Western Riverside County RCA; Economic & Planning Systems, Inc.

Table 25 Recommended Fee Level—No Extension

Item	Total for 2020 - 2029 (Years 17 - 25)	9 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		6,310 acres	na
(less) HANS Dedication	10,000 acres		1,111 acres	na
Local Permittee Acquisition	46,788 acres		5,199 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	$701,931,902		$77,992,434	72.0%
Management & Monitoring	$33,582,193		$3,731,355	3.4%
RCA Staff (2)	$20,596,453		$2,288,495	2.1%
Professional Services and Supplies (2)	$13,194,561		$1,466,062	1.4%
Loan Repayment (3)	$2,000,000		$222,222	0.2%
Other Costs (2) (4)	$3,602,285		$400,254	0.4%
Net Endowment Funding Required	$199,512,947		$22,168,105	20.5%
Total Costs	**$974,420,341**		**$108,268,927**	**100.0%**
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	$10,730,025		$1,192,225	1.4%
Transportation Mitigation (7)	$8,816,731		$979,637	1.1%
Tipping Fees	$35,876,934		$3,986,326	4.6%
Other Revenues (8)	$6,240,068		$693,341	0.8%
Total Selected Revenues	**$61,663,758**		**$6,851,529**	**8.0%**
Funding Required from Private Development Mitigation				
Net Cost	$912,756,583		$101,417,398	93.7%

Mitigation Fee Estimates (per gross acre of development)

Growth Projection:

Development	**2020 - 2028**	**Annual**
Residential Units	79,000	8,778
Residential Acres	14,026	1,558
Non-Residential Acres	6,239	693
Total Acres	20,265	2,252
Mitigation Fee	**$45,041 per acre**	

(1) Land value estimates at $14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling $2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of $1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

Table 26 Recommended Fee Level—5-Year Extension

Item	Total for 2020 - 2034 (Years 17 - 30)	14 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		4,056 acres	na
(less) HANS Dedication	10,000 acres		714 acres	na
Local Permittee Acquisition	46,788 acres		3,342 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	$701,931,902		$50,137,993	70.3%
Management & Monitoring	$51,646,790		$3,689,056	5.2%
RCA Staff (2)	$32,038,927		$2,288,495	3.2%
Professional Services and Supplies (2)	$20,524,873		$1,466,062	2.1%
Loan Repayment (3)	$2,000,000		$142,857	0.2%
Other Costs (2) (4)	$5,603,554		$400,254	0.6%
Net Endowment Funding Required	$184,528,506		$13,180,608	18.5%
Total Costs	**$998,274,552**		**$71,305,325**	**100.0%**
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	$16,691,150		$1,192,225	2.1%
Transportation Mitigation (7)	$13,714,915		$979,637	1.7%
Tipping Fees	$55,808,564		$3,986,326	6.9%
Other Revenues (8)	$9,706,772		$693,341	1.2%
Total Selected Revenues	**$95,921,402**		**$6,851,529**	**11.8%**
Funding Required from Private Development Mitigation				
Net Cost	$902,353,150		$64,453,796	90.4%

Mitigation Fee Estimates (per gross acre of development)

Growth Projection:

Development	**2020 - 2033**	**Annual**
Residential Units (4.2 DU/Acres)	122,456	8,747
Residential Acres	21,818	1,558
Non-Residential Acres	9,705	693
Total Acres	31,523	2,252
Mitigation Fee	**$28,625 per acre**	

(1) Land value estimates at $14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling $2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of $1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

Table 27 Recommended Fee Level—10-Year Extension

Item	Total for 2020 - 2039 (Years 17 - 35)	19 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		2,989 acres	na
(less) HANS Dedication	10,000 acres		526 acres	na
Local Permittee Acquisition	46,788 acres		2,463 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	$701,931,902		$36,943,784	68.6%
Management & Monitoring	$69,711,387		$3,669,020	6.8%
RCA Staff (2)	$43,481,401		$2,288,495	4.3%
Professional Services and Supplies (2)	$27,855,185		$1,466,062	2.7%
Loan Repayment (3)	$2,000,000		$105,263	0.2%
Other Costs (2) (4)	$7,604,824		$400,254	0.7%
Net Endowment Funding Required	$170,361,785		$8,966,410	16.7%
Total Costs	**$1,022,946,483**		**$53,839,289**	**100.0%**
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	$22,652,275		$1,192,225	2.7%
Transportation Mitigation (7)	$18,613,099		$979,637	2.2%
Tipping Fees	$75,740,195		$3,986,326	8.9%
Other Revenues (8)	$13,173,476		$693,341	1.5%
Total Selected Revenues	**$130,179,045**		**$6,851,529**	**15.3%**
Funding Required from Private Development Mitigation				
Net Cost	$892,767,438		$46,987,760	87.3%

Mitigation Fee Estimates (per gross acre of development)

Growth Projection:

Development	**2020 - 2038**	**Annual**
Residential Units (4.2 DU/Acres)	166,000	8,737
Residential Acres	29,611	1,558
Non-Residential Acres	13,171	693
Total Acres	42,782	2,252
Mitigation Fee	**$20,868 per acre**	

(1) Land value estimates at $14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling $2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of $1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

Table 28 Recommended Fee Level—15-Year Extension

Item	Total for 2020 - 2044 (Years 17 - 40)	24 yrs	Average Annual	% of Total Cost/ Funding Need
Local Permittee Land Requirements				
Preservation Requirement	56,788 acres		2,366 acres	na
(less) HANS Dedication	10,000 acres		417 acres	na
Local Permittee Acquisition	46,788 acres		1,950 acres	na
Local Permittee MSHCP Implementation Costs				
Land (1)	$701,931,902		$29,247,163	67.0%
Management & Monitoring	$87,775,983		$3,657,333	8.4%
RCA Staff (2)	$54,923,875		$2,288,495	5.2%
Professional Services and Supplies (2)	$35,185,497		$1,466,062	3.4%
Loan Repayment (3)	$2,000,000		$83,333	0.2%
Other Costs (2) (4)	$9,606,093		$400,254	0.9%
Net Endowment Funding Required	$157,001,144		$6,541,714	15.0%
Total Costs	**$1,048,424,494**		**$43,684,354**	**100.0%**
Offsetting Revenues (5) (exc. Private Development Mitigation)				
Public Project Mitigation (6)	$28,613,400		$1,192,225	3.2%
Transportation Mitigation (7)	$23,511,283		$979,637	2.6%
Tipping Fees	$95,671,825		$3,986,326	10.7%
Other Revenues (8)	$16,640,181		$693,341	1.9%
Total Selected Revenues	**$164,436,689**		**$6,851,529**	**18.4%**
Funding Required from Private Development Mitigation				
Net Cost	$883,987,805		$36,832,825	84.3%
Mitigation Fee Estimates (per gross acre of development)				
Growth Projection:				
Development	**2020 - 2043**		**Annual**	
Residential Units	210,000		8,750	
Residential Acres	37,403		1,558	
Non-Residential Acres	16,637		693	
Total Acres	54,040		2,252	
Mitigation Fee	**$16,358 per acre**			

(1) Land value estimates at $14,288 per acre in 2019 dollar terms plus a 5% transaction cost.
(2) RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(3) RCA has "Other Long Term Obligations" totaling $2 million, which was a loan received from the County in FY 2012/13 and is now payable in increments of $1 million over the course of two years.
(4) Includes rents and all other miscellaneous expenses.
(5) RCA Revenues are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
(6) Includes Flood Control District, PSE mitigation payments, and other government MSHCP infrastructure & civic project revenues.
(7) Includes TUMF fees.
(8) Includes interest and other sources, rents, and joint project review fees.

Sources: MSHCP; RCA; Economic & Planning Systems, Inc.

8. MITIGATION FEE ACT (NEXUS) FINDINGS

Mitigation fees are utilized in California to finance public facilities necessary to mitigate impacts stemming from new development. In 1987, the California Legislature adopted the Mitigation Fee Act to provide a framework for the application and administration of such fees. Current prevailing practice among the majority of approved and permitted regional multiple-species Habitat Conservation Plans is that any habitat mitigation fees are to be adopted by the relevant jurisdictions (cities and Counties) consistent with the Mitigation Fee Act.[29] As discussed further in **Chapter 9**, the adoption of fees under the Mitigation Fee Act includes a number of auditing and reporting requirements.

The Mitigation Fee Act, defined in California Government Code Sections 66000 to 66025, requires all public agencies to document five findings when establishing or increasing a fee as a condition for new development. These findings were made when the Western Riverside County MSHCP Local Development Mitigation Fees were first justified and established.[30]

This Chapter of the Western Riverside Habitat Conservation Plan Nexus Fee Study was prepared to describe how the proposed increase in the Local Development Mitigation Fee satisfies the five statutory findings required by the Mitigation Fee Act and is based on the appropriate nexus between new development and the imposition of a mitigation fee. The five statutory findings required for the establishment of a mitigation fee are summarized in the sections below and supported by the technical analysis in the prior chapters of this Study.

Purpose of Fee

Identify the purpose of the fee. (66001(a)(1))

The purpose of the Local Development Mitigation Fee is to contribute to the funding required to implement the MSCHP and, as a result, help maintain the incidental take permits for new private and public development in Western Riverside County under the federal and State Endangered Species Acts. Maintaining the incidental take permit is necessary to allow for future development, and without the development community paying for the cost of the MSHCP, individual applicants will need to apply independently for development approval under federal and State law if the project impacts a threaten or endangered species. The federal Endangered Species Act specifically requires that the applicant for incidental take permit "ensure that adequate funding for the plan will be provided."[31] In addition, the Local Development Mitigation Fee helps provide the regional benefit of streamlined economic development in Western Riverside County as well as

[29] In addition to the current Western Riverside County habitat mitigation fee, see also the Coachella Valley habitat mitigation fee, the San Joaquin County Multi-Species Habitat Conservation and Open Space Fee, and the East Contra Costa County HCP/NCCP mitigation fee.

[30] See the Final Mitigation Nexus Report for the Western Riverside County Multiple Species Habitat Conservation Plan, published July 1, 2003.

[31] See Section 1539(a)(2)Biii of the federal Endangered Species Act.

the provision of contiguous open spaces that will serve as a community amenity to residents, workers, and visitors.

Use of Fee Revenues

Identify the use to which the fee is to be put. If the use is financing public facilities, the facilities shall be identified. That identification may, but need not, be made by reference to a capital improvement plan as specific in Section 65403 or 66002, may be made in applicable general or specific plan requirements, or may be made in other public documents that identify the public facilities for which the fee is charged. (66001(a)(2)).

The MSHCP is the public document that outlines the actions required as a whole and the particular set of actions required by the Local Permittees (and the Regional Conservation Agency as their agent) to obtain incidental take permits—associated with State and federal Endangered Species Act requirements—for new public and private development in Western Riverside County. Failure to meet the requirements of the MSHCP will result in an inability to obtain or maintain incidental take permits through the MSHCP, which would require future development to secure individual take authorization if the project impacts a threaten or endangered species.

Revenues from the Local Development Mitigation Fee will be used, in conjunction with other local and regional funding sources, to fund the conservation actions identified as the responsibility of Local Permittees in the MSHCP. The revenue from the Local Development Mitigation Fee will be used to help fund the appropriate habitat acquisition (land acquisition and associated transaction costs), maintenance and monitoring of habitat land (preserve management, monitoring, and adaptive management), and program management, administration, and oversight activities and costs.[32] **Chapter 3** of this report describes the Local Permittee conservation requirements, progress to date, and the remaining actions required under the MSHCP.

Relationship

Determine how there is a reasonable relationship between the fee's use and the type of development project on which the fee is imposed. (66001(a)(3)).

The implementation of the MSHCP, and the mitigation fee as a fundamental part of it, will benefit all new development by mitigating their collective impacts on covered species and associated habitat. All new public and private development in the Plan area will affect habitat and species either directly, indirectly, or as a cumulative effect. New infrastructure development, for example, in addition to its direct effects, will support new development on other parcels and other locations in the Plan Area. Similarly, new private development will require new infrastructure and also result in additional demand for new developments through linkages—for

[32] Consistent with the interpretation applied to the majority of permitted and approved regional, multiple-species Habitat Conservation Plans in California and guidance from RCA Counsel, the Local Development Mitigation Fee is assumed to fund its proportionate share (as determined by the technical analysis and constrained by the statutory requirements) of applicable MSHCP implementation costs including, but also limited to, habitat acquisition costs (and associated transaction costs), the costs of managing and monitoring the habitat preserves in perpetuity, and the administrative and other costs of managing the overall program.

example, the need for new housing to accommodate new workers at commercial developments or the need for new retail developments to serve new residents at residential developments. In other words, all new development in Western Riverside County will benefit from the incidental take permits obtained through the MSHCP and via the use of the mitigation fee revenues.

In addition, the incidental take permits are necessary to permit any future development within the Plan Area, and in order to obtain or maintain such incidental take permits, the MSHCP must be fully funded. Because funding the MSHCP is required in order to allow for future development under the MSHCP, there is a direct relationship between the proposed use of the mitigation fee and development within the Plan Area.

Need

Determine how there is a reasonable relationship between the need for the public facility and the type of development project on which the fee is imposed. (66001(a)(4)).

Without new development, no MSHCP would be necessary and no further habitat conservation would be required under the federal and State Endangered Species Acts. To allow for any future development under the Plan, the MSHCP must be fully funded. New development in the Plan Area, as noted above, will directly, indirectly, or cumulatively affect species and habitat in Western Riverside County. Because of this, development of the MSHCP was undertaken to provide a regional, streamlined approach to benefit future development of all types in Western Riverside County, including the development and improvements envisioned under the numerous General Plans and the Regional Transportation Improvement Program. The requirements of the MSHCP (habitat acquisition, management and monitoring, program administration) are a direct result of the regional approach to mitigation that is engendered by all new development in the Plan Area under the pertinent environmental regulations. Meeting the requirements of the MSHCP is necessary to obtain the necessary federal authorization to develop within the Plan Area.

Proportionality

Determine how there is a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed. (66001(b)).

The MSHCP includes detailed conservation requirements based on the scientific evaluations that form the basis of the MSHCP. Based on these evaluations, conservation responsibilities were allocated between the Local Permittees and other agencies, such as the State and federal governments. The Local Development Mitigation Fee appropriately provides funding towards the fulfillment of the Local Permittee conservation requirements. Furthermore, the Local Permittee obligations are not fully funded through the Local Development Mitigation Fee revenues. Other local and regional funding sources, such as the Measure A sales tax and tipping fees, provide additional mitigation and/or offsetting revenues that reduce the overall cost allocation to the Local Development Mitigation Fee Program. In addition, consistent with the relationship between new development in Western Riverside County and the need for the public facilities (conservation program) described above, proportional attribution between new development is ensured

through the determination of a consistent per gross acre Local Development Mitigation Fee.[33] As a result, the Local Development Mitigation Fee level calculations are carefully determined to fund only the proportionate (or less than) conservation costs attributable to the new development on which the fee is imposed and to allocate the fee levels proportionally across all new development. It is this process of careful calculation based on the requirements of the MSHCP that is the subject of a substantial portion of this Nexus Study (see **Chapters 2** through **7**).

[33] Determining habitat mitigation fees on a gross acre basis is the clearest way of ensuring proportionate cost allocations among new developments and is a common practice among adopted Habitat Conservation Plans. For purposes of implementation/administrative consistency, for residential uses, the per-gross-acre fee is translated into per unit fees for different density categories.

9. FEE IMPLEMENTATION

The revised Local Development Mitigation Fee must be implemented consistent with the MSHCP (and associated Incidental Take Permit and Implementing Agreement) as well as the California Mitigation Fee Act. A detailed set of guidance is included in the Fee Implementation Handbook to support clarity and specificity in the implementation of the updated fee program by Local Permittees. The sections below summarize some of the key implementation and administration actions to be consistent with the requirements.

Adoption of Revised LDMF

- Consistent with the MSHCP and associated documents, each Local Permittee (i.e., all participating jurisdictions) must adopt an updated LDMF ordinance and a fee resolution establishing the revised fee level as prescribed by the Mitigation Fee Act.
- Consistent with the Mitigation Fee Act, the revised ordinance and associated fee resolution will become effective after a public hearing and 60 days.
- RCA Legal Counsel will prepare a Fee Update Ordinance and Resolution to facilitate the consistent adoption of the updated LDMF by Local Permittees.

Securing Supplemental Funding

The revised Local Development Mitigation Fee is set at the level that would cover the Local Permittee cost obligations once expected non-fee revenues are subtracted out. To the extent any discounts/exemptions are provided to new Western Riverside County development below the updated fee level, additional funding will be required to backfill the fee revenue losses. To the extent, these revenues do not make up for any fee discounts provided, other sources of funding will need to be sought by the RCA and the Local Permittees to fulfill their Plan obligations. At the same time, if new substantial funding sources become available to the RCA for Local Permittee obligations, the funding required through fees may decrease, in turn reducing the required fee levels through a new update.

Annual Review

The Mitigation Fee Act (at Gov. C. §§ 66001(c), 66006(b)(1)) stipulates that each local agency that requires payment of a fee make specific information available to the public annually within 180 days of the last day of the fiscal year. In this case, the RCA can play this role on behalf of the Local Permittees. This information includes the following:

- A description of the type of fee in the account.
- The amount of the fee (the mitigation fee schedule).
- The beginning and ending balance of the fund.
- The amount of fees collected and interest earned.
- Identification of the improvements constructed.
- The total cost of the improvements constructed.
- The fees expended to construct the improvement.
- The percentage of total costs funded by the fee.

If sufficient fees have been collected to fund specific improvement cost, the agency must specify the approximate date for the cost of that improvement. Because of the dynamic nature of growth and MSHCP implementation costs and consistent with current practice, the RCA should continue to monitor progress towards MSHCP goals. The overall adequacy of the fee revenues and other available funding in meeting these goals should be reviewed annually.

Surplus Funds

The Mitigation Fee Act also requires that if any portion of a fee remains unexpended or uncommitted in an account for 5 years or more after deposit of the fee, the RCA, acting for the Local Permittees, shall make findings once each year (1) to identify the purpose to which the fee is to be put, (2) to demonstrate a reasonable relationship between the fee and the purpose for which it was charged, (3) to identify all sources and amounts of funding anticipated to complete financing of incomplete improvements, and (4) to designate the approximate dates on which the funding identified in (3) is expected to be deposited into the appropriate fund (§66001(d)).

If adequate funding has been collected for specific investments, an approximate date must be specified as to when the cost of the investment will be incurred. If the findings show no need for the unspent funds, or if the conditions discussed above are not met, and the administrative costs of the refund do not exceed the refund itself, the local agency that has collected the funds must refund them (Gov. C §66001(e)(f)).

Annual and Periodic Updates

Consistent with the current practice, the Fee Ordinance should allow an automatic annual adjustment to the fees based on the Riverside-San Bernardino-Ontario, CA Consumer Price Index (CPI) or a similar inflation factor. In addition, a more comprehensive update should be conducted required periodically. The Nexus Study and the technical information it contains should be reviewed periodically by the RCA (every five years is recommended) to identify any necessary refinements to the Local Development Mitigation Fees to ensure adequate funding to implement the MSHCP. Under certain circumstances, the RCA may wish to conduct a Nexus Study update sooner than after five years. For example, to the extent there are significant and unexpected changes in implementation costs, in the level of non-fee funding, and/ or the level of fee-paying private development over time, a more immediate fee update may be appropriate.

APPENDIX I:

Detailed Time Series of Implementation Costs

All Implementation Costs Over Time – No Extension

Habitat Lands/ Cost Items	Factors		End of: 17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028
ACRES											
Land Acuisition Costs											
Land Acquisition (Annual)											
Local			6,310	6,310	6,310	6,310	6,310	6,310	6,310	6,310	6,310
(less) HANS/JPR Dedications			-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	0
Total Local			5,060	5,060	5,060	5,060	5,060	5,060	5,060	5,060	6,310
State/Fed			3,821	3,821	3,821	3,821	3,821	3,821	3,821	3,821	3,821
Total			8,881	8,881	8,881	8,881	8,881	8,881	8,881	8,881	10,131
Land Acquisition (Cumulative)											
Local [1]			45,272	50,332	55,391	60,451	65,511	70,571	75,630	80,690	87,000
State/Fed			25,429	29,251	33,072	36,893	40,715	44,536	48,357	52,179	56,000
Local - HANS/JPR Dedications			1,250	2,500	3,750	5,000	6,250	7,500	8,750	10,000	10,000
Total			71,951	82,082	92,213	102,344	112,476	122,607	132,738	142,869	153,000
Management and Monitoring Costs											
Reserve Summary	***Financial Responsibility***										
	Monitoring	Management									
State/ Federal											
PQP	RCA	State/ Fed	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000
ARL	RCA	State	25,429	29,251	33,072	36,893	40,715	44,536	48,357	52,179	56,000
Total			307,429	311,251	315,072	318,893	322,715	326,536	330,357	334,179	338,000
Local											
PQP	RCA	Non-RCA Local	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
ARL	RCA	RCA	46,522	52,832	59,141	65,451	71,761	78,071	84,380	90,690	97,000
Total			111,522	117,832	124,141	130,451	136,761	143,071	149,380	155,690	162,000
Total Acres under RCA Management			46,522	52,832	59,141	65,451	71,761	78,071	84,380	90,690	97,000
Total Acres under RCA Monitoring			418,951	429,082	439,213	449,344	459,476	469,607	479,738	489,869	500,000
COSTS (all constant 2019 dollars)											
Land Acquisition Costs											
Local, ARL, Annual	$14,288	$/Acre	$72,294,065	$72,294,065	$72,294,065	$72,294,065	$72,294,065	$72,294,065	$72,294,065	$72,294,065	$90,154,055
Land Transaction Costs	5%	of acquisition costs	$3,614,703	$3,614,703	$3,614,703	$3,614,703	$3,614,703	$3,614,703	$3,614,703	$3,614,703	$4,507,703
Total, Land Acquisition Costs			$75,908,768	$75,908,768	$75,908,768	$75,908,768	$75,908,768	$75,908,768	$75,908,768	$75,908,768	$94,661,758
Local, ARL, Cumulative			$75,908,768	$151,817,536	$227,726,304	$303,635,072	$379,543,840	$455,452,608	$531,361,376	$607,270,144	$701,931,902
Management and Monitoring Costs											
Management, Annual	$32.70	$/Acre	$1,521,340	$1,727,681	$1,934,021	$2,140,361	$2,346,702	$2,553,042	$2,759,382	$2,965,723	$3,172,063
Management Cumulative			$1,521,340	$3,249,021	$5,183,042	$7,323,403	$9,670,105	$12,223,147	$14,982,530	$17,948,252	$21,120,315
Monitoring, Annual	$3.01	$/Acre	$1,262,531	$1,293,061	$1,323,592	$1,354,122	$1,384,653	$1,415,184	$1,445,714	$1,476,245	$1,506,776
Monitoring Cumulative			$1,262,531	$2,555,592	$3,879,184	$5,233,306	$6,617,959	$8,033,143	$9,478,857	$10,955,102	$12,461,878
Endowment Costs											
Net Endowment Funding, Annual			$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105
Net Endowment Funding, Cumulative			$22,168,105	$44,336,210	$66,504,316	$88,672,421	$110,840,526	$133,008,631	$155,176,736	$177,344,842	$199,512,947
Administrative Costs [2]											
RCA Staff Costs			$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495
Professional Services			$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062
Loan Repayment [3]			$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0
Other			$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254
Total Annual			$5,154,811	$5,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811
Cumulative Costs			$5,154,811	$10,309,622	$14,464,433	$18,619,244	$22,774,055	$26,928,866	$31,083,677	$35,238,488	$39,393,299
TOTAL ALL COSTS											
TOTAL Annual			$106,015,555	$106,252,426	$105,489,297	$105,726,168	$105,963,039	$106,199,910	$106,436,781	$106,673,652	$125,663,513
TOTAL Cumulative			$106,015,555	$212,267,981	$317,757,279	$423,483,447	$529,446,486	$635,646,396	$742,083,177	$848,756,829	$974,420,341

1. All local land conserved to date, including all HANS dedications to date, are captured in the year 17 number.
2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
3. Annual administrative costs decrease in year 19 due to assumption that loan repayment is completed.

All Implementation Costs Over Time – 5 Year Extension

Habitat Lands/ Cost Items	Factors		End of: 17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028	26 2029	27 2030	28 2031	29 2032	30 2033
ACRES																
Land Acuisition Costs																
Land Acquisition (Annual)																
Local			4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056	4,056
(less) HANS/JPR Dedications			-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	0	0	0	0	0	0
Total Local			2,806	2,806	2,806	2,806	2,806	2,806	2,806	2,806	4,056	4,056	4,056	4,056	4,056	4,056
State/Fed			2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457	2,457
Total			5,263	5,263	5,263	5,263	5,263	5,263	5,263	5,263	6,513	6,513	6,513	6,513	6,513	6,513
Land Acquisition (Cumulative)																
Local [1]			43,018	45,825	48,631	51,437	54,243	57,050	59,856	62,662	66,719	70,775	74,831	78,887	82,944	87,000
State/Fed			24,065	26,521	28,978	31,434	33,891	36,347	38,804	41,261	43,717	46,174	48,630	51,087	53,543	56,000
Local - HANS/JPR Dedications			1,250	2,500	3,750	5,000	6,250	7,500	8,750	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Total			68,333	74,846	81,359	87,871	94,384	100,897	107,410	113,923	120,436	126,949	133,461	139,974	146,487	153,000
Management and Monitoring Costs																
Reserve Summary																
	Financial Responsibility															
	Monitoring	Management														
State/ Federal																
PQP	RCA	State/ Fed	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000
ARL	RCA	State	24,065	26,521	28,978	31,434	33,891	36,347	38,804	41,261	43,717	46,174	48,630	51,087	53,543	56,000
Total			306,065	308,521	310,978	313,434	315,891	318,347	320,804	323,261	325,717	328,174	330,630	333,087	335,543	338,000
Local																
PQP	RCA	Non-RCA Local	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
ARL	RCA	RCA	44,268	48,325	52,381	56,437	60,493	64,550	68,606	72,662	76,719	80,775	84,831	88,887	92,944	97,000
Total			109,268	113,325	117,381	121,437	125,493	129,550	133,606	137,662	141,719	145,775	149,831	153,887	157,944	162,000
Total Acres under RCA Management			44,268	48,325	52,381	56,437	60,493	64,550	68,606	72,662	76,719	80,775	84,831	88,887	92,944	97,000
Total Acres under RCA Monitoring			415,333	421,846	428,359	434,871	441,384	447,897	454,410	460,923	467,436	473,949	480,461	486,974	493,487	500,000
COSTS (all constant 2019 dollars)																
Land Acquisition Costs																
Local, ARL, Annual	$14,288	$/Acre	$40,096,188	$40,096,188	$40,096,188	$40,096,188	$40,096,188	$40,096,188	$40,096,188	$40,096,188	$57,956,178	$57,956,178	$57,956,178	$57,956,178	$57,956,178	$57,956,178
Land Transaction Costs	5%	of acquisition costs	$2,004,809	$2,004,809	$2,004,809	$2,004,809	$2,004,809	$2,004,809	$2,004,809	$2,004,809	$2,897,809	$2,897,809	$2,897,809	$2,897,809	$2,897,809	$2,897,809
Total, Land Acquisition Costs			$42,100,997	$42,100,997	$42,100,997	$42,100,997	$42,100,997	$42,100,997	$42,100,997	$42,100,997	$60,853,987	$60,853,987	$60,853,987	$60,853,987	$60,853,987	$60,853,987
Local, ARL, Cumulative			$42,100,997	$84,201,995	$126,302,992	$168,403,990	$210,504,987	$252,605,985	$294,706,982	$336,807,979	$397,661,967	$458,515,954	$519,369,941	$580,223,928	$641,077,915	$701,931,902
Management and Monitoring Costs																
Management, Annual	$32.70	$/Acre	$1,447,647	$1,580,295	$1,712,942	$1,845,589	$1,978,237	$2,110,884	$2,243,532	$2,376,179	$2,508,826	$2,641,474	$2,774,121	$2,906,768	$3,039,416	$3,172,063
Management Cumulative			$1,447,647	$3,027,942	$4,740,884	$6,586,474	$8,564,710	$10,675,595	$12,919,126	$15,295,305	$17,804,131	$20,445,605	$23,219,726	$26,126,494	$29,165,910	$32,337,973
Monitoring, Annual	$3.01	$/Acre	$1,251,627	$1,271,254	$1,290,880	$1,310,507	$1,330,134	$1,349,761	$1,369,388	$1,389,015	$1,408,641	$1,428,268	$1,447,895	$1,467,522	$1,487,149	$1,506,776
Monitoring Cumulative			$1,251,627	$2,522,880	$3,813,761	$5,124,268	$6,454,402	$7,804,163	$9,173,551	$10,562,566	$11,971,207	$13,399,476	$14,847,371	$16,314,893	$17,802,041	$19,308,817
Endowment Costs																
Net Endowment Funding, Annual			$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608
Net Endowment Funding, Cumulative			$13,180,608	$26,361,215	$39,541,823	$52,722,430	$65,903,038	$79,083,645	$92,264,253	$105,444,860	$118,625,468	$131,806,076	$144,986,683	$158,167,291	$171,347,898	$184,528,506
Administrative Costs [2]																
RCA Staff Costs			$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495
Professional Services			$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062
Loan Repayment [3]			$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other			$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254
Total Annual Costs			$5,154,811	$5,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811
Cumulative Costs			$5,154,811	$10,309,622	$14,464,433	$18,619,244	$22,774,055	$26,928,866	$31,083,677	$35,238,488	$39,393,299	$43,548,111	$47,702,922	$51,857,733	$56,012,544	$60,167,355
TOTAL ALL COSTS																
TOTAL Annual			$63,135,690	$63,287,964	$62,440,239	$62,592,513	$62,744,787	$62,897,061	$63,049,335	$63,201,610	$82,106,873	$82,259,148	$82,411,422	$82,563,696	$82,715,970	$82,868,244
TOTAL Cumulative			$63,135,690	$126,423,655	$188,863,893	$251,456,406	$314,201,193	$377,098,254	$440,147,590	$503,349,199	$585,456,073	$667,715,220	$750,126,642	$832,690,338	$915,406,308	$998,274,552

1. All local land conserved to date, including all HANS dedications to date, are captured in the year 17 number.
2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
3. Annual administrative costs decrease in year 19 due to assumption that loan repayment is completed.

All Implementation Costs Over Time – 10 Year Extension

Habitat Lands/ Cost Items	Factors		End of: 17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028	26 2029	27 2030	28 2031	29 2032	30 2033	31 2034	32 2035	33 2036	34 2037	35 2038
ACRES																					
Land Acuisition Costs																					
Land Acquisition (Annual)																					
Local			2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989
(less) Anheuser Busch purchase			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
(less) HANS/JPR Dedications			-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	0	0	0	0	0	0	0	0	0	0	0
Total Local			1,739	1,739	1,739	1,739	1,739	1,739	1,739	1,739	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989	2,989
State/Fed			1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810	1,810
Total			3,549	3,549	3,549	3,549	3,549	3,549	3,549	3,549	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799	4,799
Land Acquisition (Cumulative)																					
Local [1]			41,951	43,690	45,429	47,167	48,906	50,645	52,384	54,123	57,112	60,100	63,089	66,078	69,067	72,056	75,045	78,033	81,022	84,011	87,000
State/Fed			23,418	25,228	27,038	28,848	30,659	32,469	34,279	36,089	37,899	39,709	41,519	43,329	45,139	46,949	48,760	50,570	52,380	54,190	56,000
Local - HANS/JPR Dedications			1,250	2,500	3,750	5,000	6,250	7,500	8,750	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Total			66,619	71,418	76,217	81,016	85,815	90,614	95,413	100,212	105,011	109,809	114,608	119,407	124,206	129,005	133,804	138,603	143,402	148,201	153,000
Management and Monitoring Costs																					
Reserve Summary	***Financial Responsibility***																				
	Monitoring	Management																			
State/ Federal																					
PQP	RCA	State/ Fed	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000
ARL	RCA	State	23,418	25,228	27,038	28,848	30,659	32,469	34,279	36,089	37,899	39,709	41,519	43,329	45,139	46,949	48,760	50,570	52,380	54,190	56,000
Total			305,418	307,228	309,038	310,848	312,659	314,469	316,279	318,089	319,899	321,709	323,519	325,329	327,139	328,949	330,760	332,570	334,380	336,190	338,000
Local																					
PQP	RCA	Non-RCA Local	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
ARL	RCA	RCA	43,201	46,190	49,179	52,167	55,156	58,145	61,134	64,123	67,112	70,100	73,089	76,078	79,067	82,056	85,045	88,033	91,022	94,011	97,000
Total			108,201	111,190	114,179	117,167	120,156	123,145	126,134	129,123	132,112	135,100	138,089	141,078	144,067	147,056	150,045	153,033	156,022	159,011	162,000
Total Acres under RCA Management			43,201	46,190	49,179	52,167	55,156	58,145	61,134	64,123	67,112	70,100	73,089	76,078	79,067	82,056	85,045	88,033	91,022	94,011	97,000
Total Acres under RCA Monitoring			413,619	418,418	423,217	428,016	432,815	437,614	442,413	447,212	452,011	456,809	461,608	466,407	471,206	476,005	480,804	485,603	490,402	495,201	500,000
COSTS (all constant 2019 dollars)																					
Land Acquisition Costs																					
Local, ARL, Annual	$14,288	$/Acre	$24,844,562	$24,844,562	$24,844,562	$24,844,562	$24,844,562	$24,844,562	$24,844,562	$24,844,562	$42,704,552	$42,704,552	$42,704,552	$42,704,552	$42,704,552	$42,704,552	$42,704,552	$42,704,552	$42,704,552	$42,704,552	$42,704,552
Land Transaction Costs	5%	of acquisition costs	$1,242,228	$1,242,228	$1,242,228	$1,242,228	$1,242,228	$1,242,228	$1,242,228	$1,242,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228	$2,135,228
Total, Land Acquisition Costs			$26,086,790	$26,086,790	$26,086,790	$26,086,790	$26,086,790	$26,086,790	$26,086,790	$26,086,790	$44,839,780	$44,839,780	$44,839,780	$44,839,780	$44,839,780	$44,839,780	$44,839,780	$44,839,780	$44,839,780	$44,839,780	$44,839,780
Local, ARL, Cumulative			$26,086,790	$52,173,581	$78,260,371	$104,347,161	$130,433,952	$156,520,742	$182,607,532	$208,694,323	$253,534,102	$298,373,882	$343,213,662	$388,053,442	$432,893,222	$477,733,002	$522,572,782	$567,412,562	$612,252,342	$657,092,122	$701,931,902
Management and Monitoring Costs																					
Management, Annual	$32.70	$/Acre	$1,412,740	$1,510,480	$1,608,220	$1,705,961	$1,803,701	$1,901,441	$1,999,181	$2,096,921	$2,194,661	$2,292,402	$2,390,142	$2,487,882	$2,585,622	$2,683,362	$2,781,102	$2,878,843	$2,976,583	$3,074,323	$3,172,063
Management Cumulative			$1,412,740	$2,923,220	$4,531,441	$6,237,402	$8,041,102	$9,942,543	$11,941,725	$14,038,646	$16,233,307	$18,525,709	$20,915,851	$23,403,733	$25,989,355	$28,672,717	$31,453,819	$34,332,662	$37,309,245	$40,383,568	$43,555,631
Monitoring, Annual	$3.01	$/Acre	$1,246,462	$1,260,924	$1,275,386	$1,289,847	$1,304,309	$1,318,771	$1,333,233	$1,347,695	$1,362,157	$1,376,619	$1,391,081	$1,405,542	$1,420,004	$1,434,466	$1,448,928	$1,463,390	$1,477,852	$1,492,314	$1,506,776
Monitoring Cumulative			$1,246,462	$2,507,386	$3,782,771	$5,072,619	$6,376,928	$7,695,699	$9,028,932	$10,376,627	$11,738,784	$13,115,403	$14,506,484	$15,912,026	$17,332,030	$18,766,497	$20,215,425	$21,678,815	$23,156,667	$24,648,980	$26,155,756
Endowment Costs																					
Net Endowment Funding, Annual			$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410
Net Endowment Funding, Cumulative			$8,966,410	$17,932,819	$26,899,229	$35,865,639	$44,832,049	$53,798,458	$62,764,868	$71,731,278	$80,697,687	$89,664,097	$98,630,507	$107,596,917	$116,563,326	$125,529,736	$134,496,146	$143,462,556	$152,428,965	$161,395,375	$170,361,785
Administrative Costs [2]																					
RCA Staff Costs			$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495
Professional Services			$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062
Loan Repayment [3]			$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other			$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254
Total Annual Costs			$5,154,811	$5,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811
Cumulative Costs			$5,154,811	$10,309,622	$14,464,433	$18,619,244	$22,774,055	$26,928,866	$31,083,677	$35,238,488	$39,393,299	$43,548,111	$47,702,922	$51,857,733	$56,012,544	$60,167,355	$64,322,166	$68,476,977	$72,631,788	$76,786,599	$80,941,410
TOTAL ALL COSTS																					
TOTAL Annual			$42,867,213	$42,979,415	$42,091,617	$42,203,819	$42,316,021	$42,428,223	$42,540,425	$42,652,627	$61,517,819	$61,630,021	$61,742,223	$61,854,425	$61,966,627	$62,078,829	$62,191,031	$62,303,233	$62,415,435	$62,527,637	$62,639,839
TOTAL Cumulative			$42,867,213	$85,846,628	$127,938,245	$170,142,065	$212,458,086	$254,886,309	$297,426,735	$340,079,362	$401,597,181	$463,227,202	$524,969,425	$586,823,850	$648,790,477	$710,869,307	$773,060,338	$835,363,571	$897,779,006	$960,306,644	$1,022,946,483

1. All local land conserved to date, including all HANS dedications to date, are captured in the year 17 number.
2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
3. Annual administrative costs decrease in year 19 due to assumption that loan repayment is completed.

All Implementation Costs Over Time – 15 Year Extension

Habitat Lands/ Cost Items	Factors			End of: 17 2020	18 2021	19 2022	20 2023	21 2024	22 2025	23 2026	24 2027	25 2028	26 2029	27 2030	28 2031	29 2032	30 2033	31 2034	32 2035	33 2036	34 2037	35 2038	36 2039	37 2040	38 2041	39 2042	40 2043
ACRES																											
Land Acquisition Costs																											
Land Acquisition (Annual)																											
Local				2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366
(less) HANS/JPR Dedications				-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	-1,250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Local				1,116	1,116	1,116	1,116	1,116	1,116	1,116	1,116	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366	2,366
State/Fed				1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433	1,433
Total				2,549	2,549	2,549	2,549	2,549	2,549	2,549	2,549	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799	3,799
Land Acquisition (Cumulative)																											
Local [1]				41,328	42,444	43,561	44,677	45,793	46,909	48,025	49,141	51,508	53,874	56,240	58,606	60,972	63,338	65,705	68,071	70,437	72,803	75,169	77,535	79,902	82,268	84,634	87,000
State/Fed				23,041	24,474	25,907	27,340	28,773	30,206	31,639	33,072	34,505	35,938	37,371	38,804	40,237	41,670	43,103	44,536	45,969	47,402	48,835	50,268	51,701	53,134	54,567	56,000
Local - HANS/JPR Dedications				1,250	2,500	3,750	5,000	6,250	7,500	8,750	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Total				65,619	69,418	73,218	77,017	80,816	84,615	88,414	92,213	96,013	99,812	103,611	107,410	111,209	115,008	118,808	122,607	126,406	130,205	134,004	137,803	141,603	145,402	149,201	153,000
Management and Monitoring Costs																											
Reserve Summary	***Financial Responsibility***	Monitoring	Management																								
State/ Federal																											
PQP	RCA	State/ Fed		282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000	282,000
ARL	RCA	State		23,041	24,474	25,907	27,340	28,773	30,206	31,639	33,072	34,505	35,938	37,371	38,804	40,237	41,670	43,103	44,536	45,969	47,402	48,835	50,268	51,701	53,134	54,567	56,000
Total				305,041	306,474	307,907	309,340	310,773	312,206	313,639	315,072	316,505	317,938	319,371	320,804	322,237	323,670	325,103	326,536	327,969	329,402	330,835	332,268	333,701	335,134	336,567	338,000
Local																											
PQP	RCA	Non-RCA Local		65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000
ARL	RCA	RCA		42,578	44,944	47,311	49,677	52,043	54,409	56,775	59,141	61,508	63,874	66,240	68,606	70,972	73,338	75,705	78,071	80,437	82,803	85,169	87,535	89,902	92,268	94,634	97,000
Total				107,578	109,944	112,311	114,677	117,043	119,409	121,775	124,141	126,508	128,874	131,240	133,606	135,972	138,338	140,705	143,071	145,437	147,803	150,169	152,535	154,902	157,268	159,634	162,000
Total Acres under RCA Management				42,578	44,944	47,311	49,677	52,043	54,409	56,775	59,141	61,508	63,874	66,240	68,606	70,972	73,338	75,705	78,071	80,437	82,803	85,169	87,535	89,902	92,268	94,634	97,000
Total Acres under RCA Monitoring				412,619	416,418	420,218	424,017	427,816	431,615	435,414	439,213	443,013	446,812	450,611	454,410	458,209	462,008	465,808	469,607	473,406	477,205	481,004	484,803	488,603	492,402	496,201	500,000
COSTS (all constant 2019 dollars)																											
Land Acquisition Costs																											
Local, ARL, Annual	$14,288	$/Acre		$15,947,780	$15,947,780	$15,947,780	$15,947,780	$15,947,780	$15,947,780	$15,947,780	$15,947,780	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771	$33,807,771
Land Transaction Costs	5%	of acquisition costs		$797,389	$797,389	$797,389	$797,389	$797,389	$797,389	$797,389	$797,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389	$1,690,389
Total, Land Acquisition Costs				$16,745,170	$16,745,170	$16,745,170	$16,745,170	$16,745,170	$16,745,170	$16,745,170	$16,745,170	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159	$35,498,159
Local, ARL, Cumulative				$16,745,170	$33,490,339	$50,235,509	$66,980,678	$83,725,848	$100,471,017	$117,216,187	$133,961,356	$169,459,515	$204,957,674	$240,455,833	$275,953,992	$311,452,152	$346,950,311	$382,448,470	$417,946,629	$453,444,788	$488,942,947	$524,441,106	$559,939,265	$595,437,424	$630,935,583	$666,433,743	$701,931,902
Management and Monitoring Costs																											
Management, Annual	$32.70	$/Acre		$1,392,378	$1,469,755	$1,547,133	$1,624,511	$1,701,888	$1,779,266	$1,856,643	$1,934,021	$2,011,399	$2,088,776	$2,166,154	$2,243,532	$2,320,909	$2,398,287	$2,475,664	$2,553,042	$2,630,420	$2,707,797	$2,785,175	$2,862,553	$2,939,930	$3,017,308	$3,094,685	$3,172,063
Management Cumulative				$1,392,378	$2,862,133	$4,409,266	$6,033,776	$7,735,664	$9,514,930	$11,371,574	$13,305,595	$15,316,993	$17,405,770	$19,571,923	$21,815,455	$24,136,364	$26,534,651	$29,010,315	$31,563,357	$34,193,777	$36,901,574	$39,686,749	$42,549,302	$45,489,232	$48,506,540	$51,601,225	$54,773,288
Monitoring, Annual	$3.01	$/Acre		$1,243,449	$1,254,898	$1,266,347	$1,277,796	$1,289,245	$1,300,694	$1,312,143	$1,323,592	$1,335,041	$1,346,490	$1,357,939	$1,369,388	$1,380,837	$1,392,286	$1,403,735	$1,415,184	$1,426,633	$1,438,082	$1,449,531	$1,460,980	$1,472,429	$1,483,878	$1,495,327	$1,506,776
Monitoring Cumulative				$1,243,449	$2,498,347	$3,764,694	$5,042,490	$6,331,735	$7,632,429	$8,944,572	$10,268,163	$11,603,204	$12,949,694	$14,307,633	$15,677,021	$17,057,857	$18,450,143	$19,853,878	$21,269,062	$22,695,694	$24,133,776	$25,583,307	$27,044,286	$28,516,715	$30,000,593	$31,495,919	$33,002,695
Endowment Costs																											
Net Endowment Funding, Annual				$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714
Net Endowment Funding, Cumulative				$6,541,714	$13,083,429	$19,625,143	$26,166,857	$32,708,572	$39,250,286	$45,792,000	$52,333,715	$58,875,429	$65,417,143	$71,958,858	$78,500,572	$85,042,286	$91,584,001	$98,125,715	$104,667,429	$111,209,144	$117,750,858	$124,292,572	$130,834,286	$137,376,001	$143,917,715	$150,459,429	$157,001,144
Administrative Costs [2]																											
RCA Staff Costs				$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495	$2,288,495
Professional Services				$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062	$1,466,062
Loan Repayment [3]				$1,000,000	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Other				$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254	$400,254
Total Annual Costs				$5,154,811	$5,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811	$4,154,811
Cumulative Costs				$5,154,811	$10,309,622	$14,464,433	$18,619,244	$22,774,055	$26,928,866	$31,083,677	$35,238,488	$39,393,299	$43,548,111	$47,702,922	$51,857,733	$56,012,544	$60,167,355	$64,322,166	$68,476,977	$72,631,788	$76,786,599	$80,941,410	$85,096,221	$89,251,032	$93,405,843	$97,560,654	$101,715,465
TOTAL ALL COSTS																											
TOTAL Annual				$31,077,521	$31,166,348	$30,255,175	$30,344,001	$30,432,828	$30,521,655	$30,610,481	$30,699,308	$49,541,124	$49,629,951	$49,718,777	$49,807,604	$49,896,430	$49,985,257	$50,074,084	$50,162,910	$50,251,737	$50,340,563	$50,429,390	$50,518,217	$50,607,043	$50,695,870	$50,784,697	$50,873,523
TOTAL Cumulative				$31,077,521	$62,243,870	$92,499,044	$122,843,046	$153,275,874	$183,797,528	$214,408,009	$245,107,317	$294,648,441	$344,278,392	$393,997,169	$443,804,773	$493,701,203	$543,686,460	$593,760,544	$643,923,454	$694,175,191	$744,515,754	$794,945,144	$845,463,361	$896,070,404	$946,766,274	$997,550,971	$1,048,424,494

1. All local land conserved to date, including all HANS dedications to date, are captured in the year 17 number.
2. RCA Administrative Costs are based on a three year average of FY 2016-17 through FY 2018-19 actual costs, adjusted to 2019 dollars.
3. Annual administrative costs decrease in year 19 due to assumption that loan repayment is completed.

APPENDIX II:

Detailed Time Series of Endowment Funding

Annual Cost Estimate for Management and Monitoring, Constant 2019$

Cost Categories	Annual Cost by Last Year of Land Acquisition Period	Adjustment	Annual Post-Land Acquisition Cost
Ongoing Habitat Management	$3,172,063	100%	$3,172,063
Ongoing Habitat Monitoring	$1,506,776	100%	$1,506,776
Administration[1]	$4,154,811	50%	$2,077,406
Total	**$8,833,650**		**$6,756,244**

1. Adminsitration includes salaries and benefits, accounting, auditing and reporting, contracts, etc.. Assumes less administration is needed following the land acquisition period; ongoing adminsitrative needs include oversight, auditing and reporting, and board staffing.

Sources: Western Riverside County Regional Conservation Authority; and Economic & Planning Systems, Inc.

Endowment Funding – No Extension Scenario

Item	1	2	3	4	5	6	7	8	9	Post-Permit
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	
Average Per Acre Endowment Fee	$9,845	$9,845	$9,845	$9,845	$9,845	$9,845	$9,845	$9,845	$9,845	
Annual Endowment Funding	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	$22,168,105	
Endowment Balance	$22,168,105	$44,336,210	$67,169,359	$90,687,502	$114,911,189	$139,861,586	$165,560,496	$192,030,373	$219,294,346	
Annual Interest	$0	$665,043	$1,350,038	$2,055,582	$2,782,293	$3,530,804	$4,301,772	$5,095,868	$5,913,787	
Cumulative Interest Earnings	$0	$665,043	$2,015,081	$4,070,663	$6,852,955	$10,383,760	$14,685,531	$19,781,399	$25,695,187	
Total Endowment	$22,168,105	$45,001,254	$68,519,396	$92,743,083	$117,693,481	$143,392,391	$169,862,268	$197,126,241	$225,208,133	
Average Annual Post Permit Interest										$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (Including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions	
20,265	impact acres developed
9	year plan
3%	interest rate (real, net)
$6,756,244	annual post-permit cost estimate
$9,845	Endowment Funding Per Acre of Conservation

Endowment Funding – 5 Year Extension Scenario

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Post-Permit
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	
Average Per Acre Endowment Fee	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	$5,854	
Annual Endowment Funding	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	$13,180,608	
Endowment Balance	$13,180,608	$26,361,215	$39,937,241	$53,920,547	$68,323,353	$83,158,243	$98,438,180	$114,176,514	$130,386,999	$147,083,799	$164,281,502	$181,995,136	$200,240,180	$219,032,574	
Annual Interest	$0	$395,418	$802,699	$1,222,198	$1,654,282	$2,099,329	$2,557,727	$3,029,877	$3,516,192	$4,017,096	$4,533,027	$5,064,436	$5,611,787	$6,175,559	
Cumulative Interest Earnings	$0	$395,418	$1,198,117	$2,420,315	$4,074,598	$6,173,927	$8,731,654	$11,761,531	$15,277,723	$19,294,819	$23,827,846	$28,892,281	$34,504,069	$40,679,628	
Total Endowment	$13,180,608	$26,756,633	$40,739,940	$55,142,746	$69,977,636	$85,257,572	$100,995,907	$117,206,392	$133,903,191	$151,100,894	$168,814,529	$187,059,572	$205,851,967	$225,208,133	
Average Annual Post Permit Interest															$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (Including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions	
31,523	impact acres developed
14	year plan
3%	interest rate (real, net)
$6,756,244	annual post-permit cost estimate
$5,854	Endowment Funding Per Acre of Conservation

Endowment Funding – 10 Year Extension Scenario

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Post-Permit
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	
Average Per Acre Endowment Fee	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	$3,982	
Annual Endowment Funding	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	$8,966,410	
Endowment Balance	$8,966,410	$17,932,819	$27,168,221	$36,680,686	$46,478,524	$56,570,297	$66,964,823	$77,671,185	$88,698,738	$100,057,118	$111,756,249	$123,806,354	$136,217,962	$149,001,918	$162,169,393	$175,731,892	$189,701,266	$204,089,722	$218,909,831	
Annual Interest	$0	$268,992	$546,054	$831,428	$1,125,363	$1,428,117	$1,739,952	$2,061,143	$2,391,970	$2,732,721	$3,083,695	$3,445,198	$3,817,547	$4,201,065	$4,596,089	$5,002,964	$5,422,046	$5,853,699	$6,298,303	
Cumulative Interest Earnings	$0	$268,992	$815,047	$1,646,475	$2,771,838	$4,199,955	$5,939,907	$8,001,051	$10,393,020	$13,125,742	$16,209,437	$19,654,635	$23,472,182	$27,673,247	$32,269,336	$37,272,301	$42,694,347	$48,548,046	$54,846,349	
Total Endowment	$8,966,410	$18,201,812	$27,714,276	$37,512,114	$47,603,887	$57,998,413	$68,704,775	$79,732,328	$91,090,708	$102,789,839	$114,839,944	$127,251,552	$140,035,508	$153,202,983	$166,765,482	$180,734,856	$195,123,312	$209,943,421	$225,208,133	
Average Annual Post Permit Interest																				$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (Including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions

42,782	impact acres developed
19	year plan
3%	interest rate (real, net)
$6,756,244	annual post-permit cost estimate
$3,982	Endowment Funding Per Acre of Conservation

Endowment Funding – 15 Year Extension Scenario

Item	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
New Impact Acres (avg. annual)	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252
Average Per Acre Endowment Fee	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905
Annual Endowment Funding	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714
Endowment Balance	$6,541,714	$13,083,429	$19,821,394	$26,761,499	$33,909,807	$41,272,564	$48,856,204	$56,667,353	$64,712,836	$72,999,684	$81,535,138	$90,326,655	$99,381,917	$108,708,838	$118,315,566
Annual Interest	$0	$196,251	$398,390	$606,594	$821,043	$1,041,925	$1,269,435	$1,503,769	$1,745,134	$1,993,739	$2,249,803	$2,513,548	$2,785,206	$3,065,014	$3,353,216
Cumulative Interest Earnings	$0	$196,251	$594,642	$1,201,235	$2,022,278	$3,064,204	$4,333,638	$5,837,407	$7,582,541	$9,576,280	$11,826,083	$14,339,631	$17,124,837	$20,189,851	$23,543,067
Total Endowment	$6,541,714	$13,279,680	$20,219,785	$27,368,093	$34,730,850	$42,314,490	$50,125,639	$58,171,122	$66,457,970	$74,993,424	$83,784,941	$92,840,203	$102,167,123	$111,773,852	$121,668,781
Average Annual Post Permit Interest															

16	17	18	19	20	21	22	23	24	Post-Permit
2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	2,252	
$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	$2,905	
$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	$6,541,714	
$128,210,496	$138,402,273	$148,899,805	$159,712,262	$170,849,092	$182,320,028	$194,135,092	$206,304,607	$218,839,209	
$3,650,063	$3,955,817	$4,270,743	$4,595,116	$4,929,221	$5,273,349	$5,627,801	$5,992,887	$6,368,925	
$27,193,130	$31,148,947	$35,419,689	$40,014,806	$44,944,027	$50,217,377	$55,845,178	$61,838,065	$68,206,990	
$131,860,559	$142,358,090	$153,170,547	$164,307,378	$175,778,314	$187,593,377	$199,762,893	$212,297,494	$225,208,133	
									$6,756,244

(1) Endowment fee set to ensure that, at the end of the permit term, the total endowment (Including endowment fee revenues and interest) are sufficient to provide annual interest revenues equal to the post-permit annual cost. The real interest rate is assumed to be 3 percent annually.

Assumptions	
54,040	impact acres developed
24	year plan
3%	interest rate (real, net)
$6,756,244	annual post-permit cost estimate
$2,905	Endowment Funding Per Acre of Conservation

Appendix G - TUMF 2016 Program Update Disposition of Network Change Requests

As part of the 2024 update of the TUMF Nexus Study, the list of proposed improvements to mitigate the cumulative regional impacts of new development in the TUMF Network Cost Estimate table included in the previously adopted Nexus Study was reviewed for accuracy. In particular, the Network Cost table was reviewed to ensure the included projects were consistent with the mitigation needs identified by the RivCoM future year no-build traffic conditions.

To assist in the review of the Network Cost Estimate table, participating local jurisdictions, private developers and the Riverside County Transportation Commission were asked to submit requests for changes to the TUMF Network. The various requests for network changes were subsequently reviewed for consistency with the program guidelines for inclusion on the TUMF Network and to determine if future traffic impacts would be sufficient to require mitigation primarily utilizing the RivCoM future no-build scenario outputs to quantify impacts as well as screening the various qualitative measures that have guided the TUMF Network development since program inception.

Based on the findings of the review of the entire TUMF network, elements of specific projects were revised to reflect only necessary network corrections, modifications to project assumptions and to incorporate a limited number of additional improvements. The preliminary results of the network review and the associated screening of specific requested projects was presented to the WRCOG Public Works Directors Committee (PWC) in August 2023. Updated screening results were presented to the PWC in February 2024 and the findings endorsed confirming the TUMF Network as the basis for the Draft 2024 Nexus Study that was subsequently presented to the PWC for review and comment in April 2024. A matrix summarizing the disposition of the specific project requests received as part of the 2024 TUMF Nexus Update is included as **Exhibit G-1** in this Appendix.

With the release of the Draft 2024 Nexus Update Study Report for a formal review period commencing on May 14, 2024, and ending on June 10, 2024, additional comments were provided to WRCOG staff by thirteen participating jurisdictions or other stakeholders. These comments were reviewed by WRCOG staff and responses were provided to each of the parties that submitted comments. The responses included several changes to the TUMF network to remedy typographical errors contained in the draft report, including misreporting in the number of existing lanes, project percent complete and interchange project type for approximately 10 TUMF network segments. The recommended network revisions were presented to the PWC on August 8, 2024, and are reflected in the TUMF network cost table included in **Exhibit H-1**.

EXHIBIT G-1
2024 TUMF Nexus Study Update - Network Addition Requests

Northwest Zone

City/ County	Street Name	From	To	Recommendation
Eastvale	Hellman	River Road	Walter	Add to network for continuity and mitigate future v/c deficiency
Eastvale	Hellman	Schleisman	Walter	Add to network for continuity and mitigate future v/c deficiency
Eastvale	Hellman	Cucamonga Creek	bridge	Add to network for continuity and mitigate future v/c deficiency
Eastvale	River Rd	Archibald	Hellman	Add to network for continuity and mitigate future v/c deficiency
Eastvale	Limonite ITS	city wide		Add to network for deficient links with no capacity increase
Eastvale	Hamner ITS	city wide		Add to networks for deficient links with no capacity increase
Eastvale	Schliesman ITS	city wide		Add to networks for deficient links with no capacity increase
Eastvale	Archibald ITS	city wide		Add to networks for deficient links with no capacity increase
Eastvale	Limonite	Cucamonga Creek	bridge	Bridge length increased to 500'
Riverside	3rd	Chicago	Iowa	Do not add - no V/C deficiency and interchange overcrossing reconstructed to 4 lanes in 2006-2007
Riverside	La Sierra ITS	SR-91	Victoria	Add to network for deficient links with no capacity increase
Riverside	Madison ITS	SR-91	Victoria	Add to network for deficient links with no capacity increase
Riverside	University ITS	Market St	Canyon Crest	Add to network for deficient links with no capacity increase
Riverside	Tyler ITS	California Ave	Indiana Ave	Do not add - no V/C deficiency
Riverside	Alessandro Blvd ITS	Fairview Ave	Meridian	Add to network for deficient links with no capacity increase
County	Markham St	Mockingbird Canyon	Wood Rd	Do not add - no regional connectivity or V/C deficiency

Central Zone

City/ County	Street Name	From	To	Recommendation
Menifee	Garbani	Haun	Antelope	Do not add - no future v/c deficiency
Menifee	Garbani	I-215	interchange	Add to network to mitigate future v/c deficiency
Menifee	Garbani	I-215	Menifee	Do not add - no future v/c deficiency
Menifee	Garbani	Menifee	Briggs	Do not add - no future v/c deficiency
Menifee	Holland	City Limits (West)	Murrieta	Do not add - no future v/c deficiency
Menifee	Holland	Murrieta	Bradley	Add to network for continuity and mitigate future v/c deficiency
Menifee	Holland	Bradley	Haun	Add to network for continuity and mitigate future v/c deficiency
Menifee	Holland	Antelope	Muenifee	Add to network for continuity and mitigate future v/c deficiency
Menifee	Scott	Haun	Menifee	Already on TUMF Network
Menifee	Scott	Menifee	Briggs	Already on TUMF Network
Menifee	Scott	Sunset	Murrieta	Already on TUMF Network
Menifee	Briggs	Simpson	Angler	Already on TUMF Network
Menifee	Briggs	Salt Creek	bridge	Already on TUMF Network
Perris	Ethanac	Bridge	San Jacinto River	Already on TUMF Network
Unincorporated	Grand Ave	Briggs Rd	SR-79	Do not add - no future v/c deficiency

San Jacinto Zone

City/ County	Street Name	From	To	Recommendation
Hemet	Stetson	Warren	0.85 Miles w/o Warren	Do not add - no regional connectivity or V/C deficiency
San Jacinto	7th St	Western Terminus	Warren Rd	Do not add - no future v/c deficiency
San Jacinto	7st St	Channel adjacent to Warren	bridge	Do not add - no future v/c deficiency

Pass Zone

City/ County	Street Name	From	To	Recommendation
Banning	Highland Springs	Cherry Valley	Oak Valley	Already on TUMF Network - no v/c deficiency
Banning	Cottonwood	I-10	interchange	Do not add - no connectivity to regional network
Banning	Wilson	Highland Springs	Highland Home	Already on TUMF Network - no v/c deficiency
Banning	Sun Lakes	Smith Creek	bridge	Segment already on TUMF Network - Bridge added

Southwest Zone

City/ County	Street Name	From	To	Recommendation
Lake Elsinore	Camino del Norte	Summerhill	Main	Do not add - no connectivity to regional network
Lake Elsinore	Summerhill	Railroad Canyon	Greenwald	Do not add - no regional connectivity or V/C deficiency
Lake Elsinore	Nichols	I-15	Lake	Already on TUMF Network
Wildomar	Inland Valley Dr	I-15	bridge	Do not add - no connectivity to regional network
Wildomar	Palomar	Starbuck	Washington	Already on TUMF Network
Wildomar	Bundy Canyon	I-15	City Limits (Sunset)	Already on TUMF Network
Murrieta	Orange Springs Parkway	Clinton Keith	Scott	Do not add - no regional connectivity or V/C deficiency
Murrieta	Calle del Oso Oro	Vineyard Pkwy	Washington	Do not add - no regional connectivity or V/C deficiency
Murrieta	Calle del Oso Oro	1500 w/o Vineyard Pkwy	bridge	Do not add - no regional connectivity or V/C deficiency
Murrieta	Adams	Murrieta Hot Springs/Hawthorne	Cherry	Do not add - no regional connectivity or V/C deficiency
Temecula	Ynez Road	Rancho California	Santiago	Do not add - no connectivity to regional network
Temecula	Ynez Road/DePortola Road	Santiago	Margarita	Do not add - no connectivity to regional network
Temecula	ITS	Major Arterials (Winchester, Rancho California, Butterfield Stage, Temecula Pkwy, Margarita, Jefferson	City limits	Add to network for deficient links with no capacity increase

Appendix H - TUMF Network Cost Estimate and Evaluation

For the purpose of calculating the "fair share" fee to be applied to new development under the TUMF program, a planning level cost estimate was developed to reflect the cost to complete improvements to the Regional System of Highways and Arterials to adequately accommodate future traffic growth. The planning level cost estimate was established by applying the unit cost values (presented in **Table 4.1**) to the proposed changes identified for the future Regional System of Highways and Arterials. The resultant cost value was tabulated for each unique segment of the network, by improvement type, based on the proposed list of improvements recommended following the review of the TUMF Network (as described in **Section 4.3, Appendix E** and **Appendix G**). A separate cost estimate was generated for regional transit improvements based on information provided by RTA and added to the summary table. The TUMF Network cost estimate table is summarized in **Table 4.4** of the Nexus Report. The detailed TUMF Network cost estimate table is included in this Appendix as **Exhibit H-1**. The detailed TUMF transit cost estimate table is included as **Table 4.5** of the Nexus Report.

Where existing obligated funding has previously been secured through traditional funding sources to complete necessary improvements to the TUMF Network, the cost of these improvements will not be recaptured from future developments through the TUMF program. As a result, the TUMF network cost was adjusted accordingly to reflect the availability of obligated funds.

WRCOG staff, in consultation with RCTC staff, reviewed the current Regional Transportation Improvement Program (RTIP) to identify transportation projects on the TUMF network that had previously secured alternate sources of funding. **Exhibit H-2** identifies those projects included on the TUMF Network having previously obligated funding.

To account for existing needs in the original TUMF Nexus Study, the cost for facilities identified as currently experiencing LOS E or F was adjusted by extracting the share of the cost to improve the portion of those facilities identified in the 2018 Baseline network scenario with a volume to capacity ratio of greater than 0.90, which is the threshold for LOS E. The adjustment to account for existing need as part of the TUMF Nexus Study provides for the mitigation of incremental traffic growth on those facilities with existing need.

The following approach was applied to account for incremental traffic growth associated with new development as part of the existing need methodology:

1. 1. Facilities with an existing need were identified by reviewing the RivCoM 2018 Baseline scenario assigned traffic on the 2021 existing network and delineating those facilities included on the TUMF Cost Fee Summary Table that have an average directional v/c exceeding 0.90.

    a. Weighted directional v/c values were used to determine existing need for network segments, which was calculated by:

i. Determining the length for the portion of each segment (model link), and calculating the ratio of link length to the overall segment length
ii. Generating the average directional v/c for each link, for both directions in AM and PM periods, and multiplying by link/segment length ratio
iii. Determining the maximum peak-period peak-direction v/c for each link, representing the highest directional v/c in either AM or PM
iv. Calculating weighted average v/c for each TUMF segment, based on the sum of all weighted max v/c values of each link within a segment

b. A similar method was used to determine existing need for spot improvements including interchanges, railroad crossings and bridges. However, no weighting was used in the calculation of existing need for spot improvements. For these facilities, the peak-period peak-direction v/c values (highest directional v/c in either AM or PM) were utilized in the existing need calculation. This was based on the individual link within a network segment where a bridge or railroad crossing is located, or on- and off-ramps in the case of interchanges.

2. Initial costs of addressing the existing need were calculated by estimating the share of a particular roadway segments "new lane" cost, or individual spot improvement cost (including all associated ROW and soft costs).

3. Incremental growth in v/c was determined by comparing the average directional base year v/c for the TUMF facilities (delineated under step one) with the horizon year v/c for the corresponding segments and spot improvements calculated based on the RivCoM 2045 No-Build scenario assigned traffic on the 2021 existing network using the same methodology as the base year v/c.

4. The proportion of the incremental growth attributable to new development was determined by dividing the result of step three with the total 2045 No-Build scenario v/c in excess of LOS E.

5. For those segments experiencing a net increase in v/c over the base year, TUMF will 'discount' the cost of existing need improvements by the proportion of the incremental v/c growth through 2045 No-Build compared to the 2018 Baseline v/c (up to a maximum of 100%).

Exhibit H-2 includes a detailed breakdown of the existing highway improvement needs on the TUMF network, including the associated unfunded improvement cost estimate for each segment experiencing unacceptable LOS.

For transit service improvements, the cost to provide for existing demand was determined by multiplying the total transit component cost by the share of future

projected daily bus transit ridership representing existing demand. **Exhibit H-3** reflects the calculation of the existing transit need share and the existing transit need cost.

To validate the effectiveness of the TUMF Network improvements to mitigate the cumulative regional transportation impacts of new development in Western Riverside County, the future TUMF Network was evaluated. The proposed improvements to the Regional System of Highways and Arterials were coded on the 2021 existing network derived from RivCoM and the model was run to determine the relative impacts on traffic conditions. To quantify the impacts of the TUMF Network improvements, the various traffic measures of effectiveness described in **Section 3.1** for the 2018 Baseline and 2045 No-Build scenarios were calculated for the 2045 TUMF Build network scenario. The results for VMT, VHT, VHD, and total VMT experiencing unacceptable level of service (LOS E) were then compared to the results presented in **Table 3.1** for the no-build conditions. The consolidated results are provided in **Table 4.6**.

EXHIBIT H-1 TUMF Network Detailed Cost Estimate

Updated: July 23, 2024

AREA	PLAN	DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	ITS	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	ITSCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE
Central		Menifee	Ethanac	Goetz	Murrieta		Backbone	0.99	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Ethanac	Murrieta	I-215		Backbone	0.90	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Ethanac	I-215	interchange		Backbone	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$32,698,000
Central		Menifee	Ethanac	Sherman	Matthews		Backbone	0.61	2	4	0%	1.23	1	3	0	0	0	0	$1,388,000	$601,000	$0	$0	$0	$0	$139,000	$347,000	$199,000	$2,674,000	$2,674,000
Central		Menifee	Ethanac	BNSF San Jacinto Branch	railroad crossing		Backbone	0.00	2	4	0%	0.00	1	3	0	0	1	0	$0	$0	$0	$0	$72,800,000	$0	$7,280,000	$18,200,000	$7,280,000	$105,560,000	$105,560,000
Central		Menifee	Menifee	SR-74 (Pinacate)	Simpson		Backbone	2.50	2	4	88%	0.60	1	3	0	0	0	0	$678,000	$294,000	$0	$0	$0	$0	$68,000	$170,000	$97,000	$1,307,000	$1,307,000
Central		Menifee	Menifee	Salt Creek	bridge		Backbone	0.00	2	4	0%	0.00	1	3	0	315	0	0	$0	$0	$0	$3,024,000	$0	$0	$302,000	$756,000	$302,000	$4,384,000	$4,384,000
Central		Menifee	Menifee	Simpson	Aldergate		Backbone	0.64	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Menifee	Aldergate	Newport		Backbone	0.98	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Menifee	Newport	Holland		Backbone	1.07	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Menifee	Holland	Garbani		Backbone	1.03	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Menifee	Garbani	Scott		Backbone	1.00	2	4	0%	2.00	1	3	0	0	0	0	$2,260,000	$978,000	$0	$0	$0	$0	$226,000	$565,000	$324,000	$4,353,000	$4,353,000
Central		Menifee	Menifee/Whitewood	Scott	Murrieta City Limit		Backbone	0.53	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Newport	Goetz	Murrieta		Backbone	1.81	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Newport	Murrieta	I-215		Backbone	1.99	4	6	87%	0.52	1	3	0	0	0	0	$586,000	$254,000	$0	$0	$0	$0	$59,000	$147,000	$84,000	$1,130,000	$1,130,000
Central		Menifee	Newport	I-215	Menifee		Backbone	1.02	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Newport	Menifee	Lindenberger		Backbone	0.77	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Newport	Lindenberger	SR-79 (Winchester)		Backbone	3.58	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Scott	I-215	Briggs		Backbone	1.98	4	6	0%	3.96	1	3	0	0	0	0	$4,483,000	$1,941,000	$0	$0	$0	$0	$448,000	$1,121,000	$642,000	$8,635,000	$8,635,000
Central		Menifee	Scott	I-215	interchange		Backbone	0.00	0	0	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Menifee	Scott	Sunset	Murrieta		Backbone	1.01	2	4	0%	2.01	1	3	0	0	0	0	$2,278,000	$986,000	$0	$0	$0	$0	$228,000	$570,000	$326,000	$4,388,000	$4,388,000
Central		Menifee	Scott	Murrieta	I-215		Backbone	1.94	2	6	0%	7.77	1	3	0	0	0	0	$8,799,000	$3,809,000	$0	$0	$0	$0	$880,000	$2,200,000	$1,261,000	$16,949,000	$12,949,000
Central		Menifee	SR-74	Matthews	Briggs		Backbone	1.89	4	6	0%	3.79	1	3	0	0	0	0	$4,285,000	$1,855,000	$0	$0	$0	$0	$429,000	$1,071,000	$614,000	$8,254,000	$8,254,000
Central		Moreno Valley	Alessandro	I-215	Perris		Backbone	3.52	4	6	75%	1.76	1	2	0	0	0	0	$1,992,000	$9,574,000	$0	$0	$0	$0	$199,000	$498,000	$1,157,000	$13,420,000	$13,420,000
Central		Moreno Valley	Alessandro	Perris	Nason		Backbone	2.00	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Moreno Valley	Alessandro	Nason	Moreno Beach		Backbone	0.99	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Moreno Valley	Alessandro	Moreno Beach	Gilman Springs		Backbone	4.13	2	4	0%	8.26	1	3	0	0	0	0	$9,355,000	$4,049,000	$0	$0	$0	$0	$936,000	$2,339,000	$1,340,000	$18,019,000	$18,019,000
Central		Moreno Valley	Gilman Springs	SR-60	Alessandro		Backbone	1.67	2	4	0%	3.34	1	3	0	0	0	0	$3,785,000	$1,639,000	$0	$0	$0	$0	$379,000	$946,000	$542,000	$7,291,000	$7,291,000
Central		Moreno Valley	Gilman Springs	SR-60	interchange		Backbone	0.00	0	0	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Moreno Valley	Perris	Reche Vista	Ironwood		Backbone	2.09	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Moreno Valley	Perris	Ironwood	Sunnymead		Backbone	0.52	4	4	80%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Moreno Valley	Perris	SR-60	interchange		Backbone	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$11,192,000
Central		Moreno Valley	Perris	Sunnymead	Cactus		Backbone	2.00	4	4	25%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Moreno Valley	Perris	Cactus	Harley Knox		Backbone	3.64	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Moreno Valley	Reche Vista	Country	Heacock		Backbone	0.44	2	4	0%	0.88	2	2	0	0	0	0	$1,531,000	$4,787,000	$0	$0	$0	$0	$153,000	$383,000	$632,000	$7,486,000	$3,799,000
Central		Perris	11th/Case	Perris	Goetz		Backbone	0.30	2	4	0%	0.60	1	2	0	0	0	0	$680,000	$3,269,000	$0	$0	$0	$0	$68,000	$170,000	$395,000	$4,582,000	$4,582,000
Central		Perris	Case	Goetz	I-215		Backbone	2.36	2	4	42%	2.74	1	2	0	0	0	0	$3,099,000	$14,893,000	$0	$0	$0	$0	$310,000	$775,000	$1,799,000	$20,876,000	$20,876,000
Central		Perris	Case	San Jacinto River	bridge		Backbone	0.00	2	4	0%	0.00	1	2	0	125	0	0	$0	$0	$0	$1,200,000	$0	$0	$120,000	$300,000	$120,000	$1,740,000	$1,235,000
Central		Perris	Ethanac	Keystone	Goetz		Backbone	2.24	0	2	38%	2.78	1	3	0	0	0	0	$3,144,000	$1,361,000	$0	$0	$0	$0	$314,000	$786,000	$451,000	$6,056,000	$6,056,000
Central		Perris	Ethanac	San Jacinto River	bridge		Backbone	0.00	0	2	0%	0.00	1	3	0	400	0	0	$0	$0	$0	$3,840,000	$0	$0	$384,000	$960,000	$384,000	$5,568,000	$5,568,000
Central		Perris	Ethanac	I-215	Sherman		Backbone	0.35	2	4	0%	0.70	1	2	0	0	0	0	$789,000	$3,793,000	$0	$0	$0	$0	$79,000	$197,000	$458,000	$5,316,000	$5,316,000
Central		Perris	Goetz	Case	Ethanac		Backbone	2.16	2	4	84%	0.69	1	3	0	0	0	0	$782,000	$339,000	$0	$0	$0	$0	$78,000	$196,000	$112,000	$1,507,000	$999,000
Central		Perris	Goetz	San Jacinto River	bridge		Backbone	0.00	2	4	0%	0.00	1	3	0	400	0	0	$0	$0	$0	$3,840,000	$0	$0	$384,000	$960,000	$384,000	$5,568,000	$3,398,000
Central		Perris	Mid-County (Placentia)	I-215	Perris		Backbone	0.87	0	4	41%	2.05	1	2	0	0	0	0	$2,324,000	$11,169,000	$0	$0	$0	$0	$232,000	$581,000	$1,349,000	$15,655,000	$15,655,000
Central		Perris	Mid-County (Placentia)	I-215	interchange		Backbone	0.00	0	0	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Perris	Mid-County (Placentia)	Perris	Evans		Backbone	1.57	0	4	52%	3.01	1	2	0	0	0	0	$3,412,000	$16,398,000	$0	$0	$0	$0	$341,000	$853,000	$1,981,000	$22,985,000	$22,985,000
Central		Perris	Mid-County (Placentia)	Perris Valley Storm Channel	bridge		Backbone	0.00	0	4	0%	0.00	1	2	0	300	0	0	$0	$0	$0	$5,760,000	$0	$0	$576,000	$1,440,000	$576,000	$8,352,000	$8,352,000
Central		Perris	Perris	Harley Knox	Ramona		Backbone	1.00	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Perris	Perris	Ramona	Citrus		Backbone	2.49	4	6	35%	3.24	1	3	0	0	0	0	$3,667,000	$1,587,000	$0	$0	$0	$0	$367,000	$917,000	$525,000	$7,063,000	$7,063,000
Central		Perris	Perris	Citrus	Nuevo		Backbone	0.50	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Perris	Perris	Nuevo	11th		Backbone	1.75	2	4	74%	0.91	1	2	0	0	0	0	$1,028,000	$4,942,000	$0	$0	$0	$0	$103,000	$257,000	$597,000	$6,927,000	$6,927,000
Central		Perris	Perris	I-215 overcrossing	bridge		Backbone	0.00	4	4	0%	0.00	1	2	0	300	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Perris	Ramona	I-215	Perris		Backbone	1.44	4	6	77%	0.66	1	2	0	0	0	0	$748,000	$3,595,000	$0	$0	$0	$0	$75,000	$187,000	$434,000	$5,039,000	$5,039,000
Central		Perris	Ramona	I-215	interchange		Backbone	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$7,725,000
Central		Perris	Ramona	Perris	Evans		Backbone	1.00	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Perris	Ramona	Evans	Mid-County (2,800 ft E of Rider)		Backbone	2.62	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Perris	SR-74 (4th)	Ellis	I-215		Backbone	2.33	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Unincorporated	Ethanac	SR-74	Keystone		Backbone	1.07	0	2	0%	2.14	1	3	0	0	0	0	$2,422,000	$1,049,000	$0	$0	$0	$0	$242,000	$606,000	$347,000	$4,666,000	$4,666,000
Central		Unincorporated	Gilman Springs	Alessandro	Bridge Road		Backbone	5.00	2	4	0%	9.99	2	3	0	0	0	0	$17,389,000	$4,897,000	$0	$0	$0	$0	$1,739,000	$4,347,000	$2,229,000	$30,601,000	$30,601,000
Central		Unincorporated	Menifee	Nuevo	SR-74 (Pinacate)		Backbone	4.07	2	4	6%	7.65	1	3	0	0	0	0	$8,662,000	$3,749,000	$0	$0	$0	$0	$866,000	$2,166,000	$1,241,000	$16,684,000	$16,684,000
Central		Unincorporated	Mid-County	Evans	Ramona (2,800 ft E of Rider)		Backbone	0.77	0	4	0%	3.08	3	3	0	0	0	0	$7,238,000	$1,509,000	$0	$0	$0	$0	$724,000	$1,810,000	$875,000	$12,156,000	$12,156,000
Central		Unincorporated	Mid-County (Ramona)	Ramona (2,800 ft E of Rider)	Pico Avenue		Backbone	0.44	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Unincorporated	Mid-County (Ramona)	Pico Avenue	Bridge Road		Backbone	5.95	2	6	8%	21.91	1	3	0	0	0	0	$24,800,000	$10,735,000	$0	$0	$0	$0	$2,480,000	$6,200,000	$3,554,000	$47,769,000	$47,769,000
Central		Unincorporated	Mid-County (Ramona)	San Jacinto River	bridge		Backbone	0.00	2	6	0%	0.00	1	3	0	1,300	0	0	$0	$0	$0	$24,960,000	$0	$0	$2,496,000	$6,240,000	$2,496,000	$36,192,000	$36,192,000
Central		Unincorporated	Reche Canyon	San Bernardino County	Reche Vista		Backbone	3.35	2	2	0%	0.00	3	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Unincorporated	Reche Vista	Reche Canyon	Country		Backbone	1.22	2	2	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Unincorporated	Scott	Briggs	SR-79 (Winchester)		Backbone	3.04	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central		Unincorporated	SR-74	Ethanac	Ellis		Backbone	2.72	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Cajalco	I-15	Temescal Canyon		Backbone	0.50	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Cajalco	I-15	interchange		Backbone	0.00	0	0	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Foothill	Paseo Grande	Lincoln		Backbone	2.60	4	4	0%	0.00	3	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Foothill	Wardlow Wash	bridge		Backbone	0.00	4	4	0%	0.00	3	3	0	300	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Foothill	Lincoln	California		Backbone	2.81	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Foothill	California	I-15		Backbone	0.89	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Green River	SR-91	Dominguez Ranch		Backbone	0.52	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Green River	Dominguez Ranch	Palisades		Backbone	0.56	6	6	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Corona	Green River	Palisades	Paseo Grande		Backbone	2.01	4	4	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Eastvale	Schleisman	San Bernardino County	600' e/o Cucamonga Creek		Backbone	0.65	6	6	0%	0.00	1	2	0	0	0	1	$0	$0	$0	$0	$0	$446,000	$45,000	$112,000	$45,000	$648,000	$648,000
Northwest		Eastvale	Schleisman	Cucamonga Creek	bridge		Backbone	0.00	6	6	0%	0.00	1	2	0	200	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Eastvale	Schleisman	600' e/o Cucamonga Creek	Harrison		Backbone	0.87	6	6	0%	0.00	1	2	0	0	0	1	$0	$0	$0	$0	$0	$597,000	$60,000	$149,000	$60,000	$866,000	$866,000
Northwest		Eastvale	Schleisman	Harrison	Sumner		Backbone	0.49	4	4	0%	0.00	1	2	0	0	0	1	$0	$0	$0	$0	$0	$336,000	$34,000	$84,000	$34,000	$488,000	$488,000
Northwest		Eastvale	Schleisman	Sumner	Scholar		Backbone	0.50	2	4	0%	1.00	1	2	0	0	0	0	$1,132,000	$5,440,000	$0	$0	$0	$0	$113,000	$283,000	$657,000	$7,625,000	$7,625,000
Northwest		Eastvale	Schleisman	Scholar	A Street		Backbone	0.31	5	6	95%	0.02	1	2	0	0	0	0	$18,000	$84,000	$0	$0	$0	$0	$2,000	$5,000	$10,000	$119,000	$119,000
Northwest		Eastvale	Schleisman	A Street	Hamner		Backbone	0.27	4	6	95%	0.03	1	2	0	0	0	0	$31,000	$149,000	$0	$0	$0	$0	$3,000	$8,000	$18,000	$209,000	$209,000
Northwest		Jurupa Valley	Van Buren	SR-60	Bellegrave		Backbone	1.57	4	6	0%	3.14	1	2	0	0	0	0	$3,552,000	$17,071,000	$0	$0	$0	$0	$355,000	$888,000	$2,062,000	$23,928,000	$10,461,000
Northwest		Jurupa Valley	Van Buren	Bellegrave	Santa Ana River		Backbone	3.99	4	6	0%	7.99	1	2	0	0	0	0	$9,041,000	$43,446,000	$0	$0	$0	$0	$904,000	$2,260,000	$5,249,000	$60,900,000	$0
Northwest		Riverside	Alessandro	Arlington	Trautwein		Backbone	2.42	6	6	0%	0.00	2	2	0	0	0	1	$0	$0	$0	$0	$0	$1,662,000	$166,000	$416,000	$166,000	$2,410,000	$2,410,000
Northwest		Riverside	Arlington	La Sierra	Magnolia		Backbone	5.84	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Riverside	Arlington	Magnolia	Alessandro		Backbone	2.73	4	6	0%	5.46	2	2	0	0	0	0	$9,504,000	$29,713,000	$0	$0	$0	$0	$950,000	$2,376,000	$3,922,000	$46,465,000	$46,465,000
Northwest		Riverside	Van Buren	Santa Ana River	SR-91		Backbone	3.81	4	6	91%	0.69	1	2	0	0	0	0	$776,000	$3,731,000	$0	$0	$0	$0	$78,000	$194,000	$451,000	$5,230,000	$4,392,000
Northwest		Riverside	Van Buren	SR-91	Mockingbird Canyon		Backbone	3.08	4	6	16%	5.18	1	2	0	0	0	0	$5,863,000	$28,174,000	$0	$0	$0	$0	$586,000	$1,466,000	$3,404,000	$39,493,000	$21,292,000
Northwest		Riverside	Van Buren	Wood	Trautwein		Backbone	0.43	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Riverside	Van Buren	Trautwein	Orange Terrace		Backbone	1.27	5	6	22%	0.99	1	2	0	0	0	0	$1,124,000	$5,404,000	$0	$0	$0	$0	$112,000	$281,000	$653,000	$7,574,000	$7,574,000
Northwest		Unincorporated	Alessandro	Trautwein	Vista Grande		Backbone	1.22	6	6	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporated	Alessandro	Vista Grande	I-215		Backbone	1.26	6	6	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporated	Cajalco	El Sobrante	Harley John		Backbone	0.86	2	6	0%	3.46	2	3	0	0	0	0	$6,012,000	$1,693,000	$0	$0	$0	$0	$601,000	$1,503,000	$771,000	$10,580,000	$9,817,000
Northwest		Unincorporated	Cajalco	Harley John	Harvil		Backbone	5.81	2	6	6%	21.83	1	2	0	0	0	0	$24,716,000	$118,776,000	$0	$0	$0	$0	$2,472,000	$6,179,000	$14,349,000	$166,492,000	$166,492,000
Northwest		Unincorporated	Cajalco	Harvil	I-215		Backbone	0.28	4	6	0%	0.57	1	3	0	0	0	0	$643,000	$278,000	$0	$0	$0	$0	$64,000	$161,000	$92,000	$1,238,000	$1,238,000
Northwest		Unincorporated	Cajalco	Temescal Canyon	La Sierra		Backbone	3.21	2	6	2%	12.57	3	3	0	0	0	0	$29,533,000	$6,158,000	$0	$0	$0	$0	$2,953,000	$7,383,000	$3,569,000	$49,596,000	$35,953,000
Northwest		Unincorporated	Cajalco	Temescal Wash	bridge		Backbone	0.00	2	6	0%	0.00	3	3	0	175	0	0	$0	$0	$0	$3,360,000	$0	$0	$336,000	$840,000	$336,000	$4,872,000	$1,907,000
Northwest		Unincorporated	Cajalco	La Sierra	El Sobrante		Backbone	6.11	2	6	0%	24.44	3	3	0	0	0	0	$57,434,000	$11,976,000	$0	$0	$0	$0	$5,743,000	$14,359,000	$6,941,000	$96,453,000	$96,453,000
Northwest		Unincorporated	Van Buren	Mockingbird Canyon	Wood		Backbone	4.42	4	6	0%	8.84	1	2	0	0	0	0	$10,010,000	$48,104,000	$0	$0	$0	$0	$1,001,000	$2,503,000	$5,811,000	$67,429,000	$67,429,000
Northwest		Unincorporated	Van Buren	Orange Terrace	I-215		Backbone	1.89	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-1 TUMF Network Detailed Cost Estimate

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN	MILES TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	ITS	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	ITSCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE
Pass		Banning	Highland Springs	Wilson (8th)	Sun Lakes	Backbone	0.76	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Highland Springs	I-10	interchange	Backbone	0.00	0	0	0%	0.00	1	2	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$32,516,000
Pass		Banning	Highland Springs	Oak Valley (14th)	Wilson (8th)	Backbone	0.73	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Highland Springs	Cherry Valley	Oak Valley (14th)	Backbone	1.53	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Banning	I-10 Bypass South	I-10	Morongo Trail (Apache Trail)	Backbone	3.29	0	2	0%	6.57	1	2	0	0	0	0	$7,439,000	$35,748,000	$0	$0	$0	$0	$744,000	$1,860,000	$4,319,000	$50,110,000	$50,110,000
Pass		Banning	I-10 Bypass South	I-10	interchange	Backbone	0.00	0	0	0%	0.00	1	2	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$63,061,000
Pass		Banning	I-10 Bypass South	San Gorgonio	bridge	Backbone	0.00	0	2	0%	0.00	1	2	0	300	0	0	$0	$0	$0	$2,880,000	$0	$0	$288,000	$720,000	$288,000	$4,176,000	$4,176,000
Pass		Banning	I-10 Bypass South	UP/Hargrave	railroad crossing	Backbone	0.00	0	2	0%	0.00	1	2	0	0	1	0	$0	$0	$0	$0	$36,400,000	$0	$3,640,000	$9,100,000	$3,640,000	$52,780,000	$52,780,000
Pass		Beaumont	Beaumont	Oak Valley (14th)	I-10	Backbone	1.37	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Potrero	Oak Valley (San Timoteo Can	SR-60	Backbone	0.72	2	4	65%	0.50	1	3	0	0	0	0	$571,000	$247,000	$0	$0	$0	$0	$57,000	$143,000	$82,000	$1,100,000	$1,100,000
Pass		Beaumont	Potrero	SR-60	interchange	Backbone	0.00	0	0	0%	0.00	1	3	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$29,561,000
Pass		Beaumont	Potrero	UP	railroad crossing	Backbone	0.00	4	4	0%	0.00	1	3	0	0	2	0	$0	$0	$0	$0	$27,600,000	$0	$2,760,000	$6,900,000	$2,760,000	$40,020,000	$40,020,000
Pass		Beaumont	Potrero	Noble Creek	bridge	Backbone	0.00	4	4	0%	0.00	1	3	0	500	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Potrero	SR-60	4th	Backbone	0.45	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	SR-79 (Beaumont)	I-10	California	Backbone	1.15	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	SR-79 (Beaumont)	I-10	interchange	Backbone	0.00	0	0	0%	0.00	1	2	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$7,408,000
Pass		Calimesa	Cherry Valley	I-10	interchange	Backbone	0.00	0	0	0%	0.00	1	3	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$59,773,000
Pass		Calimesa	Cherry Valley	Roberts St	Roberts Rd	Backbone	0.70	2	4	0%	1.40	1	3	0	0	0	0	$1,585,000	$686,000	$0	$0	$0	$0	$159,000	$396,000	$227,000	$3,053,000	$3,053,000
Pass		Unincorporated	Cherry Valley	Bellflower	Noble	Backbone	1.47	0	2	0%	2.94	1	3	0	0	0	0	$3,328,000	$1,441,000	$0	$0	$0	$0	$333,000	$832,000	$477,000	$6,411,000	$6,411,000
Pass		Unincorporated	Cherry Valley	Highland Springs	Bellflower	Backbone	0.44	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Unincorporated	Cherry Valley	Noble	Roberts St	Backbone	3.25	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Unincorporated	Cherry Valley	San Timoteo Wash	bridge	Backbone	0.00	2	2	0%	0.00	1	3	0	300	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass		Unincorporated	SR-79 (Lamb Canyon)	California	Gilman Springs	Backbone	5.23	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet		Domenigoni	Warren	Sanderson	Backbone	1.77	4	6	0%	3.54	1	3	0	0	0	0	$4,011,000	$1,736,000	$0	$0	$0	$0	$401,000	$1,003,000	$575,000	$7,726,000	$7,726,000
San Jacinto	Hemet		Domenigoni	Sanderson	State	Backbone	2.14	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet		SR-74	Winchester	Warren	Backbone	2.59	4	6	11%	4.62	1	2	0	0	0	0	$5,227,000	$25,117,000	$0	$0	$0	$0	$523,000	$1,307,000	$3,034,000	$35,208,000	$35,208,000
San Jacinto	San Jacinto		Mid-County (Ramona)	Warren	Sanderson	Backbone	1.73	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		Mid-County (Ramona)	Sanderson/SR-79 (Hemet Bypa	interchange	Backbone	0.00	0	0	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		Ramona	Sanderson	State	Backbone	2.39	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		Ramona	State	Main	Backbone	2.66	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		Ramona	Main	Cedar	Backbone	2.40	0	4	57%	4.13	1	2	0	0	0	0	$4,679,000	$22,485,000	$0	$0	$0	$0	$468,000	$1,170,000	$2,716,000	$31,518,000	$26,928,000
San Jacinto	San Jacinto		Ramona	Cedar	SR-74	Backbone	1.10	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Unincorporated		Domenigoni	SR-79 (Winchester)	Warren	Backbone	3.10	4	6	0%	6.20	1	3	0	0	0	0	$7,013,000	$3,036,000	$0	$0	$0	$0	$701,000	$1,753,000	$1,005,000	$13,508,000	$13,508,000
San Jacinto	Unincorporated		Domenigoni	San Diego Aqueduct	bridge	Backbone	0.00	4	6	0%	0.00	1	3	0	300	0	0	$0	$0	$0	$2,880,000	$0	$0	$288,000	$720,000	$288,000	$4,176,000	$4,176,000
San Jacinto	Unincorporated		Gilman Springs	Bridge	Sanderson	Backbone	2.95	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Unincorporated		Mid-County (Ramona)	Bridge	Warren	Backbone	2.35	2	4	10%	4.23	1	3	0	0	0	0	$4,787,000	$2,072,000	$0	$0	$0	$0	$479,000	$1,197,000	$686,000	$9,221,000	$9,221,000
San Jacinto	Unincorporated		SR-74	Briggs	SR-79 (Winchester)	Backbone	3.54	4	6	0%	7.07	1	3	0	0	0	0	$8,004,000	$3,465,000	$0	$0	$0	$0	$800,000	$2,001,000	$1,147,000	$15,417,000	$15,417,000
San Jacinto	Unincorporated		SR-79 (Hemet Bypass)	SR-74 (Florida)	Domenigoni	Backbone	3.22	0	2	1%	6.38	1	3	0	0	0	0	$7,217,000	$3,124,000	$0	$0	$0	$0	$722,000	$1,804,000	$1,034,000	$13,901,000	$13,901,000
San Jacinto	Unincorporated		SR-79 (Hemet Bypass)	San Diego Aqueduct	bridge	Backbone	0.00	0	2	0%	0.00	1	3	0	300	0	0	$0	$0	$0	$2,880,000	$0	$0	$288,000	$720,000	$288,000	$4,176,000	$4,176,000
San Jacinto	Unincorporated		SR-79 (Hemet Bypass)	Domenigoni	Winchester	Backbone	1.50	0	2	0%	3.00	1	3	0	0	0	0	$3,396,000	$1,470,000	$0	$0	$0	$0	$340,000	$849,000	$487,000	$6,542,000	$6,542,000
San Jacinto	Unincorporated		SR-79 (San Jacinto Bypass)	Mid-County (Ramona)	SR-74 (Florida)	Backbone	6.50	0	4	0%	26.00	1	3	0	0	0	0	$29,432,000	$12,740,000	$0	$0	$0	$0	$2,943,000	$7,358,000	$4,217,000	$56,690,000	$56,690,000
San Jacinto	Unincorporated		SR-79 (Sanderson)	Gilman Springs	Ramona	Backbone	1.58	4	6	0%	3.16	1	3	0	0	0	0	$3,582,000	$1,550,000	$0	$0	$0	$0	$358,000	$896,000	$513,000	$6,899,000	$2,555,000
San Jacinto	Unincorporated		SR-79 (Sanderson)	San Jacinto River	bridge	Backbone	0.00	4	6	0%	0.00	1	3	0	1,400	0	0	$0	$0	$0	$13,440,000	$0	$0	$1,344,000	$3,360,000	$1,344,000	$19,488,000	$7,651,000
San Jacinto	Unincorporated		SR-79 (Winchester)	Domenigoni	Keller	Backbone	4.90	4	6	13%	8.53	1	2	0	0	0	0	$9,653,000	$46,387,000	$0	$0	$0	$0	$965,000	$2,413,000	$5,604,000	$65,022,000	$65,022,000
Southwest	Canyon Lake		Goetz	Railroad Canyon	Newport	Backbone	0.50	4	4	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Canyon Lake		Railroad Canyon	Canyon Hills	Goetz	Backbone	1.95	6	6	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore		Railroad Canyon	I-15	Canyon Hills	Backbone	2.36	6	6	50%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore		Railroad Canyon	I-15	interchange	Backbone	0.00	0	0	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore		SR-74	I-15	interchange	Backbone	0.00	0	0	0%	0.00	1	3	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$24,162,000
Southwest	Murrieta		Clinton Keith	Copper Craft	Toulon	Backbone	1.31	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta		Clinton Keith	Toulon	I-215	Backbone	0.90	4	6	47%	0.95	1	3	0	0	0	0	$1,078,000	$466,000	$0	$0	$0	$0	$108,000	$270,000	$154,000	$2,076,000	$2,076,000
Southwest	Murrieta		Clinton Keith	I-215	Whitewood	Backbone	0.75	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta		French Valley (Date)	Murrieta Hot Springs	Winchester Creek	Backbone	0.24	0	4	0%	0.96	1	2	0	0	0	0	$1,087,000	$5,222,000	$0	$0	$0	$0	$109,000	$272,000	$631,000	$7,321,000	$7,321,000
Southwest	Murrieta		French Valley (Date)	Winchester Creek	Margarita	Backbone	0.61	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta		Whitewood	Merrifee City Limit	Keller	Backbone	0.55	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta		Whitewood	Keller	Clinton Keith	Backbone	2.00	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula		French Valley (Cherry)	Jefferson	Diaz	Backbone	0.56	0	2	54%	0.52	1	2	0	0	0	0	$583,000	$2,803,000	$0	$0	$0	$0	$58,000	$146,000	$339,000	$3,929,000	$3,929,000
Southwest	Temecula		French Valley (Cherry)	Murrieta Creek	bridge	Backbone	0.00	0	2	0%	0.00	1	2	0	420	0	0	$0	$0	$0	$4,032,000	$0	$0	$403,000	$1,008,000	$403,000	$5,846,000	$5,846,000
Southwest	Temecula		French Valley (Date)	Margarita	Ynez	Backbone	0.91	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula		French Valley (Date)	Ynez	Jefferson	Backbone	0.73	0	2	55%	0.66	1	2	0	0	0	0	$744,000	$3,574,000	$0	$0	$0	$0	$74,000	$186,000	$432,000	$5,010,000	$5,010,000
Southwest	Temecula		French Valley (Date)	I-15	interchange	Backbone	0.00	0	0	0%	0.00	1	2	1	0	0	0	$0	$0	$84,190,000	$0	$0	$0	$8,419,000	$21,048,000	$8,419,000	$122,076,000	$122,076,000
Southwest	Temecula		SR-79 (Winchester)	Murrieta Hot Springs	Jefferson	Backbone	2.71	6	6	0%	0.00	1	1	0	0	0	1	$0	$0	$0	$0	$0	$1,860,000	$186,000	$465,000	$186,000	$2,697,000	$2,697,000
Southwest	Temecula		SR-79 (Winchester)	I-15	interchange	Backbone	0.00	0	0	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula		Western Bypass (Diaz)	Cherry	Rancho California	Backbone	2.14	0	2	93%	0.30	1	2	0	0	0	0	$339,000	$1,630,000	$0	$0	$0	$0	$34,000	$85,000	$197,000	$2,285,000	$2,285,000
Southwest	Temecula		Western Bypass (Vincent Moro	Rancho California	SR-79 (Front)	Backbone	1.48	0	2	15%	2.52	3	2	0	0	0	0	$5,913,000	$13,687,000	$0	$0	$0	$0	$591,000	$1,478,000	$1,960,000	$23,629,000	$23,629,000
Southwest	Temecula		Western Bypass (Vincent Moro	I-15	interchange	Backbone	0.00	0	0	0%	0.00	3	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula		Western Bypass (Vincent Moro	Murrieta Creek	bridge	Backbone	0.00	0	2	0%	0.00	3	2	0	300	0	0	$0	$0	$0	$2,880,000	$0	$0	$288,000	$720,000	$288,000	$4,176,000	$4,176,000
Southwest	Unincorporated		Benton	SR-79	Eastern Bypass	Backbone	2.40	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporated		Clinton Keith	Whitewood	SR-79	Backbone	2.54	0	4	75%	2.54	1	3	0	0	0	0	$2,875,000	$1,245,000	$0	$0	$0	$0	$288,000	$719,000	$412,000	$5,539,000	$5,539,000
Southwest	Unincorporated		Clinton Keith	Warm Springs Creek	bridge	Backbone	0.00	4	4	0%	0.00	1	3	0	1,200	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporated		SR-74	I-15	Ethanac	Backbone	4.97	4	6	9%	9.05	2	3	0	0	0	0	$15,740,000	$4,433,000	$0	$0	$0	$0	$1,574,000	$3,935,000	$2,017,000	$27,699,000	$26,347,000
Southwest	Unincorporated		SR-79 (Winchester)	Keller	Thompson	Backbone	2.47	4	6	9%	4.49	1	2	0	0	0	0	$5,079,000	$24,407,000	$0	$0	$0	$0	$508,000	$1,270,000	$2,949,000	$34,213,000	$34,213,000
Southwest	Unincorporated		SR-79 (Winchester)	Thompson	La Alba	Backbone	1.82	4	6	0%	3.63	1	2	0	0	0	0	$4,112,000	$19,761,000	$0	$0	$0	$0	$411,000	$1,028,000	$2,387,000	$27,699,000	$27,699,000
Southwest	Unincorporated		SR-79 (Winchester)	La Alba	Hunter	Backbone	0.51	4	6	0%	1.03	1	2	0	0	0	0	$1,166,000	$5,602,000	$0	$0	$0	$0	$117,000	$292,000	$677,000	$7,854,000	$3,042,000
Southwest	Unincorporated		SR-79 (Winchester)	Hunter	Murrieta Hot Springs	Backbone	1.14	4	6	88%	0.27	1	3	0	0	0	0	$309,000	$134,000	$0	$0	$0	$0	$31,000	$77,000	$44,000	$595,000	$442,000
Southwest	Wildomar		Bundy Canyon	I-15	Monte Vista	Backbone	0.22	4	6	0%	0.44	2	3	0	0	0	0	$774,000	$218,000	$0	$0	$0	$0	$77,000	$194,000	$99,000	$1,362,000	$1,362,000
Southwest	Wildomar		Bundy Canyon	Monte Vista	Sunset	Backbone	3.14	2	4	0%	6.29	3	3	0	0	0	0	$14,778,000	$3,081,000	$0	$0	$0	$0	$1,478,000	$3,695,000	$1,786,000	$24,818,000	$24,818,000
Southwest	Wildomar		Bundy Canyon	I-15	interchange	Backbone	0.00	0	0	0%	0.00	2	3	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$24,613,000
Southwest	Wildomar		Clinton Keith	Palomar	I-15	Backbone	0.55	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Wildomar		Clinton Keith	I-15	Copper Craft	Backbone	1.96	2	4	58%	1.64	2	3	0	0	0	0	$2,858,000	$805,000	$0	$0	$0	$0	$286,000	$715,000	$366,000	$5,030,000	$0
Subtotal						Backbone	269.95				318.02			11	8,835	3	7.14	$438,352,000	$682,621,000	$435,330,000	$74,976,000	$136,800,000	$4,901,000	$109,037,000	$272,606,000	$177,298,000	$2,331,921,000	$1,961,707,000

EXHIBIT H-1 TUMF Network Detailed Cost Estimate

Updated: July 23, 2024

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	ITS	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	ITSCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE
Central	Menifee	Briggs	Newport	Scott	Secondary	3.05	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Briggs	SR-74 (Pinacate)	Simpson	Secondary	2.54	2	4	73%	1.37	1	3	0	0	0	0	$1,553,000	$672,000	$0	$0	$0	$0	$155,000	$388,000	$223,000	$2,991,000	$2,991,000
Central	Menifee	Briggs	Simpson	Old Newport	Secondary	1.50	0	2	17%	2.49	1	3	0	0	0	0	$2,819,000	$1,220,000	$0	$0	$0	$0	$282,000	$705,000	$404,000	$5,430,000	$5,430,000
Central	Menifee	Briggs	Salt Creek	bridge	Secondary	0.00	0	2	0%	0.00	1	3	0	600	0	0	$0	$0	$0	$5,760,000	$0	$0	$576,000	$1,440,000	$576,000	$8,352,000	$8,352,000
Central	Menifee	Garbani	I-215	interchange	Secondary	0.00	0	0	0%	0.00	1	3	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$42,483,000
Central	Menifee	Goetz	Juanita	Lesser Lane	Secondary	2.61	2	4	0%	5.22	1	3	0	0	0	0	$5,907,000	$2,557,000	$0	$0	$0	$0	$591,000	$1,477,000	$846,000	$11,378,000	$11,378,000
Central	Menifee	Goetz	Newport	Juanita	Secondary	1.36	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Holland	Murrieta	Bradley	Secondary	1.03	2	4	0%	2.06	1	2	0	0	0	0	$2,332,000	$11,206,000	$0	$0	$0	$0	$233,000	$583,000	$1,354,000	$15,708,000	$15,708,000
Central	Menifee	Holland	Bradley	Haun	Secondary	0.75	2	4	0%	1.50	1	2	0	0	0	0	$1,698,000	$8,160,000	$0	$0	$0	$0	$170,000	$425,000	$986,000	$11,439,000	$11,439,000
Central	Menifee	Holland	Haun	Antelope	Secondary	0.31	0	4	0%	1.24	1	2	0	0	0	0	$1,404,000	$6,746,000	$0	$0	$0	$0	$140,000	$351,000	$815,000	$9,456,000	$9,456,000
Central	Menifee	Holland	I-215 overcrossing	bridge	Secondary	0.00	0	4	0%	0.00	1	2	0	350	0	0	$0	$0	$0	$6,720,000	$0	$0	$672,000	$1,680,000	$672,000	$9,744,000	$9,744,000
Central	Menifee	Holland	Antelope	Menifee	Secondary	0.70	2	4	64%	0.50	1	2	0	0	0	0	$571,000	$2,742,000	$0	$0	$0	$0	$57,000	$143,000	$331,000	$3,844,000	$3,844,000
Central	Menifee	McCall	I-215	Aspel	Secondary	1.23	4	6	0%	2.46	1	3	0	0	0	0	$2,780,000	$1,203,000	$0	$0	$0	$0	$278,000	$695,000	$398,000	$5,354,000	$5,354,000
Central	Menifee	McCall	I-215	interchange	Secondary	0.00	0	0	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Menifee	McCall	Aspel	Menifee	Secondary	0.95	2	4	45%	1.05	1	3	0	0	0	0	$1,188,000	$514,000	$0	$0	$0	$0	$119,000	$297,000	$170,000	$2,288,000	$2,288,000
Central	Menifee	Murrieta	Ethanac	McCall	Secondary	1.95	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Murrieta	McCall	Newport	Secondary	2.03	2	4	10%	3.65	1	3	0	0	0	0	$4,136,000	$1,790,000	$0	$0	$0	$0	$414,000	$1,034,000	$593,000	$7,967,000	$7,967,000
Central	Menifee	Murrieta	Newport	Bundy Canyon	Secondary	3.00	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Cactus	I-215	Heacock	Secondary	2.17	4	6	83%	0.74	1	2	0	0	0	0	$834,000	$4,007,000	$0	$0	$0	$0	$83,000	$209,000	$484,000	$5,617,000	$5,617,000
Central	Moreno Valley	Cactus	I-215	interchange	Secondary	0.00	0	0	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Day	Ironwood	SR-60	Secondary	0.28	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Day	SR-60	interchange	Secondary	0.00	0	0	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Day	SR-60	Eucalyptus	Secondary	0.77	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Eucalyptus	I-215	Towngate	Secondary	1.00	4	6	42%	1.16	1	2	0	0	0	0	$1,313,000	$6,309,000	$0	$0	$0	$0	$131,000	$328,000	$762,000	$8,843,000	$8,843,000
Central	Moreno Valley	Eucalyptus	Towngate	Frederick	Secondary	0.67	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Eucalyptus	Frederick	Heacock	Secondary	1.01	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Eucalyptus	Heacock	Kitching	Secondary	1.01	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Eucalyptus	Kitching	Moreno Beach	Secondary	2.42	4	4	98%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Eucalyptus	Moreno Beach	Theodore	Secondary	2.28	4	4	47%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Frederick	SR-60	Alessandro	Secondary	1.63	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Heacock	Cactus	San Michele	Secondary	2.79	4	4	77%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Heacock	Reche Vista	Cactus	Secondary	4.73	4	4	92%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Heacock	San Michele	Harley Knox	Secondary	0.74	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Ironwood	SR-60	Day	Secondary	1.33	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Ironwood	Day	Heacock	Secondary	2.01	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Lasselle	Alessandro	John F Kennedy	Secondary	1.00	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Lasselle	John F Kennedy	Oleander	Secondary	3.16	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Moreno Beach	Reche Canyon	SR-60	Secondary	1.23	2	4	0%	2.47	1	2	0	0	0	0	$2,790,000	$13,410,000	$0	$0	$0	$0	$279,000	$698,000	$1,620,000	$18,797,000	$18,797,000
Central	Moreno Valley	Moreno Beach	SR-60 overcrossing	bridge	Secondary	0.00	4	4	0%	0.00	1	2	0	250	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Nason	SR-60	Alessandro	Secondary	1.51	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Pigeon Pass	Ironwood	SR-60	Secondary	0.40	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Pigeon Pass/CETAP Corridor	Hidden Springs	Ironwood	Secondary	2.66	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Reche Canyon	Moreno Valley City Limit	Locust	Secondary	0.35	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Redlands	Locust	Alessandro	Secondary	2.75	2	4	5%	5.22	1	2	0	0	0	0	$5,907,000	$28,385,000	$0	$0	$0	$0	$591,000	$1,477,000	$3,429,000	$39,789,000	$39,789,000
Central	Moreno Valley	Redlands	SR-60	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$32,698,000
Central	Moreno Valley	Theodore	SR-60	Eucalyptus	Secondary	0.26	2	4	0%	0.52	1	2	0	0	0	0	$589,000	$2,829,000	$0	$0	$0	$0	$59,000	$147,000	$342,000	$3,966,000	$3,966,000
Central	Moreno Valley	Theodore	SR-60	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$32,698,000
Central	Perris	Ellis	Goetz	Evans	Secondary	1.27	0	4	14%	4.37	1	3	0	0	0	0	$4,945,000	$2,141,000	$0	$0	$0	$0	$495,000	$1,236,000	$709,000	$9,526,000	$9,526,000
Central	Perris	Evans	Oleander	Ramona	Secondary	1.00	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	Evans	Ramona	Morgan	Secondary	0.59	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	Evans	Morgan	Rider	Secondary	0.50	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	Evans	Rider	Placentia	Secondary	0.56	2	2	79%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	Evans	Placentia	Nuevo	Secondary	1.52	0	4	51%	2.98	1	3	0	0	0	0	$3,370,000	$1,459,000	$0	$0	$0	$0	$337,000	$843,000	$483,000	$6,492,000	$6,492,000
Central	Perris	Evans	Nuevo	Ellis	Secondary	2.03	0	4	0%	8.12	1	3	0	0	0	0	$9,192,000	$3,979,000	$0	$0	$0	$0	$919,000	$2,298,000	$1,317,000	$17,705,000	$17,705,000
Central	Perris	Evans	San Jacinto River	bridge	Secondary	0.00	0	4	0%	0.00	1	3	0	400	0	0	$0	$0	$0	$7,680,000	$0	$0	$768,000	$1,920,000	$768,000	$11,136,000	$11,136,000
Central	Perris	Evans	I-215	bridge	Secondary	0.00	0	4	0%	0.00	1	3	0	300	0	0	$0	$0	$0	$5,760,000	$0	$0	$576,000	$1,440,000	$576,000	$8,352,000	$8,352,000
Central	Perris	Goetz	Lesser	Ethanac	Secondary	2.04	2	4	12%	3.60	1	3	0	0	0	0	$4,073,000	$1,763,000	$0	$0	$0	$0	$407,000	$1,018,000	$584,000	$7,845,000	$7,845,000
Central	Perris	Harley Knox	I-215	Indian	Secondary	1.53	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	Harley Knox	Indian	Perris	Secondary	0.50	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	Harley Knox	Perris	Redlands	Secondary	0.50	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	Nuevo	I-215	Murrieta	Secondary	1.36	4	6	18%	2.23	1	2	0	0	0	0	$2,519,000	$12,107,000	$0	$0	$0	$0	$252,000	$630,000	$1,463,000	$16,971,000	$16,971,000
Central	Perris	Nuevo	I-215	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$19,736,000
Central	Perris	Nuevo	Murrieta	Dunlap	Secondary	1.00	2	4	0%	2.00	1	3	0	0	0	0	$2,267,000	$981,000	$0	$0	$0	$0	$227,000	$567,000	$325,000	$4,367,000	$4,367,000
Central	Perris	Nuevo	Perris Valley Storm Channel	bridge	Secondary	0.00	4	4	0%	0.00	1	3	0	300	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	SR-74 (Matthews)	I-215	Ethanac	Secondary	1.25	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Perris	SR-74 (Matthews)	I-215	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$21,835,000
Central	Unincorporated	Center (Main)	I-215	Mt Vernon	Secondary	1.66	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Unincorporated	Center (Main)	I-215	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$11,912,000
Central	Unincorporated	Center (Main)	BNSF	railroad crossing	Secondary	0.00	2	2	0%	0.00	1	2	0	0	2	0	$0	$0	$0	$0	$13,800,000	$0	$1,380,000	$3,450,000	$1,380,000	$20,010,000	$20,010,000
Central	Unincorporated	Ellis	Post	SR-74	Secondary	2.65	2	4	0%	5.30	1	3	0	0	0	0	$5,996,000	$2,596,000	$0	$0	$0	$0	$600,000	$1,499,000	$859,000	$11,550,000	$11,550,000
Central	Unincorporated	Mount Vernon/CETAP Corridor	Center	Pigeon Pass	Secondary	0.61	2	4	46%	0.65	3	3	0	0	0	0	$1,537,000	$321,000	$0	$0	$0	$0	$154,000	$384,000	$186,000	$2,582,000	$2,582,000
Central	Unincorporated	Nuevo	Dunlap	Menifee	Secondary	2.00	2	4	0%	4.01	1	3	0	0	0	0	$4,536,000	$1,963,000	$0	$0	$0	$0	$454,000	$1,134,000	$650,000	$8,737,000	$2,505,000
Central	Unincorporated	Nuevo	San Jacinto River	bridge	Secondary	0.00	2	4	0%	0.00	1	3	0	400	0	0	$0	$0	$0	$3,840,000	$0	$0	$384,000	$960,000	$384,000	$5,568,000	$5,568,000
Central	Unincorporated	Pigeon Pass/CETAP Corridor	Hidden Springs	Mount Vernon	Secondary	3.95	0	2	74%	2.05	3	3	0	0	0	0	$4,827,000	$1,006,000	$0	$0	$0	$0	$483,000	$1,207,000	$583,000	$8,106,000	$8,106,000
Central	Unincorporated	Post	Santa Rosa Mine	Ellis	Secondary	0.44	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Unincorporated	Reche Canyon	Reche Vista	Moreno Valley City Limit	Secondary	3.20	0	0	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Central	Unincorporated	Redlands	San Timoteo Canyon	Locust	Secondary	2.54	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	6th	SR-91	Magnolia	Secondary	4.50	4	4	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Auto Center	Railroad	SR-91	Secondary	0.48	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Cajalco	Bedford Canyon	I-15	Secondary	0.15	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Hidden Valley	Norco Hills	McKinley	Secondary	0.59	4	4	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Lincoln	Parkridge	Ontario	Secondary	3.20	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Magnolia	6th	Sherborn	Secondary	0.46	4	6	0%	0.92	1	2	0	0	0	0	$1,047,000	$5,032,000	$0	$0	$0	$0	$105,000	$262,000	$608,000	$7,054,000	$6,419,000
Northwest	Corona	Magnolia	Temescal Creek	bridge	Secondary	0.00	4	6	0%	0.00	1	2	0	300	0	0	$0	$0	$0	$2,880,000	$0	$0	$288,000	$720,000	$288,000	$4,176,000	$3,580,000
Northwest	Corona	Magnolia	Sherborn	Rimpau	Secondary	0.53	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Magnolia	Rimpau	Ontario	Secondary	1.17	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Main	Grand	Ontario	Secondary	0.88	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Main	Ontario	Foothill	Secondary	0.89	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Main	Hidden Valley	Parkridge	Secondary	0.35	4	6	0%	0.70	1	2	0	0	0	0	$789,000	$3,791,000	$0	$0	$0	$0	$79,000	$197,000	$458,000	$5,314,000	$4,389,000
Northwest	Corona	Main	Parkridge	SR-91	Secondary	0.91	6	6	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Main	SR-91	S. Grand	Secondary	0.81	4	4	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	McKinley	Hidden Valley	Promenade	Secondary	0.40	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	McKinley	Promenade	SR-91	Secondary	0.33	6	6	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	McKinley	SR-91	Magnolia	Secondary	0.31	4	4	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	McKinley	Arlington Channel	bridge	Secondary	0.00	6	6	0%	0.00	1	1	0	100	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	McKinley	BNSF	railroad crossing	Secondary	0.00	4	4	0%	0.00	1	1	0	0	1	0	$0	$0	$0	$0	$72,800,000	$0	$7,280,000	$18,200,000	$7,280,000	$105,560,000	$0
Northwest	Corona	Ontario	I-15	El Cerrito	Secondary	0.88	4	6	0%	1.76	1	2	0	0	0	0	$1,997,000	$9,596,000	$0	$0	$0	$0	$200,000	$499,000	$1,159,000	$13,451,000	$13,451,000
Northwest	Corona	Ontario	Lincoln	Buena Vista	Secondary	0.32	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Ontario	Buena Vista	Main	Secondary	0.65	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Ontario	Main	Kellogg	Secondary	0.78	6	6	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Ontario	Kellogg	Fullerton	Secondary	0.32	6	6	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Ontario	Fullerton	Rimpau	Secondary	0.42	6	6	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Ontario	Rimpau	I-15	Secondary	0.67	6	6	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Railroad	Auto Club	Buena Vista	Secondary	2.45	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Railroad	BNSF	railroad crossing	Secondary	0.00	4	4	0%	0.00	1	2	0	0	2	0	$0	$0	$0	$0	$27,600,000	$0	$2,760,000	$6,900,000	$2,760,000	$40,020,000	$40,020,000
Northwest	Corona	Railroad	Buena Vista	Main (at Grand)	Secondary	0.58	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	River	Corydon	Main	Secondary	2.28	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Serfas Club	SR-91	Green River	Secondary	0.96	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-1 TUMF Network Detailed Cost Estimate

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	ITS	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	ITSCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE
Northwest	Eastvale	Archibald	Remington	River		Secondary	3.40	4	4	82%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$2,333,000	$233,000	$583,000	$233,000	$3,382,000	$3,382,000
Northwest	Eastvale	Hamner	Mission	Bellegrave		Secondary	3.03	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Hamner	Bellegrave	Amberhill		Secondary	0.20	6	6	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$137,000	$14,000	$34,000	$14,000	$199,000	$199,000
Northwest	Eastvale	Hamner	Amberhill	Limonite		Secondary	0.71	2	6	55%	1.28	1	3	0	0	0	0	$1,447,000	$626,000	$0	$0	$0	$0	$145,000	$362,000	$207,000	$2,787,000	$2,787,000
Northwest	Eastvale	Hamner	Limonite	Schleisman		Secondary	1.00	6	6	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$684,000	$68,000	$171,000	$68,000	$991,000	$991,000
Northwest	Eastvale	Hamner	Schleisman	Santa Ana River		Secondary	0.82	2	6	23%	2.54	1	3	0	0	0	0	$2,873,000	$1,243,000	$0	$0	$0	$0	$287,000	$718,000	$412,000	$5,533,000	$3,675,000
Northwest	Eastvale	Hellman	Schleisman	Walters		Secondary	0.55	2	4	90%	0.06	1	2	0	0	0	0	$62,000	$299,000	$0	$0	$0	$0	$6,000	$16,000	$36,000	$419,000	$419,000
Northwest	Eastvale	Hellman	Walters			Secondary	1.41	2	4	0%	2.82	1	2	0	0	0	0	$3,192,000	$15,341,000	$0	$0	$0	$0	$319,000	$798,000	$1,853,000	$21,503,000	$21,503,000
Northwest	Eastvale	Hellman	Cucamonga Creek	bridge		Secondary	0.00	2	4	0%	0.00	1	2	0	275	0	0	$0	$0	$0	$2,640,000	$0	$0	$264,000	$660,000	$264,000	$3,828,000	$3,828,000
Northwest	Eastvale	Limonite	I-15	Eastvale Gateway		Secondary	0.29	6	6	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$199,000	$20,000	$50,000	$20,000	$289,000	$289,000
Northwest	Eastvale	Limonite	I-15	interchange		Secondary	0.00	0	0	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Limonite	Eastvale Gateway	Hamner		Secondary	0.26	6	6	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$175,000	$18,000	$44,000	$18,000	$255,000	$255,000
Northwest	Eastvale	Limonite	Hamner	Sumner		Secondary	1.00	4	6	75%	0.50	1	3	0	0	0	0	$568,000	$246,000	$0	$0	$0	$0	$57,000	$142,000	$81,000	$1,094,000	$1,094,000
Northwest	Eastvale	Limonite	Sumner	Harrison		Secondary	0.50	6	6	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$343,000	$34,000	$86,000	$34,000	$497,000	$497,000
Northwest	Eastvale	Limonite	Harrison	Archibald		Secondary	0.49	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Limonite	Archibald	Hellman (Keller SBD Co.)		Secondary	1.15	0	4	78%	1.01	1	3	0	0	0	0	$1,146,000	$496,000	$0	$0	$0	$0	$115,000	$287,000	$164,000	$2,208,000	$2,208,000
Northwest	Eastvale	Limonite	Cucamonga Creek	bridge		Secondary	0.00	0	4	0%	0.00	1	3	0	500	0	0	$0	$0	$0	$9,600,000	$0	$0	$960,000	$2,400,000	$960,000	$13,920,000	$0
Northwest	Eastvale	River	Hellman	Archibald		Secondary	0.75	2	4	48%	0.78	1	2	0	0	0	0	$883,000	$4,243,000	$0	$0	$0	$0	$88,000	$221,000	$513,000	$5,948,000	$5,948,000
Northwest	Jurupa Valley	Armstrong	San Bernardino County	Valley		Secondary	1.53	2	4	34%	2.02	2	3	0	0	0	0	$3,518,000	$991,000	$0	$0	$0	$0	$352,000	$880,000	$451,000	$6,192,000	$6,192,000
Northwest	Jurupa Valley	Bellegrave	Cantu-Galleano Ranch	Van Buren		Secondary	0.29	2	4	63%	0.21	1	3	0	0	0	0	$241,000	$104,000	$0	$0	$0	$0	$24,000	$60,000	$35,000	$464,000	$464,000
Northwest	Jurupa Valley	Cantu-Galleano Ranch	Wineville	Bellegrave		Secondary	1.82	0	2	90%	0.36	1	3	0	0	0	0	$412,000	$178,000	$0	$0	$0	$0	$41,000	$103,000	$59,000	$793,000	$793,000
Northwest	Jurupa Valley	Etiwanda	Philadelphia	SR-60		Secondary	1.05	4	6	67%	0.69	1	3	0	0	0	0	$786,000	$340,000	$0	$0	$0	$0	$79,000	$197,000	$113,000	$1,515,000	$989,000
Northwest	Jurupa Valley	Etiwanda	SR-60	Limonite		Secondary	2.95	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	I-15	Wineville		Secondary	0.47	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	Wineville	Etiwanda		Secondary	0.99	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	Etiwanda	Van Buren		Secondary	2.73	2	4	75%	1.37	1	3	0	0	0	0	$1,547,000	$670,000	$0	$0	$0	$0	$155,000	$387,000	$222,000	$2,981,000	$2,981,000
Northwest	Jurupa Valley	Limonite	Van Buren	Clay		Secondary	0.79	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	Clay	Riverview		Secondary	2.45	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Market	Rubidoux	Santa Ana River		Secondary	1.19	2	4	0%	2.38	1	3	0	0	0	0	$2,690,000	$1,164,000	$0	$0	$0	$0	$269,000	$673,000	$385,000	$5,181,000	$0
Northwest	Jurupa Valley	Market	Santa Ana River	bridge		Secondary	0.00	2	4	0%	0.00	1	3	0	1,000	0	0	$0	$0	$0	$9,600,000	$0	$0	$960,000	$2,400,000	$960,000	$13,920,000	$6,204,000
Northwest	Jurupa Valley	Mission	Milliken	SR-60		Secondary	2.10	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Mission	SR-60	Santa Ana River		Secondary	7.24	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Riverview	Limonite	Mission		Secondary	0.95	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Rubidoux	Pine	Mission		Secondary	2.90	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Rubidoux	SR-60	interchange		Secondary	0.00	0	0	0%	0.00	2	3	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$9,051,000
Northwest	Jurupa Valley	Valley	Armstrong	Mission		Secondary	0.48	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	1st	Parkridge	Mountain		Secondary	0.26	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	1st	Mountain	Hamner		Secondary	0.26	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	2nd	River	I-15		Secondary	1.39	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	6th	Hamner	California		Secondary	1.71	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	6th	I-15	interchange		Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$3,489,000
Northwest	Norco	Arlington	Crestview	Fairhaven		Secondary	1.00	2	4	0%	1.99	1	3	0	0	0	0	$2,254,000	$976,000	$0	$0	$0	$0	$225,000	$564,000	$323,000	$4,342,000	$4,342,000
Northwest	Norco	California	Arlington	6th		Secondary	1.05	2	4	5%	2.00	1	2	0	0	0	0	$2,262,000	$10,870,000	$0	$0	$0	$0	$226,000	$566,000	$1,313,000	$15,237,000	$12,525,000
Northwest	Norco	Corydon	River	5th		Secondary	1.46	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	Hamner	Santa Ana River	bridge		Secondary	0.00	2	6	0%	0.00	1	3	0	1,200	0	0	$0	$0	$0	$23,040,000	$0	$0	$2,304,000	$5,760,000	$2,304,000	$33,408,000	$11,455,000
Northwest	Norco	Hamner	Santa Ana River	Hidden Valley		Secondary	3.25	4	6	0%	6.50	1	2	0	0	0	0	$7,362,000	$35,378,000	$0	$0	$0	$0	$736,000	$1,841,000	$4,274,000	$49,591,000	$49,591,000
Northwest	Norco	Hidden Valley	I-15	Norco Hills		Secondary	1.46	4	4	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	Hidden Valley	Hamner	I-15		Secondary	0.19	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	Norco	Corydon	Hamner		Secondary	1.20	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	North	California	Crestview		Secondary	0.25	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	River	Archibald	Corydon		Secondary	1.14	2	4	90%	0.23	1	2	0	0	0	0	$259,000	$1,243,000	$0	$0	$0	$0	$26,000	$65,000	$150,000	$1,743,000	$1,109,000
Northwest	Riverside	14th	Market	Martin Luther King		Secondary	0.89	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	1st	Market	Main		Secondary	0.08	2	2	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	3rd	SR-91	I-215		Secondary	1.34	3	4	81%	0.25	1	2	0	0	0	0	$288,000	$1,385,000	$0	$0	$0	$0	$29,000	$72,000	$167,000	$1,941,000	$1,941,000
Northwest	Riverside	3rd	BNSF	railroad crossing		Secondary	0.00	4	4	0%	0.00	1	2	0	0	1	0	$0	$0	$0	$0	$72,800,000	$0	$7,280,000	$18,200,000	$7,280,000	$105,560,000	$30,560,000
Northwest	Riverside	Adams	Arlington	SR-91		Secondary	1.56	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Adams	SR-91	Lincoln		Secondary	0.54	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Adams	SR-91	interchange		Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$3,262,000
Northwest	Riverside	Arlington	Fairhaven	La Sierra		Secondary	0.61	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Buena Vista	Santa Ana River	Redwood		Secondary	0.30	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Canyon Crest	Martin Luther King	Central		Secondary	0.95	4	4	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Canyon Crest	Central	Country Club		Secondary	0.59	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Canyon Crest	Country Club	Via Vista		Secondary	0.93	2	4	12%	1.63	2	3	0	0	0	0	$2,839,000	$799,000	$0	$0	$0	$0	$284,000	$710,000	$364,000	$4,996,000	$1,593,000
Northwest	Riverside	Canyon Crest	Via Vista	Alessandro		Secondary	0.68	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	Chicago	I-215/SR-60		Secondary	2.22	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	SR-91	Magnolia		Secondary	0.73	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	Alessandro	SR-91		Secondary	2.09	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	Van Buren	Magnolia		Secondary	3.53	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Chicago	Alessandro	Spruce		Secondary	3.43	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Chicago	Spruce	Columbia		Secondary	0.75	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Columbia	Main	Iowa		Secondary	1.09	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Columbia	I-215	interchange		Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$9,050,000
Northwest	Riverside	Iowa	Center	3rd		Secondary	2.26	4	6	12%	3.97	1	2	0	0	0	0	$4,494,000	$21,596,000	$0	$0	$0	$0	$449,000	$1,124,000	$2,609,000	$30,272,000	$30,272,000
Northwest	Riverside	Iowa	3rd	University		Secondary	0.51	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Iowa	University	Martin Luther King		Secondary	0.51	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	JFK	Trautwein	Wood		Secondary	0.48	2	4	10%	0.86	1	3	0	0	0	0	$976,000	$422,000	$0	$0	$0	$0	$98,000	$244,000	$140,000	$1,880,000	$1,880,000
Northwest	Riverside	La Sierra	Arlington	SR-91		Secondary	3.56	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	La Sierra	SR-91	Indiana		Secondary	0.19	6	6	0%	0.00	1	2	0	0	0	1	$0	$0	$0	$0	$0	$133,000	$13,000	$33,000	$13,000	$192,000	$192,000
Northwest	Riverside	La Sierra	Indiana	Victoria		Secondary	0.78	4	4	0%	0.00	1	2	0	0	0	1	$0	$0	$0	$0	$0	$536,000	$54,000	$134,000	$54,000	$778,000	$778,000
Northwest	Riverside	Lemon (NB One way)	Mission Inn	University		Secondary	0.08	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Lincoln	Van Buren	Jefferson		Secondary	2.00	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Lincoln	Jefferson	Washington		Secondary	1.00	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Lincoln	Washington	Victoria		Secondary	1.43	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Madison	SR-91	Victoria		Secondary	0.86	2	2	0%	0.00	1	2	0	0	0	1	$0	$0	$0	$0	$0	$588,000	$59,000	$147,000	$59,000	$853,000	$853,000
Northwest	Riverside	Madison	BNSF	railroad crossing		Secondary	0.00	2	2	0%	0.00	1	2	0	0	2	0	$0	$0	$0	$0	$13,800,000	$0	$1,380,000	$3,450,000	$1,380,000	$20,010,000	$20,010,000
Northwest	Riverside	Magnolia	BNSF Railroad	Tyler		Secondary	2.70	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Magnolia	BNSF	railroad crossing		Secondary	0.00	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Magnolia	Tyler	Harrison		Secondary	0.65	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Magnolia	Harrison	14th		Secondary	5.98	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Main	1st	San Bernardino County		Secondary	2.19	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Market	14th	Santa Ana River		Secondary	2.59	2	4	76%	1.24	1	2	0	0	0	0	$1,409,000	$6,771,000	$0	$0	$0	$0	$141,000	$352,000	$818,000	$9,491,000	$9,491,000
Northwest	Riverside	Martin Luther King	14th	I-215/SR-60		Secondary	2.22	4	6	29%	3.15	1	2	0	0	0	0	$3,567,000	$17,144,000	$0	$0	$0	$0	$357,000	$892,000	$2,071,000	$24,031,000	$24,031,000
Northwest	Riverside	Mission Inn	Redwood	Lemon		Secondary	0.79	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Redwood (SB One way)	Mission Inn	University		Secondary	0.08	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Trautwein	Alessandro	Van Buren		Secondary	2.19	4	4	0%	0.00	2	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	SR-91	Magnolia		Secondary	0.43	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	SR-91	interchange		Secondary	0.00	0	0	0%	0.00	1	2	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$21,814,000
Northwest	Riverside	Tyler	Magnolia	Hole		Secondary	0.27	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	Hole	Wells		Secondary	1.06	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	Wells	Arlington		Secondary	1.35	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	University	Redwood	SR-91		Secondary	0.86	4	4	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$593,000	$59,000	$148,000	$59,000	$859,000	$859,000
Northwest	Riverside	University	SR-91	I-215/SR-60		Secondary	2.08	4	4	0%	0.00	2	2	0	0	0	1	$0	$0	$0	$0	$0	$1,425,000	$143,000	$356,000	$143,000	$2,067,000	$2,067,000
Northwest	Riverside	Victoria	Lincoln	Arlington		Secondary	0.16	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Victoria	Madison	Washington		Secondary	0.52	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Washington	Victoria	Hermosa		Secondary	2.06	2	4	14%	3.54	1	2	0	0	0	0	$4,011,000	$19,274,000	$0	$0	$0	$0	$401,000	$1,003,000	$2,329,000	$27,018,000	$27,018,000
Northwest	Riverside	Wood	JFK	Van Buren		Secondary	0.70	2	4	0%	1.40	1	3	0	0	0	0	$1,585,000	$686,000	$0	$0	$0	$0	$159,000	$396,000	$227,000	$3,053,000	$3,053,000
Northwest	Riverside	Wood	Van Buren	Bergamont		Secondary	0.11	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Wood	Bergamont	Krameria		Secondary	0.39	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-1 TUMF Network Detailed Cost Estimate

Updated: July 23, 2024

AREA PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	ITS	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	ITSCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE
Northwest	Unincorporated	Cantu-Galleano Ranch	Hamner	Wineville	Secondary	0.94	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Dos Lagos (Weirick)	Temescal Canyon	I-15	Secondary	0.17	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	El Cerrito	I-15	Ontario	Secondary	0.56	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	El Sobrante	Mockingbird Canyon	Cajalco	Secondary	1.05	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Harley John	Washington	Scottsdale	Secondary	0.12	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Harley John	Scottsdale	Cajalco	Secondary	1.19	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	La Sierra	Victoria	El Sobrante	Secondary	2.23	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	La Sierra	El Sobrante	Cajalco	Secondary	2.36	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Mockingbird Canyon	Van Buren	El Sobrante	Secondary	3.41	2	4	0%	6.82	2	3	0	0	0	0	$11,860,000	$3,340,000	$0	$0	$0	$0	$1,186,000	$2,965,000	$1,520,000	$20,871,000	$20,871,000
Northwest	Unincorporated	Temescal Canyon	El Cerrito	Tuscany	Secondary	0.65	2	4	20%	1.03	2	3	0	0	0	0	$1,800,000	$507,000	$0	$0	$0	$0	$180,000	$450,000	$231,000	$3,168,000	$0
Northwest	Unincorporated	Temescal Canyon	Tuscany	Dos Lagos	Secondary	0.91	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Temescal Canyon	Dos Lagos	Leroy	Secondary	1.10	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Temescal Canyon	Leroy	Dawson Canyon	Secondary	1.89	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Temescal Canyon	Dawson Canyon	I-15	Secondary	0.49	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Temescal Canyon	I-15	interchange	Secondary	0.00	0	0	0%	0.00	2	3	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$32,698,000
Northwest	Unincorporated	Temescal Canyon	I-15	Park Canyon	Secondary	2.02	2	4	10%	3.63	3	3	0	0	0	0	$8,533,000	$1,779,000	$0	$0	$0	$0	$853,000	$2,133,000	$1,031,000	$14,329,000	$14,329,000
Northwest	Unincorporated	Temescal Canyon	Park Canyon	Indian Truck Trail	Secondary	2.55	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporated	Washington	Hermosa	Harley John	Secondary	3.96	2	4	26%	5.86	1	3	0	0	0	0	$6,638,000	$2,874,000	$0	$0	$0	$0	$664,000	$1,660,000	$951,000	$12,787,000	$12,787,000
Northwest	Unincorporated	Wood	Krameria	Cajalco	Secondary	2.99	2	4	4%	5.75	1	3	0	0	0	0	$6,509,000	$2,817,000	$0	$0	$0	$0	$651,000	$1,627,000	$933,000	$12,537,000	$12,537,000
Pass	Banning	8th	Wilson	I-10	Secondary	0.54	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Lincoln	Sunset	SR-243	Secondary	2.01	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Ramsey	I-10	8th	Secondary	1.70	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Ramsey	8th	Highland Springs	Secondary	3.55	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	SR-243	I-10	Wesley	Secondary	0.62	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Sun Lakes	Highland Home	Sunset	Secondary	1.00	0	4	0%	4.00	1	2	0	0	0	0	$4,528,000	$21,760,000	$0	$0	$0	$0	$453,000	$1,132,000	$2,629,000	$30,502,000	$30,502,000
Pass	Banning	Sun Lakes	Smith Creek	bridge	Secondary	0.00	0	4	0%	0.00	1	2	0	300	0	0	$0	$0	$0	$5,760,000	$0	$0	$576,000	$1,440,000	$576,000	$8,352,000	$8,352,000
Pass	Banning	Sun Lakes	Montgomery Creek	bridge	Secondary	0.00	0	4	0%	0.00	1	2	0	200	0	0	$0	$0	$0	$3,840,000	$0	$0	$384,000	$960,000	$384,000	$5,568,000	$5,568,000
Pass	Banning	Sun Lakes	Highland Springs	Highland Home	Secondary	1.33	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Sunset	Ramsey	Lincoln	Secondary	0.28	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Sunset	I-10	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$32,698,000
Pass	Banning	Wilson	Highland Home	8th	Secondary	2.51	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Wilson	Highland Springs	Highland Home	Secondary	1.01	4	4	100%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	1st	Viele	Pennsylvania	Secondary	1.28	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	1st	Pennsylvania	Highland Springs	Secondary	1.10	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	6th	I-10	Highland Springs	Secondary	2.24	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Desert Lawn	Champions	Oak Valley (STC)	Secondary	0.99	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Oak Valley (14th)	Highland Springs	Pennsylvania	Secondary	1.13	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Oak Valley (14th)	Pennsylvania	Oak View	Secondary	1.40	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Oak Valley (14th)	Oak View	I-10	Secondary	0.65	4	4	50%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Oak Valley (14th)	I-10	interchange	Secondary	0.00	0	0	0%	0.00	1	2	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$62,401,000
Pass	Beaumont	Oak Valley (STC)	UP Railroad	Tukwet Canyon	Secondary	2.94	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Oak Valley (STC)	Tukwet Canyon	I-10	Secondary	2.58	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Pennsylvania	6th	1st	Secondary	0.53	2	4	18%	0.86	1	2	0	0	0	0	$978,000	$4,699,000	$0	$0	$0	$0	$98,000	$245,000	$568,000	$6,588,000	$6,588,000
Pass	Beaumont	Pennsylvania	I-10	interchange	Secondary	0.00	0	0	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Calimesa	Bryant	County Line	Avenue L	Secondary	0.38	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Calimesa	Calimesa	County Line	I-10	Secondary	0.80	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Calimesa	Calimesa	I-10	interchange	Secondary	0.00	0	0	0%	0.00	1	2	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$63,061,000
Pass	Calimesa	County Line	7th	Bryant	Secondary	1.83	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Calimesa	County Line	I-10	interchange	Secondary	0.00	0	0	0%	0.00	1	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$32,698,000
Pass	Calimesa	Desert Lawn	Palmer	Champions	Secondary	1.42	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Calimesa	Singleton	Avenue L	Condit	Secondary	1.86	4	4	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Calimesa	Singleton	Condit	Roberts	Secondary	0.85	2	4	0%	1.70	1	2	0	0	0	0	$1,926,000	$9,253,000	$0	$0	$0	$0	$193,000	$482,000	$1,118,000	$12,972,000	$12,972,000
Pass	Calimesa	Singleton	I-10	interchange	Secondary	0.00	0	0	0%	0.00	1	2	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$0
Pass	Calimesa	Tukwet Canyon	Roberts Rd	Palmer	Secondary	0.25	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Unincorporated	Live Oak Canyon	Oak Valley (STC)	San Bernardino County	Secondary	2.81	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Unincorporated	San Timoteo Canyon	San Bernardino County	UP Railroad	Secondary	5.65	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Pass	Unincorporated	San Timoteo Canyon	UP Railroad	railroad crossing	Secondary	0.00	2	2	0%	0.00	2	3	0	0	1	0	$0	$0	$0	$0	$36,400,000	$0	$3,640,000	$9,100,000	$3,640,000	$52,780,000	$52,780,000
San Jacinto	Hemet	Sanderson	Acacia	Menlo	Secondary	0.98	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	Sanderson	RR Crossing	Acacia	Secondary	0.42	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	Sanderson	Stetson	RR Crossing	Secondary	0.58	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	Sanderson	Menlo	Esplanade	Secondary	1.00	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	SR-74 (Florida)	Warren	Cawston	Secondary	1.02	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	SR-74 (Florida)	Columbia	Ramona	Secondary	2.58	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	SR-74/SR-79 (Florida)	Cawston	Columbia	Secondary	4.03	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	State	Domenigoni	Chambers	Secondary	1.31	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	State	Chambers	Stetson	Secondary	0.51	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	State	Florida	Esplanade	Secondary	1.74	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	State	Stetson	Florida	Secondary	1.25	2	2	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	Stetson	Cawston	State	Secondary	2.52	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	Stetson	Warren	Cawston	Secondary	1.00	2	4	0%	2.00	1	3	0	0	0	0	$2,262,000	$979,000	$0	$0	$0	$0	$226,000	$566,000	$324,000	$4,357,000	$4,357,000
San Jacinto	Hemet	Warren	Esplanade	Domenigoni	Secondary	5.02	2	4	9%	9.14	1	3	0	0	0	0	$10,345,000	$4,478,000	$0	$0	$0	$0	$1,035,000	$2,586,000	$1,482,000	$19,926,000	$19,926,000
San Jacinto	Hemet	Warren	Salt Creek	bridge	Secondary	0.00	2	4	0%	0.00	1	3	0	300	0	0	$0	$0	$0	$2,880,000	$0	$0	$288,000	$720,000	$288,000	$4,176,000	$4,176,000
San Jacinto	San Jacinto	Esplanade	Mountain	State	Secondary	2.55	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	Esplanade	State	Warren	Secondary	3.53	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	Sanderson	Ramona	Esplanade	Secondary	3.55	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	SR-79 (North Ramona)	State	San Jacinto	Secondary	1.02	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	SR-79 (San Jacinto)	North Ramona Blvd	7th	Secondary	0.25	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	SR-79 (San Jacinto)	7th	SR-74	Secondary	2.25	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	State	Ramona	Esplanade	Secondary	1.99	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	State	Gilman Springs	Quandt Ranch	Secondary	0.76	2	4	0%	1.52	1	3	0	0	0	0	$1,722,000	$745,000	$0	$0	$0	$0	$172,000	$431,000	$247,000	$3,317,000	$3,317,000
San Jacinto	San Jacinto	State	San Jacinto River	bridge	Secondary	0.00	4	4	0%	0.00	1	3	0	500	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	State	Quandt Ranch	Ramona	Secondary	0.70	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	Warren	Ramona	Esplanade	Secondary	3.47	2	4	11%	6.18	1	3	0	0	0	0	$6,993,000	$3,027,000	$0	$0	$0	$0	$699,000	$1,748,000	$1,002,000	$13,469,000	$13,469,000
San Jacinto	Unincorporated	Gilman Springs	Sanderson	State	Secondary	2.54	2	4	0%	5.09	1	3	0	0	0	0	$5,761,000	$2,494,000	$0	$0	$0	$0	$576,000	$1,440,000	$826,000	$11,097,000	$11,097,000
San Jacinto	Unincorporated	Gilman Springs	Massacre Canyon Wash	bridge	Secondary	0.00	2	4	0%	0.00	1	3	0	100	0	0	$0	$0	$0	$960,000	$0	$0	$96,000	$240,000	$96,000	$1,392,000	$1,392,000
San Jacinto	Unincorporated	SR-79 (Winchester)	SR-74 (Florida)	Domenigoni	Secondary	3.23	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-1 TUMF Network Detailed Cost Estimate

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	NETWORK	MILES	EXISTINGLN	FUTURELN	% COMPLETE	INCREASELN MILES	TOPO	LANDUSE	INTERCHG	BRIDGE	RRXING	ITS	NEWLNCOST	ROWCOST	INTCHGCOST	BRDGCOST	RRXCOST	ITSCOST	PLNG	ENG	CONTIG	TOTAL COST	MAXIMUM TUMF SHARE
Southwest	Lake Elsinore	Corydon	Mission	Grand	Secondary	1.53	2	4	50%	1.53	1	3	0	0	0	0	$1,732,000	$750,000	$0	$0	$0	$0	$173,000	$433,000	$248,000	$3,336,000	$3,336,000
Southwest	Lake Elsinore	Diamond	Mission	I-15	Secondary	0.24	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Franklin (integral to Railroad C	I-15	interchange	Secondary	0.00	0	0	0%	0.00	1	3	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$32,698,000
Southwest	Lake Elsinore	Grand	Lincoln	Toft	Secondary	1.29	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Grand	Toft	SR-74 (Riverside)	Secondary	0.86	2	4	6%	1.61	1	3	0	0	0	0	$1,824,000	$789,000	$0	$0	$0	$0	$182,000	$456,000	$261,000	$3,512,000	$3,512,000
Southwest	Lake Elsinore	Lake	I-15	Lincoln	Secondary	3.25	2	4	28%	4.68	2	2	0	0	0	0	$8,144,000	$25,462,000	$0	$0	$0	$0	$814,000	$2,036,000	$3,361,000	$39,817,000	$32,726,000
Southwest	Lake Elsinore	Lake	I-15	interchange	Secondary	0.00	0	0	0%	0.00	2	2	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$15,771,000
Southwest	Lake Elsinore	Temescal Wash	bridge	Lake	Secondary	0.00	2	4	0%	0.00	2	2	0	180	0	0	$0	$0	$0	$1,728,000	$0	$0	$173,000	$432,000	$173,000	$2,506,000	$1,150,000
Southwest	Lake Elsinore	Mission	Railroad Canyon	Bundy Canyon	Secondary	2.39	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Nichols	I-15	Lake	Secondary	1.80	2	4	0%	3.60	1	3	0	0	0	0	$4,075,000	$1,764,000	$0	$0	$0	$0	$408,000	$1,019,000	$584,000	$7,850,000	$7,850,000
Southwest	Lake Elsinore	Nichols	Temescal Wash	bridge	Secondary	0.00	2	4	0%	0.00	1	3	0	300	0	0	$0	$0	$0	$2,880,000	$0	$0	$288,000	$720,000	$288,000	$4,176,000	$4,176,000
Southwest	Lake Elsinore	Nichols	I-15	interchange	Secondary	0.00	0	0	0%	0.00	1	3	2	0	0	0	$0	$0	$43,490,000	$0	$0	$0	$4,349,000	$10,873,000	$4,349,000	$63,061,000	$63,061,000
Southwest	Lake Elsinore	SR-74 (Collier/Riverside)	I-15	Lakeshore	Secondary	2.15	2	4	26%	3.19	1	2	0	0	0	0	$3,608,000	$17,337,000	$0	$0	$0	$0	$361,000	$902,000	$2,095,000	$24,303,000	$24,303,000
Southwest	Lake Elsinore	SR-74 (Grand)	Riverside	SR-74 (Ortega)	Secondary	0.64	2	4	0%	1.28	1	2	0	0	0	0	$1,445,000	$6,943,000	$0	$0	$0	$0	$145,000	$361,000	$839,000	$9,733,000	$3,691,000
Southwest	Lake Elsinore	SR-74 (Riverside)	Lakeshore	Grand	Secondary	1.74	2	4	24%	2.65	1	2	0	0	0	0	$2,995,000	$14,392,000	$0	$0	$0	$0	$300,000	$749,000	$1,739,000	$20,175,000	$20,175,000
Southwest	Lake Elsinore	Temescal Canyon	I-15	Lake	Secondary	1.21	2	4	0%	2.42	2	3	0	0	0	0	$4,211,000	$1,186,000	$0	$0	$0	$0	$421,000	$1,053,000	$540,000	$7,411,000	$7,411,000
Southwest	Lake Elsinore	Temescal Canyon	Temescal Wash	bridge	Secondary	0.00	2	4	0%	0.00	2	3	0	250	0	0	$0	$0	$0	$2,400,000	$0	$0	$240,000	$600,000	$240,000	$3,480,000	$3,480,000
Southwest	Murrieta	California Oaks	Jefferson	I-15	Secondary	0.32	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	California Oaks	I-15	Jackson	Secondary	0.50	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	California Oaks	Jackson	Clinton Keith	Secondary	1.76	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Jackson	Whitewood	Ynez	Secondary	0.53	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Jefferson	Palomar	Nutmeg	Secondary	1.02	0	2	75%	0.51	2	3	0	0	0	0	$887,000	$250,000	$0	$0	$0	$0	$89,000	$222,000	$114,000	$1,562,000	$1,562,000
Southwest	Murrieta	Jefferson	Nutmeg	Murrieta Hot Springs	Secondary	2.37	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Jefferson	Murrieta Hot Springs	Cherry	Secondary	2.26	4	6	11%	4.02	1	2	0	0	0	0	$4,548,000	$21,854,000	$0	$0	$0	$0	$455,000	$1,137,000	$2,640,000	$30,634,000	$30,634,000
Southwest	Murrieta	Keller	I-215	Whitewood	Backbone	0.75	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Keller	I-215	interchange	Backbone	0.00	0	0	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Los Alamos	Jefferson	I-215	Secondary	1.77	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	Jefferson	I-215	Secondary	1.16	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	I-215	Margarita	Secondary	1.45	6	6	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	Margarita	SR-79 (Winchester)	Secondary	1.01	4	6	8%	1.86	1	3	0	0	0	0	$2,106,000	$911,000	$0	$0	$0	$0	$211,000	$527,000	$302,000	$4,057,000	$3,899,000
Southwest	Murrieta	Nutmeg	Jefferson	Clinton Keith	Secondary	1.97	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Whitewood	Clinton Keith	Los Alamos	Secondary	2.01	3	4	56%	0.88	2	3	0	0	0	0	$1,539,000	$433,000	$0	$0	$0	$0	$154,000	$385,000	$197,000	$2,708,000	$2,708,000
Southwest	Murrieta	Whitewood	Los Alamos	Murrieta Hot Springs	Secondary	1.93	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Whitewood	Murrieta Hot Springs	Jackson	Secondary	0.80	0	2	66%	0.54	2	2	0	0	0	0	$947,000	$2,959,000	$0	$0	$0	$0	$95,000	$237,000	$391,000	$4,629,000	$4,629,000
Southwest	Murrieta	Ynez	Jackson	SR-79 (Winchester)	Secondary	1.22	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Butterfield Stage	Murrieta Hot Springs	Calle Chapos	Secondary	0.82	4	4	0%	0.00	2	3	0	0	0	1	$0	$0	$0	$0	$0	$563,000	$56,000	$141,000	$56,000	$816,000	$816,000
Southwest	Temecula	Butterfield Stage	Calle Chapos	La Serena	Secondary	0.70	4	4	0%	0.00	2	3	0	0	0	1	$0	$0	$0	$0	$0	$480,000	$48,000	$120,000	$48,000	$696,000	$696,000
Southwest	Temecula	Butterfield Stage	La Serena	Rancho California	Secondary	0.91	4	4	0%	0.00	2	3	0	0	0	1	$0	$0	$0	$0	$0	$624,000	$62,000	$156,000	$62,000	$904,000	$904,000
Southwest	Temecula	Butterfield Stage	Rancho California	Pauba	Secondary	0.85	4	4	0%	0.00	2	3	0	0	0	1	$0	$0	$0	$0	$0	$584,000	$58,000	$146,000	$58,000	$846,000	$846,000
Southwest	Temecula	Butterfield Stage	Pauba	SR-79 (Temecula Pkwy)	Secondary	1.69	2	4	93%	0.24	2	3	0	0	0	0	$412,000	$116,000	$0	$0	$0	$0	$41,000	$103,000	$53,000	$725,000	$725,000
Southwest	Temecula	Jefferson	Cherry	Rancho California	Secondary	2.29	4	4	0%	0.00	1	1	0	0	0	1	$0	$0	$0	$0	$0	$1,575,000	$158,000	$394,000	$158,000	$2,285,000	$2,285,000
Southwest	Temecula	Margarita	Murrieta Hot Springs	SR-79 (Temecula Pkwy)	Secondary	7.68	4	4	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$5,272,000	$527,000	$1,318,000	$527,000	$7,644,000	$7,644,000
Southwest	Temecula	Old Town Front	Rancho California	I-15/SR-79 (Temecula Pkwy)	Secondary	1.45	4	4	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Pechanga Pkwy	SR-79 (Temecula Pkwy)	Via Gilberto	Secondary	1.32	6	6	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Pechanga Pkwy	Via Gilberto	Pechanga Pkwy	Secondary	1.44	4	4	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Rancho California	Jefferson	Margarita	Secondary	1.89	4	6	53%	1.78	1	1	0	0	0	0	$2,015,000	$13,938,000	$0	$0	$0	$0	$202,000	$504,000	$1,595,000	$18,254,000	$18,181,000
Southwest	Temecula	Rancho California	I-15	interchange	Secondary	0.00	0	0	0%	0.00	1	1	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$0
Southwest	Temecula	Rancho California	Margarita	Butterfield Stage	Secondary	1.96	4	4	0%	0.00	1	1	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	SR-79 (Temecula Pkwy)	I-15	Pechanga Pkwy	Secondary	0.90	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	SR-79 (Temecula Pkwy)	Pechanga Pkwy	Butterfield Stage	Secondary	3.08	6	6	0%	0.00	1	3	0	0	0	1	$0	$0	$0	$0	$0	$2,114,000	$211,000	$529,000	$211,000	$3,065,000	$3,065,000
Southwest	Unincorporated	Briggs	Scott	SR-79 (Winchester)	Secondary	3.39	2	4	56%	2.98	1	3	0	0	0	0	$3,379,000	$1,463,000	$0	$0	$0	$0	$338,000	$845,000	$484,000	$6,509,000	$6,509,000
Southwest	Unincorporated	Butterfield Stage	Tucalota Creek	bridge	Secondary	0.00	4	4	0%	0.00	2	3	0	200	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporated	Butterfield Stage (Pourroy)	Auld	Murrieta Hot Springs	Secondary	2.27	0	4	17%	7.54	2	3	0	0	0	0	$13,113,000	$3,693,000	$0	$0	$0	$0	$1,311,000	$3,278,000	$1,681,000	$23,076,000	$23,076,000
Southwest	Unincorporated	Grand	Ortega	Corydon	Secondary	4.96	2	4	10%	8.92	1	2	0	0	0	0	$10,098,000	$48,529,000	$0	$0	$0	$0	$1,010,000	$2,525,000	$5,863,000	$68,025,000	$68,025,000
Southwest	Unincorporated	Horsethief Canyon	Temescal Canyon	I-15	Secondary	0.17	2	2	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporated	Indian Truck Trail	Temescal Canyon	I-15	Secondary	0.18	6	6	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporated	Murrieta Hot Springs	SR-79 (Winchester)	Pourroy	Secondary	1.75	4	4	0%	0.00	1	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporated	Pala	Pechanga	San Diego County	Secondary	1.39	2	2	0%	0.00	2	3	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporated	Pourroy	SR-79 (Winchester)	Auld	Secondary	2.28	2	4	84%	0.73	2	3	0	0	0	0	$1,270,000	$358,000	$0	$0	$0	$0	$127,000	$318,000	$163,000	$2,236,000	$2,236,000
Southwest	Unincorporated	Rancho California	Butterfield Stage	Glen Oaks	Secondary	4.26	2	4	0%	8.52	1	1	0	0	0	0	$9,645,000	$66,712,000	$0	$0	$0	$0	$965,000	$2,411,000	$7,636,000	$87,369,000	$87,369,000
Southwest	Unincorporated	Temescal Canyon	Horsethief Canyon Wash	bridge	Secondary	0.00	2	4	0%	0.00	2	3	0	240	0	0	$0	$0	$0	$2,304,000	$0	$0	$230,000	$576,000	$230,000	$3,340,000	$3,340,000
Southwest	Unincorporated	Temescal Canyon	Indian Truck Trail	I-15	Secondary	2.57	2	4	0%	5.14	2	3	0	0	0	0	$8,944,000	$2,519,000	$0	$0	$0	$0	$894,000	$2,236,000	$1,146,000	$15,739,000	$15,739,000
Southwest	Unincorporated	Temescal Canyon	Indian Wash	bridge	Secondary	0.00	2	4	0%	0.00	2	3	0	105	0	0	$0	$0	$0	$1,008,000	$0	$0	$101,000	$252,000	$101,000	$1,462,000	$1,462,000
Southwest	Wildomar	Bundy Canyon	Mission	I-15	Secondary	0.94	2	4	32%	1.27	1	2	0	0	0	0	$1,441,000	$6,923,000	$0	$0	$0	$0	$144,000	$360,000	$836,000	$9,704,000	$9,704,000
Southwest	Wildomar	Grand	Corydon	Wildomar Trail	Secondary	2.02	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Wildomar	Mission	Bundy Canyon	Palomar	Secondary	0.84	4	4	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Southwest	Wildomar	Palomar	Clinton Keith	Washington	Secondary	0.74	2	4	0%	1.48	1	3	0	0	0	0	$1,675,000	$725,000	$0	$0	$0	$0	$168,000	$419,000	$240,000	$3,227,000	$3,227,000
Southwest	Wildomar	Palomar	Mission	Clinton Keith	Secondary	2.79	2	4	21%	4.41	2	3	0	0	0	0	$7,667,000	$2,159,000	$0	$0	$0	$0	$767,000	$1,917,000	$983,000	$13,493,000	$13,493,000
Southwest	Wildomar	Wildomar Trail	I-15	Baxter	Secondary	0.29	2	4	0%	0.59	1	3	0	0	0	0	$665,000	$288,000	$0	$0	$0	$0	$67,000	$166,000	$95,000	$1,281,000	$1,281,000
Southwest	Wildomar	Wildomar Trail	I-15	interchange	Secondary	0.00	0	0	0%	0.00	1	3	3	0	0	0	$0	$0	$22,550,000	$0	$0	$0	$2,255,000	$5,638,000	$2,255,000	$32,698,000	$27,858,000
Southwest	Wildomar	Wildomar Trail	Baxter	Palomar	Secondary	0.74	2	4	0%	1.48	1	2	0	0	0	0	$1,680,000	$8,073,000	$0	$0	$0	$0	$168,000	$420,000	$975,000	$11,316,000	$11,316,000
Southwest	Wildomar	Wildomar Trail	Palomar	Grand	Secondary	0.51	2	2	0%	0.00	1	2	0	0	0	0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Subtotal					Secondary	469.28				240.56			22	8,650	6	26.75	$303,507,000	$590,248,000	$621,740,000	$101,280,000	$237,200,000	$18,358,000	$128,215,000	$320,544,000	$187,237,000	$2,508,329,000	$1,913,028,000
Totals	**Network**					739.22				558.58			33	17,485	9	33.89	$ 741,859,000	$1,272,869,000	$ 1,057,070,000	$ 176,256,000	$ 374,000,000	$ 23,259,000	$ 237,252,000	$ 593,150,000	$ 364,535,000	$ 4,840,250,000	$ 3,874,735,000
	Transit																									$ 217,870,000	$ 154,831,000
	Administration																									$ 161,183,000	$ 161,183,000
	MSHCP																									$ 64,606,000	$ 53,859,000
	TOTAL																									**$ 5,283,909,000**	**$ 4,244,608,000**

EXHIBIT H-2 TUMF Network Detailed Cost Estimate - Existing Need and Obligated Funding

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MAX TUMF MSHCP SHARE	EXIST NEED LOS E&F SEGMENT DESCRIPTION	% EXIST NEED	>2 LANE ADJST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Central	Menifee	Ethanac		Goetz	Murrieta	$0	$0	$0		0%	0%	0.27	0.87		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Ethanac		Murrieta	I-215	$0	$0	$0		0%	0%	0.29	0.77		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Ethanac		I-215	interchange	$32,698,000	$32,698,000	$0		0%	0%	0.62	1.21		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Ethanac		Sherman	Matthews	$2,674,000	$2,674,000	$69,000		0%	0%	0.32	0.61		$0	$0	$0	$69,000	$0	$0	$0
Central	Menifee	Ethanac		BNSF San Jacinto Branch	railroad crossing	$105,560,000	$105,560,000	$3,640,000		0%	0%	0.32	0.61		$0	$0	$0	$3,640,000	$0	$0	$0
Central	Menifee	Menifee		SR-74 (Pinacate)	Simpson	$1,307,000	$1,307,000	$34,000	Between Rouse and Matthews	11%	11%	0.70	0.98		$0	$0	$0	$34,000	$0	$0	$0
Central	Menifee	Menifee		Salt Creek	bridge	$4,384,000	$4,384,000	$151,000		0%	0%	0.36	0.55		$0	$0	$0	$151,000	$0	$0	$0
Central	Menifee	Menifee		Simpson	Aldergate	$0	$0	$0		0%	0%	0.39	0.73		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Menifee		Aldergate	Newport	$0	$0	$0		0%	0%	0.45	0.63		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Menifee		Newport	Holland	$0	$0	$0		0%	0%	0.44	0.72		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Menifee		Holland	Garbani	$0	$0	$0		0%	0%	0.41	0.54		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Menifee		Garbani	Scott	$4,353,000	$4,353,000	$113,000		0%	0%	0.64	0.96		$0	$0	$0	$113,000	$0	$0	$0
Central	Menifee	Menifee/Whitewood		Scott	Murrieta City Limit	$0	$0	$0		0%	0%	0.44	0.76		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Newport		Goetz	Murrieta	$0	$0	$0		0%	0%	0.59	0.85		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Newport		Murrieta	I-215	$1,130,000	$1,130,000	$29,000	Between Pacific Channel and Winter Hawk, and SB I-215 Exit Ramp and SB I-215 On Ramp	27%	27%	0.84	1.08		$0	$0	$0	$29,000	$0	$0	$0
Central	Menifee	Newport		I-215	Menifee	$0	$0	$0	Between Menifee Lakes to Menifee, and I-215 SB On Ramp to Antelope	36%	36%	0.93	1.08	85%	$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Newport		Menifee	Lindenberger	$0	$0	$0		0%	0%	0.66	0.94		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Newport		Lindenberger	SR-79 (Winchester)	$0	$0	$0		0%	0%	0.51	0.69		$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Scott		I-215	Briggs	$8,635,000	$8,635,000	$224,000	Between SB I-215 On Ramp and Antelope	5%	5%	0.45	0.82		$0	$0	$0	$224,000	$0	$0	$0
Central	Menifee	Scott		I-215	interchange	$0	$0	$0		0%	0%	1.17	1.54	57%	$0	$0	$0	$0	$0	$0	$0
Central	Menifee	Scott		Sunset	Murrieta	$4,388,000	$4,388,000	$114,000		0%	0%	0.94	1.32	91%	$0	$0	$0	$114,000	$0	$0	$0
Central	Menifee	Scott		Murrieta	I-215	$16,949,000	$12,949,000	$336,000		0%	0%	0.72	1.03		$0	$4,000,000	$0	$440,000	$0	$0	$0
Central	Menifee	SR-74		Matthews	Briggs	$8,254,000	$8,254,000	$214,000		0%	0%	0.72	0.98		$0	$0	$0	$214,000	$0	$0	$0
Central	Moreno Valley	Alessandro		I-215	Perris	$13,420,000	$13,420,000	$100,000		0%	0%	0.61	0.80		$0	$0	$0	$100,000	$0	$0	$0
Central	Moreno Valley	Alessandro		Perris	Nason	$0	$0	$0		0%	0%	0.55	0.75		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Alessandro		Nason	Moreno Beach	$0	$0	$0		0%	0%	0.22	0.48		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Alessandro		Moreno Beach	Gilman Springs	$18,019,000	$18,019,000	$468,000		0%	0%	0.24	0.66		$0	$0	$0	$468,000	$0	$0	$0
Central	Moreno Valley	Gilman Springs		SR-60	Alessandro	$7,291,000	$7,291,000	$189,000		0%	0%	0.65	0.73		$0	$0	$0	$189,000	$0	$0	$0
Central	Moreno Valley	Gilman Springs		SR-60	interchange	$0	$0	$0		0%	0%	0.60	0.76		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Perris		Reche Vista	Ironwood	$0	$0	$0		0%	0%	0.34	0.46		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Perris		Ironwood	Sunnymead	$0	$0	$0		0%	0%	0.74	0.93		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Perris		SR-60	interchange	$32,698,000	$11,192,000	$0		0%	0%	2.03	2.62	34%	$21,506,000	$0	$21,506,000	$0	$0	$0	$21,506,000
Central	Moreno Valley	Perris		Sunnymead	Cactus	$0	$0	$0		0%	0%	0.62	0.76		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Perris		Cactus	Harley Knox	$0	$0	$0	Between Nandina and Harley Knox	18%	18%	0.69	1.01		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley	Reche Vista		Country	Heacock	$7,486,000	$3,799,000	$39,000	Moreno Valley City Limit to Heacock	100%	100%	0.92	0.95	51%	$3,687,000	$0	$3,687,000	$77,000	$38,000	$38,000	$3,725,000
Central	Perris	11th/Case		Perris	Goetz	$4,582,000	$4,582,000	$34,000		0%	0%	0.76	0.85		$0	$0	$0	$34,000	$0	$0	$0
Central	Perris	Case		Goetz	I-215	$20,876,000	$20,876,000	$155,000	Between Ellis and Murrieta	40%	40%	0.80	1.18		$0	$0	$0	$155,000	$0	$0	$0
Central	Perris	Case		San Jacinto River	bridge	$1,740,000	$1,235,000	$43,000		0%	0%	1.18	1.88	71%	$505,000	$0	$505,000	$60,000	$0	$0	$505,000
Central	Perris	Ethanac		Keystone	Goetz	$6,056,000	$6,056,000	$157,000		0%	0%	0.07	0.30		$0	$0	$0	$157,000	$0	$0	$0
Central	Perris	Ethanac		San Jacinto River	bridge	$5,568,000	$5,568,000	$192,000		0%	0%	0.07	0.30		$0	$0	$0	$192,000	$0	$0	$0
Central	Perris	Ethanac		I-215	Sherman	$5,316,000	$5,316,000	$39,000		0%	0%	0.53	1.15		$0	$0	$0	$39,000	$0	$0	$0
Central	Perris	Goetz		Case	Ethanac	$1,507,000	$999,000	$26,000	Between Case and Ethanac	100%	100%	1.06	1.38	66%	$508,000	$0	$508,000	$39,000	$13,000	$13,000	$521,000
Central	Perris	Goetz		San Jacinto River	bridge	$5,568,000	$3,398,000	$117,000		0%	0%	1.13	1.50	61%	$2,170,000	$0	$2,170,000	$192,000	$0	$0	$2,170,000
Central	Perris	Mid-County (Placentia)		I-215	Perris	$15,655,000	$15,655,000	$116,000		0%	0%	0.05	0.21		$0	$0	$0	$116,000	$0	$0	$0
Central	Perris	Mid-County (Placentia)		I-215	interchange	$0	$0	$0		0%	0%	0.46	0.85		$0	$0	$0	$0	$0	$0	$0
Central	Perris	Mid-County (Placentia)		Perris	Evans	$22,985,000	$22,985,000	$171,000		0%	0%	0.03	0.11		$0	$0	$0	$171,000	$0	$0	$0
Central	Perris	Mid-County (Placentia)		Perris Valley Storm Channel	bridge	$8,352,000	$8,352,000	$288,000		0%	0%	0.03	0.11		$0	$0	$0	$288,000	$0	$0	$0
Central	Perris	Perris		Harley Knox	Ramona	$0	$0	$0		0%	0%	0.86	1.04		$0	$0	$0	$0	$0	$0	$0
Central	Perris	Perris		Ramona	Citrus	$7,063,000	$7,063,000	$183,000	Between Ramona and Dawes, and Rider and Water	39%	39%	0.83	1.06		$0	$0	$0	$183,000	$0	$0	$0
Central	Perris	Perris		Citrus	Nuevo	$0	$0	$0		0%	0%	0.66	0.97		$0	$0	$0	$0	$0	$0	$0
Central	Perris	Perris		Nuevo	11th	$6,927,000	$6,927,000	$51,000		0%	0%	0.72	0.99		$0	$0	$0	$51,000	$0	$0	$0
Central	Perris	Perris		I-215 overcrossing	bridge	$0	$0	$0		0%	0%	0.78	1.10		$0	$0	$0	$0	$0	$0	$0
Central	Perris	Ramona		I-215	Perris	$5,039,000	$5,039,000	$37,000	Between NB I-215 On Ramp and Webster	26%	26%	0.77	0.79		$0	$0	$0	$37,000	$0	$0	$0
Central	Perris	Ramona		I-215	interchange	$32,698,000	$7,725,000	$0		0%	0%	1.80	2.08	24%	$24,973,000	$0	$24,973,000	$0	$0	$0	$24,973,000
Central	Perris	Ramona		Perris	Evans	$0	$0	$0		0%	0%	0.67	0.82		$0	$0	$0	$0	$0	$0	$0
Central	Perris	Ramona		Evans	Mid-County (2,800 ft E of Rider)	$0	$0	$0		0%	0%	0.62	1.06		$0	$0	$0	$0	$0	$0	$0
Central	Perris	SR-74 (4th)		Ellis	I-215	$0	$0	$0	Between Navajo and S A St	22%	22%	0.78	1.03		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec	Ethanac		SR-74	Keystone	$4,666,000	$4,666,000	$121,000		0%	0%	0.04	0.19		$0	$0	$0	$121,000	$0	$0	$0
Central	Unincorporatec	Gilman Springs		Alessandro	Bridge Road	$30,601,000	$30,601,000	$869,000	Between Olive and Jackrabbit	41%	41%	0.87	1.43		$0	$0	$0	$869,000	$0	$0	$0
Central	Unincorporatec	Menifee		Nuevo	SR-74 (Pinacate)	$16,684,000	$16,684,000	$433,000		0%	0%	0.69	0.98		$0	$0	$0	$433,000	$0	$0	$0
Central	Unincorporatec	Mid-County		Evans	Ramona (2,800 ft E of Rider)	$12,156,000	$12,156,000	$362,000		0%	0%	0.08	0.45		$0	$0	$0	$362,000	$0	$0	$0
Central	Unincorporatec	Mid-County (Ramona)		Ramona (2,800 ft E of Rider)	Pico Avenue	$0	$0	$0		0%	0%	0.37	0.96		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec	Mid-County (Ramona)		Pico Avenue	Bridge Road	$47,769,000	$47,769,000	$1,240,000		0%	0%	0.82	1.43		$0	$0	$0	$1,240,000	$0	$0	$0
Central	Unincorporatec	Mid-County (Ramona)		San Jacinto River	bridge	$36,192,000	$36,192,000	$1,248,000		0%	0%	0.78	1.33		$0	$0	$0	$1,248,000	$0	$0	$0
Central	Unincorporatec	Reche Canyon		San Bernardino County	Reche Vista	$0	$0	$0		0%	0%	0.84	0.91		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec	Reche Vista		Reche Canyon	Country	$0	$0	$0		0%	0%	0.81	0.83		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec	Scott		Briggs	SR-79 (Winchester)	$0	$0	$0		0%	0%	0.12	0.53		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec	SR-74		Ethanac	Ellis	$0	$0	$0	Between Ethanac and Theda, and Mountain and Sofie	34%	34%	0.87	1.17		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Cajalco		I-15	Temescal Canyon	$0	$0	$0		0%	0%	0.47	0.62		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Cajalco		I-15	interchange	$0	$0	$0		0%	0%	1.59	2.08	42%	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Foothill		Paseo Grande	Lincoln	$0	$0	$0		0%	0%	0.45	0.61		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Foothill		Wardlow Wash	bridge	$0	$0	$0		0%	0%	0.47	0.63		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Foothill		Lincoln	California	$0	$0	$0		0%	0%	0.30	0.42		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Foothill		California	I-15	$0	$0	$0		0%	0%	0.29	0.42		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Green River		SR-91	Dominguez Ranch	$0	$0	$0		0%	0%	0.53	0.61		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Green River		Dominguez Ranch	Palisades	$0	$0	$0		0%	0%	0.53	0.60		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona	Green River		Palisades	Paseo Grande	$0	$0	$0		0%	0%	0.66	0.77		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Schleisman		San Bernardino County	600' e/o Cucamonga Creek	$648,000	$648,000	$0		0%	0%	0.65	1.23		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Schleisman		Cucamonga Creek	bridge	$0	$0	$0		0%	0%	0.72	1.27		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Schleisman		600' e/o Cucamonga Creek	Harrison	$866,000	$866,000	$0		0%	0%	0.69	1.17		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Schleisman		Harrison	Sumner	$488,000	$488,000	$0	Between Spicewood and Sumner	18%	18%	0.62	0.96		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Schleisman		Sumner	Scholar	$7,625,000	$7,625,000	$57,000		0%	0%	0.85	0.97		$0	$0	$0	$57,000	$0	$0	$0
Northwest	Eastvale	Schleisman		Scholar	A Street	$119,000	$119,000	$1,000		0%	0%	0.50	0.80		$0	$0	$0	$1,000	$0	$0	$0
Northwest	Eastvale	Schleisman		A Street	Hamner	$209,000	$209,000	$2,000		0%	0%	0.50	0.84		$0	$0	$0	$2,000	$0	$0	$0
Northwest	Jurupa Valley	Van Buren		SR-60	Bellegrave	$23,928,000	$10,461,000	$78,000	Between SR-60 and Bellegrave	100%	100%	1.02	1.10	44%	$13,467,000	$0	$13,467,000	$178,000	$100,000	$100,000	$13,567,000
Northwest	Jurupa Valley	Van Buren		Bellegrave	Santa Ana River	$60,900,000	$0	$0	Between Limonite and Santa Ana River, and Rutile and Bellegrave	59%	59%	1.03	1.13	44%	$19,851,000	$60,900,000	$0	$452,000	$147,000	$0	$0
Northwest	Riverside	Alessandro		Arlington	Trautwein	$2,410,000	$2,410,000	$0	Between Arlington and Via Vista, and Canyon Crest and Trautwein	73%	73%	1.03	1.16	48%	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Arlington		La Sierra	Magnolia	$0	$0	$0	Between Ben Lomond and 300 ft East of Pegasus	13%	13%	0.68	0.77		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Arlington		Magnolia	Alessandro	$46,465,000	$46,465,000	$475,000	Between Victoria and Alessandro	36%	36%	0.80	0.93		$0	$0	$0	$475,000	$0	$0	$0
Northwest	Riverside	Van Buren		Santa Ana River	SR-91	$5,230,000	$4,392,000	$33,000	Between Santa Ana River and Cypress	58%	58%	0.94	1.05	72%	$838,000	$0	$838,000	$39,000	$6,000	$6,000	$844,000
Northwest	Riverside	Van Buren		SR-91	Mockingbird Canyon	$39,493,000	$21,292,000	$158,000	Between Mockingbird Canyon and Rudicill, and Indiana to SR-91	95%	95%	1.00	1.10	51%	$18,201,000	$0	$18,201,000	$293,000	$135,000	$135,000	$18,336,000
Northwest	Riverside	Van Buren		Wood	Trautwein	$0	$0	$0		0%	0%	0.79	0.85		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Van Buren		Trautwein	Orange Terrace	$7,574,000	$7,574,000	$56,000		0%	0%	0.69	0.89		$0	$0	$0	$56,000	$0	$0	$0
Northwest	Unincorporatec	Alessandro		Trautwein	Vista Grande	$0	$0	$0		0%	0%	0.79	0.93		$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporatec	Alessandro		Vista Grande	I-215	$0	$0	$0		0%	0%	0.85	1.04		$0	$0	$0	$0	$0	$0	$0
Northwest	Unincorporatec	Cajalco		El Sobrante	Harley John	$10,580,000	$9,817,000	$279,000	Between El Sobrante and Gavilan	40%	20%	0.95	1.04	64%	$763,000	$0	$763,000	$301,000	$22,000	$22,000	$785,000
Northwest	Unincorporatec	Cajalco		Harley John	Harvil	$166,492,000	$166,492,000	$1,236,000	Between Harley John and Wood, and Cole and Alexander, and Carroll and Seaton	63%	31%	0.87	1.05		$0	$0	$0	$1,236,000	$0	$0	$0
Northwest	Unincorporatec	Cajalco		Harvil	I-215	$1,238,000	$1,238,000	$32,000		0%	0%	0.78	0.84		$0	$0	$0	$32,000	$0	$0	$0
Northwest	Unincorporatec	Cajalco		Temescal Canyon	La Sierra	$49,596,000	$35,953,000	$1,071,000	Between Temescal Canyon and Sierra	100%	50%	1.06	1.19	45%	$13,643,000	$0	$13,643,000	$1,477,000	$406,000	$406,000	$14,049,000
Northwest	Unincorporatec	Cajalco		Temescal Wash	bridge	$4,872,000	$1,907,000	$66,000		0%	0%	1.13	1.27	39%	$2,965,000	$0	$2,965,000	$168,000	$0	$0	$2,965,000
Northwest	Unincorporatec	Cajalco		La Sierra	El Sobrante	$96,453,000	$96,453,000	$2,872,000		0%	0%	0.78	0.85		$0	$0	$0	$2,872,000	$0	$0	$0
Northwest	Unincorporatec	Van Buren		Mockingbird Canyon	Wood	$67,429,000	$67,429,000	$501,000	Between Washington and Wood	47%	47%	0.89	1.04		$0	$0	$0	$501,000	$0	$0	$0
Northwest	Unincorporatec	Van Buren		Orange Terrace	I-215	$0	$0	$0		0%	0%	0.71	0.99		$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-2 TUMF Network Detailed Cost Estimate - Existing Need and Obligated Funding

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MAX TUMF MSHCP SHARE	EXIST NEED LOS E&F SEGMENT DESCRIPTION	% EXIST NEED	>2 LANE ADJST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Pass	Banning	Highland Springs	Wilson (8th)	Sun Lakes		$0	$0	$0		0%	0%	0.46	0.68		$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Highland Springs	I-10	interchange		$63,061,000	$32,516,000	$0		0%	0%	1.16	1.43	52%	$30,545,000	$14,698,000	$15,847,000	$0	$0	$0	$15,847,000
Pass	Banning	Highland Springs	Oak Valley (14th)	Wilson (8th)		$0	$0	$0		0%	0%	0.29	0.49		$0	$0	$0	$0	$0	$0	$0
Pass	Banning	Highland Springs	Cherry Valley	Oak Valley (14th)		$0	$0	$0		0%	0%	0.28	0.50		$0	$0	$0	$0	$0	$0	$0
Pass	Banning	I-10 Bypass South	I-10	Morongo Trail (Apache Trail)		$50,110,000	$50,110,000	$372,000		0%	0%	0.04	0.05		$0	$0	$0	$372,000	$0	$0	$0
Pass	Banning	I-10 Bypass South	I-10	interchange		$63,061,000	$63,061,000	$0		0%	0%	0.73	0.86		$0	$0	$0	$0	$0	$0	$0
Pass	Banning	I-10 Bypass South	San Gorgonio	bridge		$4,176,000	$4,176,000	$144,000		0%	0%	0.26	0.31		$0	$0	$0	$144,000	$0	$0	$0
Pass	Banning	I-10 Bypass South	UP/Hargrave	railroad crossing		$52,780,000	$52,780,000	$1,820,000		0%	0%	0.26	0.31		$0	$0	$0	$1,820,000	$0	$0	$0
Pass	Beaumont	Beaumont	Oak Valley (14th)	I-10		$0	$0	$0		0%	0%	0.31	0.37		$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Potrero	Oak Valley (San Timoteo Car	SR-60		$1,100,000	$1,100,000	$29,000		0%	0%	0.01	0.37		$0	$0	$0	$29,000	$0	$0	$0
Pass	Beaumont	Potrero	SR-60	interchange		$63,061,000	$29,561,000	$0		0%	0%	0.39	0.84		$0	$33,500,000	$0	$0	$0	$0	$0
Pass	Beaumont	Potrero	UP	railroad crossing		$40,020,000	$40,020,000	$1,380,000		0%	0%	0.01	0.37		$0	$0	$0	$1,380,000	$0	$0	$0
Pass	Beaumont	Potrero	Noble Creek	bridge		$0	$0	$0		0%	0%	0.01	0.37		$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	Potrero	SR-60	4th		$0	$0	$0		0%	0%	0.01	0.25		$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	SR-79 (Beaumont)	I-10	California		$0	$0	$0	Between I-10 WB On Ramp and California	100%	100%	1.05	1.18	46%	$0	$0	$0	$0	$0	$0	$0
Pass	Beaumont	SR-79 (Beaumont)	I-10	interchange		$63,061,000	$7,408,000	$0		0%	0%	2.20	2.37	12%	$55,653,000	$0	$55,653,000	$0	$0	$0	$55,653,000
Pass	Calimesa	Cherry Valley	I-10	interchange		$63,061,000	$59,773,000	$0		0%	0%	0.93	1.51	95%	$3,288,000	$443,000	$2,845,000	$0	$0	$0	$2,845,000
Pass	Calimesa	Cherry Valley	Roberts St	Roberts Rd		$3,053,000	$3,053,000	$79,000		0%	0%	0.54	0.71		$0	$0	$0	$79,000	$0	$0	$0
Pass	Unincorporatec	Cherry Valley	Bellflower	Noble		$6,411,000	$6,411,000	$166,000		0%	0%	0.08	0.23		$0	$0	$0	$166,000	$0	$0	$0
Pass	Unincorporatec	Cherry Valley	Highland Springs	Bellflower		$0	$0	$0		0%	0%	0.03	0.10		$0	$0	$0	$0	$0	$0	$0
Pass	Unincorporatec	Cherry Valley	Noble	Roberts St		$0	$0	$0		0%	0%	0.41	0.61		$0	$0	$0	$0	$0	$0	$0
Pass	Unincorporatec	Cherry Valley	San Timoteo Wash	bridge		$0	$0	$0		0%	0%	0.26	0.41		$0	$0	$0	$0	$0	$0	$0
Pass	Unincorporatec	SR-79 (Lamb Canyon)	California	Gilman Springs		$0	$0	$0	Between California and Gilman Springs	100%	100%	1.21	1.43	42%	$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	Domenigoni	Warren	Sanderson		$7,726,000	$7,726,000	$201,000		0%	0%	0.82	1.13		$0	$0	$0	$201,000	$0	$0	$0
San Jacinto	Hemet	Domenigoni	Sanderson	State		$0	$0	$0		0%	0%	0.41	0.69		$0	$0	$0	$0	$0	$0	$0
San Jacinto	Hemet	SR-74	Winchester	Warren		$35,208,000	$35,208,000	$261,000	Between Warren and 650 ft East of Cordoba	25%	25%	0.83	1.05		$0	$0	$0	$261,000	$0	$0	$0
San Jacinto	San Jacinto	Mid-County (Ramona)	Warren	Sanderson		$0	$0	$0		0%	0%	0.57	0.61		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	Mid-County (Ramona)	Sanderson/SR-79 (Hemet Byp	interchange		$0	$0	$0		0%	0%	0.61	0.85		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	Ramona	Sanderson	State		$0	$0	$0		0%	0%	0.48	0.63		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	Ramona	State	Main		$0	$0	$0		0%	0%	0.58	0.67		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto	Ramona	Main	Cedar		$31,518,000	$26,928,000	$200,000	Between 7th and Rue Pinot Blanc, and Hemet and Mountain	68%	34%	0.93	0.97	57%	$4,590,000	$0	$4,590,000	$234,000	$34,000	$34,000	$4,624,000
San Jacinto	San Jacinto	Ramona	Cedar	SR-74		$0	$0	$0		0%	0%	0.29	0.35		$0	$0	$0	$0	$0	$0	$0
San Jacinto	Unincorporatec	Domenigoni	SR-79 (Winchester)	Warren		$13,508,000	$13,508,000	$351,000		0%	0%	0.88	1.13		$0	$0	$0	$351,000	$0	$0	$0
San Jacinto	Unincorporatec	Domenigoni	San Diego Aqueduct	bridge		$4,176,000	$4,176,000	$144,000		0%	0%	0.88	1.12		$0	$0	$0	$144,000	$0	$0	$0
San Jacinto	Unincorporatec	Gilman Springs	Bridge	Sanderson		$0	$0	$0		0%	0%	0.62	0.84		$0	$0	$0	$0	$0	$0	$0
San Jacinto	Unincorporatec	Mid-County (Ramona)	Bridge	Warren		$9,221,000	$9,221,000	$239,000		0%	0%	0.78	1.04		$0	$0	$0	$239,000	$0	$0	$0
San Jacinto	Unincorporatec	SR-74	Briggs	SR-79 (Winchester)		$15,417,000	$15,417,000	$400,000	Between Briggs and Sultanas	14%	14%	0.63	1.06		$0	$0	$0	$400,000	$0	$0	$0
San Jacinto	Unincorporatec	SR-79 (Hemet Bypass)	SR-74 (Florida)	Domenigoni		$13,901,000	$13,901,000	$361,000		0%	0%	0.62	0.86		$0	$0	$0	$361,000	$0	$0	$0
San Jacinto	Unincorporatec	SR-79 (Hemet Bypass)	San Diego Aqueduct	bridge		$4,176,000	$4,176,000	$144,000		0%	0%	0.62	0.86		$0	$0	$0	$144,000	$0	$0	$0
San Jacinto	Unincorporatec	SR-79 (Hemet Bypass)	Domenigoni	Winchester		$6,542,000	$6,542,000	$170,000		0%	0%	0.59	0.76		$0	$0	$0	$170,000	$0	$0	$0
San Jacinto	Unincorporatec	SR-79 (San Jacinto Bypass)	Mid-County (Ramona)	SR-74 (Florida)		$56,690,000	$56,690,000	$1,472,000		0%	0%	0.55	0.73		$0	$0	$0	$1,472,000	$0	$0	$0
San Jacinto	Unincorporatec	SR-79 (Sanderson)	Gilman Springs	Ramona		$6,899,000	$2,555,000	$66,000	Between Ramona and Gilman Springs	100%	100%	1.18	1.34	37%	$4,344,000	$0	$4,344,000	$179,000	$113,000	$113,000	$4,457,000
San Jacinto	Unincorporatec	SR-79 (Sanderson)	San Jacinto River	bridge		$19,488,000	$7,651,000	$264,000		0%	0%	1.21	1.41	39%	$11,837,000	$0	$11,837,000	$672,000	$0	$0	$11,837,000
San Jacinto	Unincorporatec	SR-79 (Winchester)	Domenigoni	Keller		$65,022,000	$65,022,000	$483,000		0%	0%	0.55	0.82		$0	$0	$0	$483,000	$0	$0	$0
Southwest	Canyon Lake	Goetz	Railroad Canyon	Newport		$0	$0	$0		0%	0%	0.35	0.53		$0	$0	$0	$0	$0	$0	$0
Southwest	Canyon Lake	Railroad Canyon	Canyon Hills	Goetz		$0	$0	$0		0%	0%	0.71	0.94		$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Railroad Canyon	I-15	Canyon Hills		$0	$0	$0	Between NB I-5 On Ramp and Summerhill	2%	2%	0.86	1.12		$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Railroad Canyon	I-15	interchange		$0	$0	$0		0%	0%	2.48	3.04	26%	$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	SR-74	I-15	interchange		$63,061,000	$24,162,000	$0		0%	0%	1.60	2.03	38%	$38,899,000	$0	$38,899,000	$0	$0	$0	$38,899,000
Southwest	Murrieta	Clinton Keith	Copper Craft	Toulon		$0	$0	$0	Between California Oaks and Toulon	35%	35%	0.76	0.95		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Clinton Keith	Toulon	I-215		$2,076,000	$2,076,000	$54,000	Between Toulon and Thousand Oaks, and Duster and McElwain	52%	52%	0.88	1.06		$0	$0	$0	$54,000	$0	$0	$0
Southwest	Murrieta	Clinton Keith	I-215	Whitewood		$0	$0	$0		0%	0%	0.67	0.76		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	French Valley (Date)	Murrieta Hot Springs	Winchester Creek		$7,321,000	$7,321,000	$54,000		0%	0%	0.77	1.21		$0	$0	$0	$54,000	$0	$0	$0
Southwest	Murrieta	French Valley (Date)	Winchester Creek	Margarita		$0	$0	$0		0%	0%	0.04	0.08		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Whitewood	Menifee City Limit	Keller		$0	$0	$0		0%	0%	0.39	0.74		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Whitewood	Keller	Clinton Keith		$0	$0	$0		0%	0%	0.54	0.84		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	French Valley (Cherry)	Jefferson	Diaz		$3,929,000	$3,929,000	$29,000		0%	0%	0.00	0.58		$0	$0	$0	$29,000	$0	$0	$0
Southwest	Temecula	French Valley (Cherry)	Murrieta Creek	bridge		$5,846,000	$5,846,000	$202,000		0%	0%	0.00	0.58		$0	$0	$0	$202,000	$0	$0	$0
Southwest	Temecula	French Valley (Date)	Margarita	Ynez		$0	$0	$0		0%	0%	0.20	0.34		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	French Valley (Date)	Ynez	Jefferson		$5,010,000	$5,010,000	$37,000		0%	0%	0.07	0.15		$0	$0	$0	$37,000	$0	$0	$0
Southwest	Temecula	French Valley (Date)	I-15	interchange		$122,076,000	$122,076,000	$0		0%	0%	0.19	0.29		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	SR-79 (Winchester)	Murrieta Hot Springs	Jefferson		$2,697,000	$2,697,000	$0	Between Promenade Mall West and Murrieta Hot Springs, and I-15 NB On Ramp to 250 ft East of Jefferson Ave	84%	84%	0.96	1.24	81%	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	SR-79 (Winchester)	I-15	interchange		$0	$0	$0		0%	0%	1.58	1.80	24%	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Western Bypass (Diaz)	Cherry	Rancho California		$2,285,000	$2,285,000	$17,000		0%	0%	0.18	0.45		$0	$0	$0	$17,000	$0	$0	$0
Southwest	Temecula	Western Bypass (Vincent Mor	Rancho California	SR-79 (Front)		$23,629,000	$23,629,000	$296,000		0%	0%	0.01	0.05		$0	$0	$0	$296,000	$0	$0	$0
Southwest	Temecula	Western Bypass (Vincent Mor	I-15	interchange		$0	$0	$0		0%	0%	2.30	3.07	36%	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Western Bypass (Vincent Mor	Murrieta Creek	bridge		$4,176,000	$4,176,000	$144,000		0%	0%	0.01	0.05		$0	$0	$0	$144,000	$0	$0	$0
Southwest	Unincorporatec	Benton	SR-79	Eastern Bypass		$0	$0	$0		0%	0%	0.26	0.35		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	Clinton Keith	Whitewood	SR-79		$5,539,000	$5,539,000	$144,000		0%	0%	0.62	0.79		$0	$0	$0	$144,000	$0	$0	$0
Southwest	Unincorporatec	Clinton Keith	Warm Springs Creek	bridge		$0	$0	$0		0%	0%	0.62	0.79		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	SR-74	I-15	Ethanac		$27,699,000	$26,347,000	$749,000	Between I-15 nd Dexter, and Conard and Riverside, and Steele Valley and Peach, and Meadowbrook and Elt	64%	64%	0.93	1.23	92%	$1,352,000	$0	$1,352,000	$787,000	$38,000	$38,000	$1,390,000
Southwest	Unincorporatec	SR-79 (Winchester)	Keller	Thompson		$34,213,000	$34,213,000	$254,000		0%	0%	0.56	0.71		$0	$0	$0	$254,000	$0	$0	$0
Southwest	Unincorporatec	SR-79 (Winchester)	Thompson	La Alba		$27,699,000	$27,699,000	$206,000	Between La Alba and Via Mira Mesa	25%	25%	0.82	0.99		$0	$0	$0	$206,000	$0	$0	$0
Southwest	Unincorporatec	SR-79 (Winchester)	La Alba	Hunter		$7,854,000	$3,042,000	$22,000	Between La Alba and Hunter	100%	100%	1.10	1.22	39%	$4,812,000	$0	$4,812,000	$58,000	$36,000	$36,000	$4,848,000
Southwest	Unincorporatec	SR-79 (Winchester)	Hunter	Murrieta Hot Springs		$595,000	$442,000	$11,000	Between Murrieta Hot Springs and Robert Jones, and Borel	75%	75%	0.95	1.04	66%	$153,000	$0	$153,000	$15,000	$4,000	$4,000	$157,000
Southwest	Wildomar	Bundy Canyon	I-15	Monte Vista		$1,362,000	$1,362,000	$39,000	Between I-15 NB On Ramp and Monte Vista	75%	75%	0.84	1.16		$0	$0	$0	$39,000	$0	$0	$0
Southwest	Wildomar	Bundy Canyon	Monte Vista	Sunset		$24,818,000	$24,818,000	$739,000	Between Monte Vista and Oak Circle	37%	37%	0.89	1.18		$0	$0	$0	$739,000	$0	$0	$0
Southwest	Wildomar	Bundy Canyon	I-15	interchange		$32,698,000	$24,613,000	$0		0%	0%	1.12	1.77	75%	$8,085,000	$0	$8,085,000	$0	$0	$0	$8,085,000
Southwest	Wildomar	Clinton Keith	Palomar	I-15		$0	$0	$0		0%	0%	0.69	0.80		$0	$0	$0	$0	$0	$0	$0
Southwest	Wildomar	Clinton Keith	I-15	Copper Craft		$5,030,000	$0	$0	Between Inland Valley and Smith Ranch, and Covington and Copper Craft	60%	60%	0.89	1.01		$0	$5,030,000	$0	$143,000	$0	$0	$0
Subtotal						$2,331,921,000	$1,961,707,000	$30,262,000		10.8%					$286,635,000	$118,571,000	$251,643,000	$32,508,000	$1,092,000	945,000	252,588,000

EXHIBIT H-2 TUMF Network Detailed Cost Estimate - Existing Need and Obligated Funding

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MAX TUMF MSHCP SHARE	EXIST NEED LOS E&F SEGMENT DESCRIPTION	% EXIST NEED	>2 LANE ADJST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Central	Menifee		Briggs	Newport	Scott	$0	$0	$0		0%	0%	0.18	0.48		$0	$0	$0	$0	$0	$0	$0
Central	Menifee		Briggs	SR-74 (Pinacate)	Simpson	$2,991,000	$2,991,000	$78,000		0%	0%	0.05	0.23		$0	$0	$0	$78,000	$0	$0	$0
Central	Menifee		Briggs	Simpson	Old Newport	$5,430,000	$5,430,000	$141,000		0%	0%	0.35	0.78		$0	$0	$0	$141,000	$0	$0	$0
Central	Menifee		Briggs	Salt Creek	bridge	$8,352,000	$8,352,000	$288,000		0%	0%	0.41	0.74		$0	$0	$0	$288,000	$0	$0	$0
Central	Menifee		Garbani	I-215	interchange	$63,061,000	$42,483,000	$0		0%	0%	1.21	1.85	67%	$20,578,000	$0	$20,578,000	$0	$0	$0	$20,578,000
Central	Menifee		Goetz	Juanita	Lesser Lane	$11,378,000	$11,378,000	$295,000		0%	0%	0.70	0.94		$0	$0	$0	$295,000	$0	$0	$0
Central	Menifee		Goetz	Newport	Juanita	$0	$0	$0		0%	0%	0.65	0.97		$0	$0	$0	$0	$0	$0	$0
Central	Menifee		Holland	Murrieta	Bradley	$15,708,000	$15,708,000	$117,000		0%	0%	0.52	0.87		$0	$0	$0	$117,000	$0	$0	$0
Central	Menifee		Holland	Bradley	Haun	$11,439,000	$11,439,000	$85,000		0%	0%	0.62	0.94		$0	$0	$0	$85,000	$0	$0	$0
Central	Menifee		Holland	Haun	Antelope	$9,456,000	$9,456,000	$70,000		0%	0%	0.74	0.96		$0	$0	$0	$70,000	$0	$0	$0
Central	Menifee		Holland	I-215 overcrossing	bridge	$9,744,000	$9,744,000	$336,000		0%	0%	0.76	0.96		$0	$0	$0	$336,000	$0	$0	$0
Central	Menifee		Holland	Antelope	Menifee	$3,844,000	$3,844,000	$29,000		0%	0%	0.17	0.50		$0	$0	$0	$29,000	$0	$0	$0
Central	Menifee		McCall	I-215	Aspel	$5,354,000	$5,354,000	$139,000		0%	0%	0.34	0.65		$0	$0	$0	$139,000	$0	$0	$0
Central	Menifee		McCall	I-215	interchange	$0	$0	$0		0%	0%	1.58	2.02	39%	$0	$0	$0	$0	$0	$0	$0
Central	Menifee		McCall	Aspel	Menifee	$2,288,000	$2,288,000	$59,000		0%	0%	0.38	0.71		$0	$0	$0	$59,000	$0	$0	$0
Central	Menifee		Murrieta	Ethanac	McCall	$0	$0	$0		0%	0%	0.52	0.84		$0	$0	$0	$0	$0	$0	$0
Central	Menifee		Murrieta	McCall	Newport	$7,967,000	$7,967,000	$207,000		0%	0%	0.60	0.84		$0	$0	$0	$207,000	$0	$0	$0
Central	Menifee		Murrieta	Newport	Bundy Canyon	$0	$0	$0		0%	0%	0.43	0.69		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Cactus	I-215	Heacock	$5,617,000	$5,617,000	$42,000	Between Goldencrest and Arlal, and Frontage Road and 250 ft East	7%	7%	0.66	0.84		$0	$0	$0	$42,000	$0	$0	$0
Central	Moreno Valley		Cactus	I-215	interchange	$0	$0	$0		0%	0%	1.22	1.43	40%	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Day	Ironwood	SR-60	$0	$0	$0		0%	0%	0.53	0.63		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Day	SR-60	interchange	$0	$0	$0		0%	0%	1.03	1.21	60%	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Day	SR-60	Eucalyptus	$0	$0	$0		0%	0%	0.45	0.58		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Eucalyptus	I-215	Towngate	$8,843,000	$8,843,000	$66,000		0%	0%	0.52	0.72		$0	$0	$0	$66,000	$0	$0	$0
Central	Moreno Valley		Eucalyptus	Towngate	Frederick	$0	$0	$0		0%	0%	0.43	0.69		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Eucalyptus	Frederick	Heacock	$0	$0	$0		0%	0%	0.51	0.67		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Eucalyptus	Heacock	Kitching	$0	$0	$0		0%	0%	0.53	0.71		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Eucalyptus	Kitching	Moreno Beach	$0	$0	$0		0%	0%	0.19	0.28		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Eucalyptus	Moreno Beach	Theodore	$0	$0	$0		0%	0%	0.01	0.12		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Frederick	SR-60	Alessandro	$0	$0	$0	Between SR-60 and Sunnymead	5%	5%	0.42	0.59		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Heacock	Cactus	San Michele	$0	$0	$0		0%	0%	0.56	0.96		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Heacock	Reche Vista	Cactus	$0	$0	$0		0%	0%	0.47	0.66		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Heacock	San Michele	Harley Knox	$0	$0	$0		0%	0%	0.11	0.22		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Ironwood	SR-60	Day	$0	$0	$0		0%	0%	0.82	1.02		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Ironwood	Day	Heacock	$0	$0	$0		0%	0%	0.69	0.84		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Lasselle	Alessandro	John F Kennedy	$0	$0	$0		0%	0%	0.68	0.79		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Lasselle	John F Kennedy	Oleander	$0	$0	$0	Between Via Xavier and Kramelia	13%	13%	0.72	1.01		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Moreno Beach	Reche Canyon	SR-60	$18,797,000	$18,797,000	$140,000	Between SR-60 and SR-60 WB Exit Ramp	5%	5%	0.32	0.65		$0	$0	$0	$140,000	$0	$0	$0
Central	Moreno Valley		Moreno Beach	SR-60 overcrossing	bridge	$0	$0	$0		0%	0%	0.95	1.27	87%	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Nason	SR-60	Alessandro	$0	$0	$0		0%	0%	0.66	0.83		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Pigeon Pass	Ironwood	SR-60	$0	$0	$0	Between SR-60 and SR-60 WB On Ramp, and Hemlock and Ironwood	87%	87%	0.94	1.07	74%	$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Pigeon Pass/CETAP Corridor	Hidden Springs	Ironwood	$0	$0	$0		0%	0%	0.40	0.48		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Reche Canyon	Moreno Valley City Limit	Locust	$0	$0	$0		0%	0%	0.02	0.19		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Redlands	Locust	Alessandro	$39,789,000	$39,789,000	$295,000	Between Locust and Ironwood	27%	27%	0.80	0.97		$0	$0	$0	$295,000	$0	$0	$0
Central	Moreno Valley		Redlands	SR-60	interchange	$32,698,000	$32,698,000	$0		0%	0%	0.47	0.51		$0	$0	$0	$0	$0	$0	$0
Central	Moreno Valley		Theodore	SR-60	Eucalyptus	$3,966,000	$3,966,000	$29,000		0%	0%	0.46	0.99		$0	$0	$0	$29,000	$0	$0	$0
Central	Moreno Valley		Theodore	SR-60	interchange	$32,698,000	$32,698,000	$0		0%	0%	0.44	0.75		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Ellis	Goetz	Evans	$9,526,000	$9,526,000	$247,000		0%	0%	0.08	0.14		$0	$0	$0	$247,000	$0	$0	$0
Central	Perris		Evans	Oleander	Ramona	$0	$0	$0		0%	0%	0.71	1.10		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Evans	Ramona	Morgan	$0	$0	$0		0%	0%	0.80	1.15		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Evans	Morgan	Rider	$0	$0	$0	Between Morgan and Sinclair	50%	50%	0.83	1.06		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Evans	Rider	Placentia	$0	$0	$0	Between Placentia and 350 ft North	11%	11%	0.55	0.69		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Evans	Placentia	Nuevo	$6,492,000	$6,492,000	$169,000	Between Placentia and 220 ft South, and Moraga and Sunset	9%	4%	0.54	0.79		$0	$0	$0	$169,000	$0	$0	$0
Central	Perris		Evans	Nuevo	Ellis	$17,705,000	$17,705,000	$460,000		0%	0%	0.00	0.33		$0	$0	$0	$460,000	$0	$0	$0
Central	Perris		Evans	San Jacinto River	bridge	$11,136,000	$11,136,000	$384,000		0%	0%	0.00	0.13		$0	$0	$0	$384,000	$0	$0	$0
Central	Perris		Evans	I-215	bridge	$8,352,000	$8,352,000	$288,000		0%	0%	0.00	0.13		$0	$0	$0	$288,000	$0	$0	$0
Central	Perris		Goetz	Lesser	Ethanac	$7,845,000	$7,845,000	$204,000	Between Ethanac and Ruffian	7%	7%	0.79	1.13		$0	$0	$0	$204,000	$0	$0	$0
Central	Perris		Harley Knox	I-215	Indian	$0	$0	$0		0%	0%	0.31	0.38		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Harley Knox	I-215	interchange	$0	$0	$0		0%	0%	0.99	1.62	88%	$0	$0	$0	$0	$0	$0	$0
Central	Perris		Harley Knox	Indian	Perris	$0	$0	$0		0%	0%	0.12	0.15		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Harley Knox	Perris	Redlands	$0	$0	$0		0%	0%	0.25	0.47		$0	$0	$0	$0	$0	$0	$0
Central	Perris		Nuevo	I-215	Murrieta	$16,971,000	$16,971,000	$126,000		0%	0%	0.51	0.83		$0	$0	$0	$126,000	$0	$0	$0
Central	Perris		Nuevo	I-215	interchange	$32,698,000	$19,736,000	$0		0%	0%	1.53	2.50	60%	$12,962,000	$0	$12,962,000	$0	$0	$0	$12,962,000
Central	Perris		Nuevo	Murrieta	Dunlap	$4,367,000	$4,367,000	$113,000		0%	0%	0.35	0.68		$0	$0	$0	$113,000	$0	$0	$0
Central	Perris		Nuevo	Perris Valley Storm Channel	bridge	$0	$0	$0		0%	0%	0.35	0.67		$0	$0	$0	$0	$0	$0	$0
Central	Perris		SR-74 (Matthews)	I-215	Ethanac	$0	$0	$0		0%	0%	0.69	0.98		$0	$0	$0	$0	$0	$0	$0
Central	Perris		SR-74 (Matthews)	I-215	interchange	$32,698,000	$21,835,000	$0		0%	0%	1.41	2.42	67%	$10,863,000	$0	$10,863,000	$0	$0	$0	$10,863,000
Central	Unincorporatec		Center (Main)	I-215	Mt Vernon	$0	$0	$0	Between I-215 and Highgrove	4%	4%	0.39	0.67		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec		Center (Main)	I-215	interchange	$32,698,000	$11,912,000	$0		0%	0%	2.38	3.22	36%	$20,786,000	$0	$20,786,000	$0	$0	$0	$20,786,000
Central	Unincorporatec		Center (Main)	BNSF	railroad crossing	$20,010,000	$20,010,000	$690,000		0%	0%	0.46	0.82		$0	$0	$0	$690,000	$0	$0	$0
Central	Unincorporatec		Ellis	Post	SR-74	$11,550,000	$11,550,000	$300,000		0%	0%	0.20	0.46		$0	$0	$0	$300,000	$0	$0	$0
Central	Unincorporatec		Mount Vernon/CETAP Corridc	Center	Pigeon Pass	$2,582,000	$2,582,000	$77,000		0%	0%	0.58	0.96		$0	$0	$0	$77,000	$0	$0	$0
Central	Unincorporatec		Nuevo	Dunlap	Menifee	$8,737,000	$2,505,000	$65,000	Between Dunlap and Menifee	100%	100%	0.76	1.30		$0	$6,232,000	$0	$227,000	$0	$0	$0
Central	Unincorporatec		Nuevo	San Jacinto River	bridge	$5,568,000	$5,568,000	$192,000		0%	0%	0.77	1.36		$0	$0	$0	$192,000	$0	$0	$0
Central	Unincorporatec		Pigeon Pass/CETAP Corridor	Hidden Springs	Mount Vernon	$8,106,000	$8,106,000	$241,000		0%	0%	1.16	1.33	40%	$0	$0	$0	$241,000	$0	$0	$0
Central	Unincorporatec		Post	Santa Rosa Mine	Ellis	$0	$0	$0		0%	0%	0.58	1.07		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec		Reche Canyon	Reche Vista	Moreno Valley City Limit	$0	$0	$0		0%	0%	0.02	0.19		$0	$0	$0	$0	$0	$0	$0
Central	Unincorporatec		Redlands	San Timoteo Canyon	Locust	$0	$0	$0	Between Locust and San Timoteo	100%	100%	1.32	1.51	31%	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		6th	SR-91	Magnolia	$0	$0	$0		0%	0%	0.43	0.55		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Auto Center	Railroad	SR-91	$0	$0	$0		0%	0%	0.31	0.32		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Cajalco	Bedford Canyon	I-15	$0	$0	$0		0%	0%	0.51	0.79		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Hidden Valley	Norco Hills	McKinley	$0	$0	$0		0%	0%	0.52	0.72		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Lincoln	Parkridge	Ontario	$0	$0	$0		0%	0%	0.58	0.65		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Magnolia	6th	Sherborn	$7,054,000	$6,419,000	$47,000	Between 6th and Sherborn	100%	100%	0.91	1.07	91%	$635,000	$0	$635,000	$52,000	$5,000	$5,000	$640,000
Northwest	Corona		Magnolia	Temescal Creek	bridge	$4,176,000	$3,580,000	$123,000		0%	0%	0.93	1.08	86%	$596,000	$0	$596,000	$144,000	$0	$0	$596,000
Northwest	Corona		Magnolia	Sherborn	Rimpau	$0	$0	$0	Between Rimpau and I-15 SB On Ramp, and Montecito and Sherborn	60%	60%	0.93	1.04	77%	$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Magnolia	Rimpau	Ontario	$0	$0	$0		0%	0%	0.71	0.73		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Main	Grand	Ontario	$0	$0	$0		0%	0%	0.78	0.81		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Main	Ontario	Foothill	$0	$0	$0		0%	0%	0.40	0.50		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Main	Hidden Valley	Parkridge	$5,314,000	$4,389,000	$32,000	Between Hidden Valley and Parkridge	100%	100%	0.94	1.12	83%	$925,000	$0	$925,000	$39,000	$7,000	$7,000	$932,000
Northwest	Corona		Main	Parkridge	SR-91	$0	$0	$0	Between SR-91 WB On Ramp and Grand	8%	8%	0.62	0.73		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Main	SR-91	S. Grand	$0	$0	$0	Between 3rd and 4th	8%	8%	0.66	0.65		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		McKinley	Hidden Valley	Promenade	$0	$0	$0		0%	0%	0.70	0.86		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		McKinley	Promenade	SR-91	$0	$0	$0		0%	0%	0.61	0.66		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		McKinley	SR-91	Magnolia	$0	$0	$0		0%	0%	0.76	0.81		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		McKinley	Arlington Channel	bridge	$0	$0	$0		0%	0%	0.81	0.89		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		McKinley	BNSF	railroad crossing	$105,560,000	$0	$0		0%	0%	0.81	0.89		$0	$105,560,000	$0	$3,640,000	$0	$0	$0
Northwest	Corona		Ontario	I-15	El Cerrito	$13,451,000	$13,451,000	$100,000	Between State and Rising Sun	32%	32%	0.69	0.93		$0	$0	$0	$100,000	$0	$0	$0
Northwest	Corona		Ontario	Lincoln	Buena Vista	$0	$0	$0		0%	0%	0.67	0.71		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Ontario	Buena Vista	Main	$0	$0	$0		0%	0%	0.47	0.47		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Ontario	Main	Kellogg	$0	$0	$0		0%	0%	0.39	0.41		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Ontario	Kellogg	Fullerton	$0	$0	$0		0%	0%	0.36	0.42		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Ontario	Fullerton	Rimpau	$0	$0	$0		0%	0%	0.36	0.49		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Ontario	Rimpau	I-15	$0	$0	$0	Between Compton and I-15 SB On Ramp	7%	7%	0.45	0.57		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Railroad	Auto Club	Buena Vista	$0	$0	$0		0%	0%	0.26	0.30		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Railroad	BNSF	railroad crossing	$40,020,000	$40,020,000	$1,380,000		0%	0%	0.31	0.34		$0	$0	$0	$1,380,000	$0	$0	$0
Northwest	Corona		Railroad	Buena Vista	Main (at Grand)	$0	$0	$0		0%	0%	0.69	0.73		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		River	Corydon	Main	$0	$0	$0	Between Corydon and 2nd St	25%	25%	0.71	0.85		$0	$0	$0	$0	$0	$0	$0
Northwest	Corona		Serfas Club	SR-91	Green River	$0	$0	$0		0%	0%	0.58	0.59		$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-2 TUMF Network Detailed Cost Estimate - Existing Need and Obligated Funding

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MAX TUMF MSHCP SHARE	EXIST NEED LOS E&F SEGMENT DESCRIPTION	% EXIST NEED	>2 LANE ADJST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Northwest	Eastvale	Archibald	Remington	River		$3,382,000	$3,382,000	$0	Between Whispering Hills and Cadenza, and Providence and San Bernardino County	24%	24%	0.62	0.93		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Hamner	Mission	Bellegrave		$0	$0	$0	Between Ontario Ranch and Micro, and Riverside and Mission	44%	44%	0.86	1.30		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Hamner	Bellegrave	Amberhill		$199,000	$199,000	$0		0%	0%	0.57	1.16		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Hamner	Amberhill	Limonite		$2,787,000	$2,787,000	$72,000		0%	0%	0.68	1.08		$0	$0	$0	$72,000	$0	$0	$0
Northwest	Eastvale	Hamner	Limonite	Schleisman		$991,000	$991,000	$0		0%	0%	0.38	0.63		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Hamner	Schleisman	Santa Ana River		$5,533,000	$3,675,000	$96,000	Between Schleisman and Santa Ana River	100%	50%	1.24	1.41	33%	$1,858,000	$0	$1,858,000	$144,000	$48,000	$48,000	$1,906,000
Northwest	Eastvale	Hellman	Schleisman	Walters		$419,000	$419,000	$3,000		0%	0%	0.86	1.69		$0	$0	$0	$3,000	$0	$0	$0
Northwest	Eastvale	Hellman	Walters	River		$21,503,000	$21,503,000	$160,000		0%	0%	0.69	1.44		$0	$0	$0	$160,000	$0	$0	$0
Northwest	Eastvale	Hellman	Cucamonga Creek	bridge		$3,828,000	$3,828,000	$132,000		0%	0%	0.69	1.44		$0	$0	$0	$132,000	$0	$0	$0
Northwest	Eastvale	Limonite	I-15	Eastvale Gateway		$289,000	$289,000	$0	Between I-15 and Eastvale Gateway	100%	100%	0.93	1.32	92%	$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Limonite	I-15	interchange		$0	$0	$0		0%	0%	0.67	1.07		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Limonite	Eastvale Gateway	Hamner		$255,000	$255,000	$0	Between Eastvale Gateway and Hamner	100%	100%	0.95	1.36	90%	$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Limonite	Hamner	Sumner		$1,094,000	$1,094,000	$28,000	Between Hamner and Scholar	50%	50%	0.80	1.16		$0	$0	$0	$28,000	$0	$0	$0
Northwest	Eastvale	Limonite	Sumner	Harrison		$497,000	$497,000	$0		0%	0%	0.77	0.97		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Limonite	Harrison	Archibald		$0	$0	$0		0%	0%	0.55	0.70		$0	$0	$0	$0	$0	$0	$0
Northwest	Eastvale	Limonite	Archibald	Hellman (Keller SBD Co.)		$2,208,000	$2,208,000	$57,000		0%	0%	0.00	0.35		$0	$0	$0	$57,000	$0	$0	$0
Northwest	Eastvale	Limonite	Cucamonga Creek	bridge		$13,920,000	$0	$0		0%	0%	0.64	0.75		$0	$13,920,000	$0	$480,000	$0	$0	$0
Northwest	Eastvale	River	Hellman	Archibald		$5,948,000	$5,948,000	$44,000		0%	0%	0.67	1.01		$0	$0	$0	$44,000	$0	$0	$0
Northwest	Jurupa Valley	Armstrong	San Bernardino County	Valley		$6,192,000	$6,192,000	$176,000	Between Sierra and Valley	33%	33%	0.83	1.14		$0	$0	$0	$176,000	$0	$0	$0
Northwest	Jurupa Valley	Bellegrave	Cantu-Galleano Ranch	Van Buren		$464,000	$464,000	$12,000		0%	0%	0.43	0.78		$0	$0	$0	$12,000	$0	$0	$0
Northwest	Jurupa Valley	Cantu-Galleano Ranch	Wineville	Bellegrave		$793,000	$793,000	$21,000		0%	0%	0.14	0.27		$0	$0	$0	$21,000	$0	$0	$0
Northwest	Jurupa Valley	Etiwanda	Philadelphia	SR-60		$1,515,000	$989,000	$25,000	Between San Bernardino County and SR-60	100%	100%	1.11	1.49	65%	$526,000	$0	$526,000	$39,000	$14,000	$14,000	$540,000
Northwest	Jurupa Valley	Etiwanda	SR-60	Limonite		$0	$0	$0	Between SR-60 and Riverside, and Cantu Galleano Ranch and Coral	12%	12%	0.61	0.84		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	I-15	Wineville		$0	$0	$0	Between I-15 and I-15 NB On Ramp	15%	15%	0.82	0.90		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	Wineville	Etiwanda		$0	$0	$0	Between Etiwanda and Lorena	9%	9%	0.76	0.80		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	Etiwanda	Van Buren		$2,981,000	$2,981,000	$77,000	Between Bain and Beach	23%	23%	0.80	0.91		$0	$0	$0	$77,000	$0	$0	$0
Northwest	Jurupa Valley	Limonite	Van Buren	Clay		$0	$0	$0		0%	0%	0.67	0.84		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Limonite	Clay	Riverview		$0	$0	$0		0%	0%	0.64	0.79		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Market	Rubidoux	Santa Ana River		$5,181,000	$0	$0	Between Rubidoux and Aqua Mansa, and Via Cerro and Santa Ana River	40%	40%	0.86	1.06		$0	$5,181,000	$0	$135,000	$0	$0	$0
Northwest	Jurupa Valley	Market	Santa Ana River	bridge		$13,920,000	$6,204,000	$214,000		0%	0%	1.13	1.32	45%	$7,716,000	$0	$7,716,000	$480,000	$0	$0	$7,716,000
Northwest	Jurupa Valley	Mission	Milliken	SR-60		$0	$0	$0	Between Milliken and Wineville, and SR-60 to SR-60 EB Off Ramp	58%	58%	0.90	1.06		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Mission	SR-60	Santa Ana River		$0	$0	$0	Between Jurupa and Canal, Riverview and Rubidoux, and Crestmore and Santa Ana River	13%	13%	0.57	0.78		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Riverview	Limonite	Mission		$0	$0	$0		0%	0%	0.55	0.56		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Rubidoux	Pine	Mission		$0	$0	$0	Between SR-60 WB and 30th, and 24th and Market	9%	9%	0.86	1.11		$0	$0	$0	$0	$0	$0	$0
Northwest	Jurupa Valley	Rubidoux	SR-60	interchange		$32,698,000	$9,051,000	$0		0%	0%	1.61	1.88	28%	$23,647,000	$0	$23,647,000	$0	$0	$0	$23,647,000
Northwest	Jurupa Valley	Valley	Armstrong	Mission		$0	$0	$0	Between Armstrong and Mission	100%	100%	1.22	1.47	44%	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	1st	Parkridge	Mountain		$0	$0	$0		0%	0%	0.75	0.89		$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	1st	Mountain	Hamner		$0	$0	$0		0%	0%	0.38	0.51		$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	2nd	River	I-15		$0	$0	$0	Between Hamner and I-15 SB On Ramp	7%	7%	0.74	0.85		$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	6th	Hamner	California		$0	$0	$0	Between Hamner and I-15 NB On Ramp	9%	9%	0.68	0.76		$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	6th	I-15	interchange		$32,698,000	$3,489,000	$0		0%	0%	2.57	2.77	11%	$29,209,000	$0	$29,209,000	$0	$0	$0	$29,209,000
Northwest	Norco	Arlington	Crestview	Fairhaven		$4,342,000	$4,342,000	$113,000	Between Crestview and Fairhaven	100%	100%	0.79	0.94		$0	$0	$0	$113,000	$0	$0	$0
Northwest	Norco	California	Arlington	6th		$15,237,000	$12,525,000	$93,000	Between Arlington and 7th, and Green Tree ans 6th	78%	78%	0.96	1.14	77%	$2,712,000	$0	$2,712,000	$113,000	$20,000	$20,000	$2,732,000
Northwest	Norco	Corydon	River	5th		$0	$0	$0		0%	0%	0.52	0.78		$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	Hamner	Santa Ana River	bridge		$33,408,000	$11,455,000	$395,000		0%	0%	1.41	1.67	34%	$21,953,000	$21,621,000	$332,000	$1,152,000	$0	$0	$332,000
Northwest	Norco	Hamner	Santa Ana River	Hidden Valley		$49,591,000	$49,591,000	$368,000	Between Detroit and Santa Ana River	6%	6%	0.65	0.80		$0	$0	$0	$368,000	$0	$0	$0
Northwest	Norco	Hidden Valley	I-15	Norco Hills		$0	$0	$0	Between I-15 to I-15 NB On Ramp	3%	3%	0.55	0.70		$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	Hidden Valley	Hamner	I-15		$0	$0	$0	Between Hamner and I-15	100%	100%	1.14	1.23	27%	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	Norco	Corydon	Hamner		$0	$0	$0		0%	0%	0.33	0.48		$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	North	California	Crestview		$0	$0	$0	Between California and Crestview	100%	100%	0.96	1.19	80%	$0	$0	$0	$0	$0	$0	$0
Northwest	Norco	River	Archibald	Corydon		$1,743,000	$1,109,000	$8,000	Between Archibald and Sundance	79%	79%	1.20	1.56	54%	$634,000	$0	$634,000	$13,000	$5,000	$5,000	$639,000
Northwest	Riverside	14th	Market	Martin Luther King		$0	$0	$0		0%	0%	0.66	0.76		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	1st	Market	Main		$0	$0	$0		0%	0%	0.24	0.50		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	3rd	SR-91	I-215		$1,941,000	$1,941,000	$14,000		0%	0%	0.49	0.59		$0	$0	$0	$14,000	$0	$0	$0
Northwest	Riverside	3rd	BNSF	railroad crossing		$105,560,000	$30,560,000	$1,054,000		0%	0%	0.77	0.90		$0	$75,000,000	$0	$3,640,000	$0	$0	$0
Northwest	Riverside	Adams	Arlington	SR-91		$0	$0	$0		0%	0%	0.49	0.48		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Adams	SR-91	Lincoln		$0	$0	$0		0%	0%	0.44	0.64		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Adams	SR-91	interchange		$32,698,000	$3,262,000	$0		0%	0%	1.46	1.52	10%	$29,436,000	$935,000	$28,501,000	$0	$0	$0	$28,501,000
Northwest	Riverside	Arlington	Fairhaven	La Sierra		$0	$0	$0		0%	0%	0.68	0.77		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Buena Vista	Santa Ana River	Redwood		$0	$0	$0		0%	0%	0.83	1.17		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Canyon Crest	Martin Luther King	Central		$0	$0	$0	Between Martin Luther King and El Cerrito	71%	71%	1.02	1.16	55%	$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Canyon Crest	Central	Country Club		$0	$0	$0		0%	0%	0.70	0.77		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Canyon Crest	Country Club	Via Vista		$4,996,000	$1,593,000	$45,000	Between Country Club and Via Vista	100%	100%	1.30	1.48	32%	$3,403,000	$0	$3,403,000	$142,000	$97,000	$97,000	$3,500,000
Northwest	Riverside	Canyon Crest	Via Vista	Alessandro		$0	$0	$0		0%	0%	0.59	0.72		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	Chicago	I-215/SR-60		$0	$0	$0	Between Chicago and Chapala, and Canyon Crest and Quail Run	32%	32%	0.80	0.96		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	SR-91	Magnolia		$0	$0	$0	Between SR-91 and SR-91 SB On Ramp	6%	6%	0.64	0.71		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	Alessandro	SR-91		$0	$0	$0	Between SR-91 and SR-91 NB On Ramp, and Nottingham and 420 ft West	5%	5%	0.75	0.87		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Central	Van Buren	Magnolia		$0	$0	$0		0%	0%	0.43	0.53		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Chicago	Alessandro	Spruce		$0	$0	$0	Between Martin Luther King and Ransom	43%	43%	0.85	0.99		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Chicago	Spruce	Columbia		$0	$0	$0		0%	0%	0.72	0.85		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Columbia	Main	Iowa		$0	$0	$0		0%	0%	0.62	0.71		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Columbia	I-215	interchange		$32,698,000	$9,050,000	$0		0%	0%	2.96	3.74	28%	$23,648,000	$0	$23,648,000	$0	$0	$0	$23,648,000
Northwest	Riverside	Iowa	Center	3rd		$30,272,000	$30,272,000	$225,000	Between Palmyrita and Columbia	11%	11%	0.82	0.93		$0	$0	$0	$225,000	$0	$0	$0
Northwest	Riverside	Iowa	3rd	University		$0	$0	$0		0%	0%	0.65	0.73		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Iowa	University	Martin Luther King		$0	$0	$0		0%	0%	0.24	0.36		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	JFK	Trautwein	Wood		$1,880,000	$1,880,000	$49,000		0%	0%	0.54	0.68		$0	$0	$0	$49,000	$0	$0	$0
Northwest	Riverside	La Sierra	Arlington	SR-91		$0	$0	$0		0%	0%	0.43	0.51		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	La Sierra	SR-91	Indiana		$192,000	$192,000	$0		0%	0%	0.77	0.85		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	La Sierra	Indiana	Victoria		$778,000	$778,000	$0		0%	0%	0.71	0.80		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Lemon (NB One way)	Mission Inn	University		$0	$0	$0		0%	0%	0.11	0.15		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Lincoln	Van Buren	Jefferson		$0	$0	$0		0%	0%	0.23	0.48		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Lincoln	Jefferson	Washington		$0	$0	$0		0%	0%	0.26	0.49		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Lincoln	Washington	Victoria		$0	$0	$0		0%	0%	0.39	0.56		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Madison	SR-91	Victoria		$853,000	$853,000	$0		0%	0%	0.65	0.66		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Madison	BNSF	railroad crossing		$20,010,000	$20,010,000	$690,000		0%	0%	0.81	0.80		$0	$0	$0	$690,000	$0	$0	$0
Northwest	Riverside	Magnolia	BNSF Railroad	Tyler		$0	$0	$0	Between Buchanan and SR-91 EB On Ramp, and SR-91 to La Sierra	53%	53%	0.82	0.96		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Magnolia	BNSF	railroad crossing		$0	$0	$0		0%	0%	0.90	1.04		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Magnolia	Tyler	Harrison		$0	$0	$0		0%	0%	0.52	0.66		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Magnolia	Harrison	14th		$0	$0	$0		0%	0%	0.62	0.79		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Main	1st	San Bernardino County		$0	$0	$0	Between Columbia and San Bernardino County, and SR-60 WB On Ramp to SR-60 EB On Ramp	43%	43%	0.76	0.94		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Market	14th	Santa Ana River		$9,491,000	$9,491,000	$70,000	Between Rivera and Santa Ana River	21%	21%	0.72	0.92		$0	$0	$0	$70,000	$0	$0	$0
Northwest	Riverside	Martin Luther King	14th	I-215/SR-60		$24,031,000	$24,031,000	$178,000	Between Victoria and Sedgwick, and Iowa and I-215 SB On Ramp	41%	41%	0.78	0.87		$0	$0	$0	$178,000	$0	$0	$0
Northwest	Riverside	Mission Inn	Redwood	Lemon		$0	$0	$0		0%	0%	0.26	0.47		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Redwood (SB One way)	Mission Inn	University		$0	$0	$0		0%	0%	0.59	0.74		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Trautwein	Alessandro	Van Buren		$0	$0	$0	Between Mission Grove and Orange Terrace	43%	43%	0.88	1.04		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	SR-91	Magnolia		$0	$0	$0		0%	0%	0.31	0.37		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	SR-91	interchange		$63,061,000	$21,814,000	$0		0%	0%	1.56	1.90	35%	$41,247,000	$0	$41,247,000	$0	$0	$0	$41,247,000
Northwest	Riverside	Tyler	Magnolia	Hole		$0	$0	$0		0%	0%	0.30	0.30		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	Hole	Wells		$0	$0	$0		0%	0%	0.52	0.53		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Tyler	Wells	Arlington		$0	$0	$0		0%	0%	0.59	0.62		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	University	Redwood	SR-91		$859,000	$859,000	$0		0%	0%	0.60	0.71		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	University	SR-91	I-215/SR-60		$2,067,000	$2,067,000	$0	Between SR-60 and SR-60 SB On Ramp	2%	2%	0.52	0.65		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Victoria	Lincoln	Arlington		$0	$0	$0		0%	0%	0.86	1.11		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Victoria	Madison	Washington		$0	$0	$0		0%	0%	0.36	0.55		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Washington	Victoria	Hermosa		$27,018,000	$27,018,000	$201,000	Between Dufferin and Overlook, and Bradley and Hermosa	34%	34%	0.83	0.94		$0	$0	$0	$201,000	$0	$0	$0
Northwest	Riverside	Wood	JFK	Van Buren		$3,053,000	$3,053,000	$79,000		0%	0%	0.81	1.03		$0	$0	$0	$79,000	$0	$0	$0
Northwest	Riverside	Wood	Van Buren	Bergamont		$0	$0	$0		0%	0%	0.50	0.69		$0	$0	$0	$0	$0	$0	$0
Northwest	Riverside	Wood	Bergamont	Krameria		$0	$0	$0		0%	0%	0.55	0.77		$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-2 TUMF Network Detailed Cost Estimate - Existing Need and Obligated Funding

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MAX TUMF MSHCP SHARE	EXIST NEED LOS E&F SEGMENT DESCRIPTION	% EXIST NEED	>2 LANE ADJST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Northwest		Unincorporatec	Cantu-Galleano Ranch	Hamner	Wineville		$0	$0	$0	0%	0%	0.47	0.95		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Dos Lagos (Weirick)	Temescal Canyon	I-15		$0	$0	$0 Between I-15 and I-15 NB On Ramp	22%	22%	0.52	0.72		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	El Cerrito	I-15	Ontario		$0	$0	$0	0%	0%	0.15	0.26		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	El Sobrante	Mockingbird Canyon	Cajalco		$0	$0	$0	0%	0%	0.62	0.78		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Harley John	Washington	Scottsdale		$0	$0	$0	0%	0%	0.38	0.65		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Harley John	Scottsdale	Cajalco		$0	$0	$0	0%	0%	0.38	0.73		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	La Sierra	Victoria	El Sobrante		$0	$0	$0 Between Victoria and Orchard View	40%	40%	0.85	1.03		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	La Sierra	El Sobrante	Cajalco		$0	$0	$0	0%	0%	0.50	0.83		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Mockingbird Canyon	Van Buren	El Sobrante		$20,871,000	$20,871,000	$593,000 Between Van Buren and Lindina	31%	31%	0.76	0.97		$0	$0	$0	$593,000	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	El Cerrito	Tuscany		$3,168,000	$0	$0	0%	0%	0.68	1.07		$0	$3,168,000	$0	$90,000	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	Tuscany	Dos Lagos		$0	$0	$0	0%	0%	0.72	1.08		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	Dos Lagos	Leroy		$0	$0	$0	0%	0%	0.48	0.74		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	Leroy	Dawson Canyon		$0	$0	$0	0%	0%	0.46	0.71		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	Dawson Canyon	I-15		$0	$0	$0 Between I-15 NB On Ramp and 1000 ft North	43%	43%	0.66	1.01		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	I-15	interchange		$32,698,000	$32,698,000	$0	0%	0%	0.85	1.35		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	I-15	Park Canyon		$14,329,000	$14,329,000	$427,000 Between I-15 SB On Ramp and Squaw Mountain	27%	27%	0.69	1.02		$0	$0	$0	$427,000	$0	$0	$0
Northwest		Unincorporatec	Temescal Canyon	Park Canyon	Indian Truck Trail		$0	$0	$0	0%	0%	0.02	0.12		$0	$0	$0	$0	$0	$0	$0
Northwest		Unincorporatec	Washington	Hermosa	Harley John		$12,787,000	$12,787,000	$332,000	0%	0%	0.73	0.92		$0	$0	$0	$332,000	$0	$0	$0
Northwest		Unincorporatec	Wood	Krameria	Cajalco		$12,537,000	$12,537,000	$325,000 Between Krameria and Mariposa	17%	17%	0.56	0.83		$0	$0	$0	$325,000	$0	$0	$0
Pass		Banning	8th	Wilson	I-10		$0	$0	$0	0%	0%	0.25	0.37		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Lincoln	Sunset	SR-243		$0	$0	$0	0%	0%	0.14	0.16		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Ramsey	I-10	8th		$0	$0	$0	0%	0%	0.10	0.13		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Ramsey	8th	Highland Springs		$0	$0	$0	0%	0%	0.24	0.33		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	SR-243	I-10	Wesley		$0	$0	$0	0%	0%	0.31	0.46		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Sun Lakes	Highland Home	Sunset		$30,502,000	$30,502,000	$226,000	0%	0%	0.10	0.11		$0	$0	$0	$226,000	$0	$0	$0
Pass		Banning	Sun Lakes	Smith Creek	bridge		$8,352,000	$8,352,000	$288,000	0%	0%	0.10	0.11		$0	$0	$0	$288,000	$0	$0	$0
Pass		Banning	Sun Lakes	Montgomery Creek	bridge		$5,568,000	$5,568,000	$192,000	0%	0%	0.10	0.11		$0	$0	$0	$192,000	$0	$0	$0
Pass		Banning	Sun Lakes	Highland Springs	Highland Home		$0	$0	$0	0%	0%	0.04	0.05		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Sunset	Ramsey	Lincoln		$0	$0	$0	0%	0%	0.13	0.23		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Sunset	I-10	interchange		$32,698,000	$32,698,000	$0	0%	0%	0.53	0.91		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Wilson	Highland Home	8th		$0	$0	$0	0%	0%	0.06	0.12		$0	$0	$0	$0	$0	$0	$0
Pass		Banning	Wilson	Highland Springs	Highland Home		$0	$0	$0	0%	0%	0.14	0.24		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	1st	Viele	Pennsylvania		$0	$0	$0	0%	0%	0.48	0.57		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	1st	Pennsylvania	Highland Springs		$0	$0	$0	0%	0%	0.51	0.71		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	6th	I-10	Highland Springs		$0	$0	$0	0%	0%	0.23	0.47		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Desert Lawn	Champions	Oak Valley (STC)		$0	$0	$0	0%	0%	0.45	0.80		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Oak Valley (14th)	Highland Springs	Pennsylvania		$0	$0	$0	0%	0%	0.05	0.11		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Oak Valley (14th)	Pennsylvania	Oak View		$0	$0	$0	0%	0%	0.14	0.26		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Oak Valley (14th)	Oak View	I-10		$0	$0	$0	0%	0%	0.69	1.04		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Oak Valley (14th)	I-10	interchange		$63,061,000	$62,401,000	$0	0%	0%	0.90	1.14	99%	$660,000	$0	$660,000	$0	$0	$0	$660,000
Pass		Beaumont	Oak Valley (STC)	UP Railroad	Tukwet Canyon		$0	$0	$0	0%	0%	0.01	0.23		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Oak Valley (STC)	Tukwet Canyon	I-10		$0	$0	$0	0%	0%	0.09	0.38		$0	$0	$0	$0	$0	$0	$0
Pass		Beaumont	Pennsylvania	6th	1st		$6,588,000	$6,588,000	$49,000	0%	0%	0.52	0.74		$0	$0	$0	$49,000	$0	$0	$0
Pass		Beaumont	Pennsylvania	I-10	interchange		$0	$0	$0	0%	0%	0.51	0.63		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	Bryant	County Line	Avenue L		$0	$0	$0	0%	0%	0.38	0.61		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	Calimesa	County Line	I-10		$0	$0	$0	0%	0%	0.13	0.38		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	Calimesa	I-10	interchange		$63,061,000	$63,061,000	$0	0%	0%	0.54	1.59		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	County Line	7th	Bryant		$0	$0	$0 Between I-10 WB On Ramp and Calimesa, and Park and 5th	13%	13%	0.54	0.71		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	County Line	I-10	interchange		$32,698,000	$32,698,000	$0	0%	0%	0.88	1.26		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	Desert Lawn	Palmer	Champions		$0	$0	$0	0%	0%	0.04	0.44		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	Singleton	Avenue L	Condit		$0	$0	$0	0%	0%	0.43	0.64		$0	$0	$0	$0	$0	$0	$0
Pass		Calimesa	Singleton	Condit	Roberts		$12,972,000	$12,972,000	$96,000	0%	0%	0.74	1.14		$0	$0	$0	$96,000	$0	$0	$0
Pass		Calimesa	Singleton	I-10	interchange		$63,061,000	$0	$0	0%	0%	1.04	0.99	0%	$63,061,000	$0	$63,061,000	$0	$0	$0	$63,061,000
Pass		Calimesa	Tukwet Canyon	Roberts Rd	Palmer		$0	$0	$0	0%	0%	0.71	1.37		$0	$0	$0	$0	$0	$0	$0
Pass		Unincorporatec	Live Oak Canyon	Oak Valley (STC)	San Bernardino County		$0	$0	$0	0%	0%	0.36	0.47		$0	$0	$0	$0	$0	$0	$0
Pass		Unincorporatec	San Timoteo Canyon	San Bernardino County	UP Railroad		$0	$0	$0 Between San Bernardino County and Redlands	22%	22%	0.31	0.66		$0	$0	$0	$0	$0	$0	$0
Pass		Unincorporatec	San Timoteo Canyon	UP Railroad	railroad crossing		$52,780,000	$52,780,000	$1,820,000	0%	0%	0.08	0.48		$0	$0	$0	$1,820,000	$0	$0	$0
San Jacinto		Hemet	Sanderson	Acacia	Menlo		$0	$0	$0	0%	0%	0.74	0.92		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	Sanderson	Domenigoni	Stetson		$0	$0	$0 Between Stetson and Thornton	26%	26%	0.79	1.11		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	Sanderson	RR Crossing	Acacia		$0	$0	$0	0%	0%	0.82	0.97		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	Sanderson	Stetson	RR Crossing		$0	$0	$0	0%	0%	0.77	1.11		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	Sanderson	Menlo	Esplanade		$0	$0	$0	0%	0%	0.72	0.95		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	SR-74 (Florida)	Warren	Cawston		$0	$0	$0	0%	0%	0.62	0.96		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	SR-74 (Florida)	Columbia	Ramona		$0	$0	$0	0%	0%	0.47	0.57		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	SR-74/SR-79 (Florida)	Cawston	Columbia		$0	$0	$0	0%	0%	0.38	0.63		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	State	Domenigoni	Chambers		$0	$0	$0	0%	0%	0.44	0.92		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	State	Chambers	Stetson		$0	$0	$0	0%	0%	0.51	0.93		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	State	Florida	Esplanade		$0	$0	$0	0%	0%	0.33	0.53		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	State	Stetson	Florida		$0	$0	$0	0%	0%	0.57	0.80		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	Stetson	Cawston	State		$0	$0	$0	0%	0%	0.49	0.68		$0	$0	$0	$0	$0	$0	$0
San Jacinto		Hemet	Stetson	Warren	Cawston		$4,357,000	$4,357,000	$113,000	0%	0%	0.59	0.96		$0	$0	$0	$113,000	$0	$0	$0
San Jacinto		Hemet	Warren	Esplanade	Domenigoni		$19,926,000	$19,926,000	$517,000 Between Devonshire and Stetson	31%	31%	0.79	1.10		$0	$0	$0	$517,000	$0	$0	$0
San Jacinto		Hemet	Warren	Salt Creek	bridge		$4,176,000	$4,176,000	$144,000	0%	0%	0.64	1.05		$0	$0	$0	$144,000	$0	$0	$0
San Jacinto	San Jacinto		Esplanade	Mountain	State		$0	$0	$0	0%	0%	0.33	0.39		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		Esplanade	State	Warren		$0	$0	$0	0%	0%	0.37	0.55		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		Sanderson	Ramona	Esplanade		$0	$0	$0	0%	0%	0.53	0.84		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		SR-79 (North Ramona)	State	San Jacinto		$0	$0	$0	0%	0%	0.55	0.70		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		SR-79 (San Jacinto)	North Ramona Blvd	7th		$0	$0	$0	0%	0%	0.70	0.80		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		SR-79 (San Jacinto)	7th	SR-74		$0	$0	$0	0%	0%	0.32	0.46		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		State	Ramona	Esplanade		$0	$0	$0	0%	0%	0.60	0.78		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		State	Gilman Springs	Quandt Ranch		$3,317,000	$3,317,000	$86,000	0%	0%	0.82	1.01		$0	$0	$0	$86,000	$0	$0	$0
San Jacinto	San Jacinto		State	San Jacinto River	bridge		$0	$0	$0	0%	0%	0.86	1.03		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		State	Quandt Ranch	Ramona		$0	$0	$0	0%	0%	0.39	0.46		$0	$0	$0	$0	$0	$0	$0
San Jacinto	San Jacinto		Warren	Ramona	Esplanade		$13,469,000	$13,469,000	$350,000	0%	0%	0.67	0.89		$0	$0	$0	$350,000	$0	$0	$0
San Jacinto		Unincorporatec	Gilman Springs	Sanderson	State		$11,097,000	$11,097,000	$288,000	0%	0%	0.83	1.07		$0	$0	$0	$288,000	$0	$0	$0
San Jacinto		Unincorporatec	Gilman Springs	Massacre Canyon Wash	bridge		$1,392,000	$1,392,000	$48,000	0%	0%	0.85	1.11		$0	$0	$0	$48,000	$0	$0	$0
San Jacinto		Unincorporatec	SR-79 (Winchester)	SR-74 (Florida)	Domenigoni		$0	$0	$0	0%	0%	0.66	1.05		$0	$0	$0	$0	$0	$0	$0

EXHIBIT H-2 TUMF Network Detailed Cost Estimate - Existing Need and Obligated Funding

Updated: July 23, 2024

AREA	PLAN DIST	CITY	STREETNAME	SEGMENTFROM	SEGMENTTO	TOTAL COST	MAXIMUM TUMF SHARE	MAX TUMF MSHCP SHARE	EXIST NEED LOS E&F SEGMENT DESCRIPTION	% EXIST NEED	>2 LANE ADJST	EXIST V/C	FUTURE V/C	TUMF V/C SHARE	EXIST NEED	OBLIGATED	UNFUND EXIST NEED	MSHCP	MSHCP EXIST NEED	MSHCP UNFUND EXIST NEED	COMBINED UNFUND EXIST NEED
Southwest	Lake Elsinore	Corydon	Mission	Grand	$3,336,000	$3,336,000	$87,000		0%	0%	0.73	1.02		$0	$0	$0	$87,000	$0	$0	$0
Southwest	Lake Elsinore	Diamond	Mission	I-15	$0	$0	$0		0%	0%	0.73	0.93		$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Franklin (integral to Railroad C	I-15	interchange	$32,698,000	$32,698,000	$0		0%	0%	0.66	1.25		$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Grand	Lincoln	Toft	$0	$0	$0		0%	0%	0.47	0.65		$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Grand	Toft	SR-74 (Riverside)	$3,512,000	$3,512,000	$91,000		0%	0%	0.68	0.92		$0	$0	$0	$91,000	$0	$0	$0
Southwest	Lake Elsinore	Lake	I-15	Lincoln	$39,817,000	$32,726,000	$335,000	Between Orange Grove and the I-15 SB On Ramp	76%	76%	0.99	1.28	77%	$7,091,000	$0	$7,091,000	$407,000	$73,000	$73,000	$7,164,000
Southwest	Lake Elsinore	Lake	I-15	interchange	$32,698,000	$15,771,000	$0		0%	0%	1.08	1.25	48%	$16,927,000	$0	$16,927,000	$0	$0	$0	$16,927,000
Southwest	Lake Elsinore	Lake	Temescal Wash	bridge	$2,506,000	$1,150,000	$39,000		0%	0%	1.12	1.31	46%	$1,356,000	$0	$1,356,000	$86,000	$0	$0	$1,356,000
Southwest	Lake Elsinore	Mission	Railroad Canyon	Bundy Canyon	$0	$0	$0		0%	0%	0.48	0.74		$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	Nichols	I-15	Lake	$7,850,000	$7,850,000	$204,000		0%	0%	0.59	0.96		$0	$0	$0	$204,000	$0	$0	$0
Southwest	Lake Elsinore	Nichols	Temescal Wash	bridge	$4,176,000	$4,176,000	$144,000		0%	0%	0.63	1.12		$0	$0	$0	$144,000	$0	$0	$0
Southwest	Lake Elsinore	Nichols	I-15	interchange	$63,061,000	$63,061,000	$0		0%	0%	0.63	1.12		$0	$0	$0	$0	$0	$0	$0
Southwest	Lake Elsinore	SR-74 (Collier/Riverside)	I-15	Lakeshore	$24,303,000	$24,303,000	$180,000	Between Strickland and Collier	31%	31%	0.86	1.05		$0	$0	$0	$180,000	$0	$0	$0
Southwest	Lake Elsinore	SR-74 (Grand)	Riverside	SR-74 (Ortega)	$9,733,000	$3,691,000	$27,000	Between Riverside and Ortega	100%	100%	1.19	1.37	38%	$6,042,000	$0	$6,042,000	$72,000	$45,000	$45,000	$6,087,000
Southwest	Lake Elsinore	SR-74 (Riverside)	Lakeshore	Grand	$20,175,000	$20,175,000	$150,000	Between Lakeshore and Raven	31%	31%	0.78	0.91		$0	$0	$0	$150,000	$0	$0	$0
Southwest	Lake Elsinore	Temescal Canyon	I-15	Lake	$7,411,000	$7,411,000	$211,000		0%	0%	0.64	1.17		$0	$0	$0	$211,000	$0	$0	$0
Southwest	Lake Elsinore	Temescal Canyon	Temescal Wash	bridge	$3,480,000	$3,480,000	$120,000		0%	0%	0.85	1.28		$0	$0	$0	$120,000	$0	$0	$0
Southwest	Murrieta	California Oaks	Jefferson	I-15	$0	$0	$0		0%	0%	0.47	0.61		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	California Oaks	I-15	Jackson	$0	$0	$0		0%	0%	0.76	0.89		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	California Oaks	Jackson	Clinton Keith	$0	$0	$0		0%	0%	0.65	0.77		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Jackson	Whitewood	Ynez	$0	$0	$0		0%	0%	0.32	0.62		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Jefferson	Palomar	Nutmeg	$1,562,000	$1,562,000	$44,000		0%	0%	0.07	0.10		$0	$0	$0	$44,000	$0	$0	$0
Southwest	Murrieta	Jefferson	Nutmeg	Murrieta Hot Springs	$0	$0	$0		0%	0%	0.46	0.63		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Jefferson	Murrieta Hot Springs	Cherry	$30,634,000	$30,634,000	$227,000		0%	0%	0.47	0.80		$0	$0	$0	$227,000	$0	$0	$0
Southwest	Murrieta	Keller	I-215	Whitewood	$0	$0	$0		0%	0%	0.20	0.45		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Keller	I-215	interchange	$0	$0	$0		0%	0%	0.09	0.06		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Los Alamos	Jefferson	I-215	$0	$0	$0		0%	0%	0.24	0.38		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	Jefferson	I-215	$0	$0	$0	Between Hancock and I-215	17%	17%	0.62	0.90		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	I-215	Margarita	$0	$0	$0	Between I-215 and I-215 NB On Ramp, and Alta Murrieta and St. Maria	11%	11%	0.82	1.08		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Murrieta Hot Springs	Margarita	SR-79 (Winchester)	$4,057,000	$3,899,000	$101,000	Between Margarita and Calle del Lago	57%	57%	0.93	1.33	93%	$158,000	$0	$158,000	$105,000	$4,000	$4,000	$162,000
Southwest	Murrieta	Nutmeg	Jefferson	Clinton Keith	$0	$0	$0		0%	0%	0.45	0.69		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Whitewood	Clinton Keith	Los Alamos	$2,708,000	$2,708,000	$77,000		0%	0%	0.45	0.76		$0	$0	$0	$77,000	$0	$0	$0
Southwest	Murrieta	Whitewood	Los Alamos	Murrieta Hot Springs	$0	$0	$0		0%	0%	0.45	0.75		$0	$0	$0	$0	$0	$0	$0
Southwest	Murrieta	Whitewood	Murrieta Hot Springs	Jackson	$4,629,000	$4,629,000	$47,000		0%	0%	0.15	0.16		$0	$0	$0	$47,000	$0	$0	$0
Southwest	Murrieta	Ynez	Jackson	SR-79 (Winchester)	$0	$0	$0		0%	0%	0.62	1.00		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Butterfield Stage	Murrieta Hot Springs	Calle Chapos	$816,000	$816,000	$0		0%	0%	0.61	1.15		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Butterfield Stage	Calle Chapos	La Serena	$696,000	$696,000	$0		0%	0%	0.58	0.93		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Butterfield Stage	La Serena	Rancho California	$904,000	$904,000	$0	Between La Serena and Rancho California	100%	100%	0.95	1.21	85%	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Butterfield Stage	Rancho California	Pauba	$846,000	$846,000	$0	Between Rancho California and Creek	5%	5%	0.55	0.88		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Butterfield Stage	Pauba	SR-79 (Temecula Pkwy)	$725,000	$725,000	$21,000		0%	0%	0.49	0.84		$0	$0	$0	$21,000	$0	$0	$0
Southwest	Temecula	Jefferson	Cherry	Rancho California	$2,285,000	$2,285,000	$0		0%	0%	0.34	0.92		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Margarita	Murrieta Hot Springs	SR-79 (Temecula Pkwy)	$7,644,000	$7,644,000	$0	Between Winchester and Campos Verdes, and Solana and 250 ft North of Ramsey	5%	5%	0.65	1.04		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Old Town Front	Rancho California	I-15/SR-79 (Temecula Pkwy)	$0	$0	$0		0%	0%	0.68	1.37		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Pechanga Pkwy	SR-79 (Temecula Pkwy)	Via Gilberto	$0	$0	$0		0%	0%	0.72	1.02		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Pechanga Pkwy	Via Gilberto	Pechanga Pkwy	$0	$0	$0		0%	0%	0.42	0.52		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	Rancho California	Jefferson	Margarita	$18,254,000	$18,181,000	$101,000	Between I-15 SB On Ramp and I-15, and Moraga and Cosmic	40%	40%	0.90	1.37	99%	$73,000	$0	$73,000	$101,000	$0	$0	$73,000
Southwest	Temecula	Rancho California	I-15	interchange	$32,698,000	$0	$0		0%	0%	1.55	2.67	63%	$12,098,000	$32,698,000	$0	$0	$0	$0	$0
Southwest	Temecula	Rancho California	Margarita	Butterfield Stage	$0	$0	$0		0%	0%	0.63	0.74		$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	SR-79 (Temecula Pkwy)	I-15	Pechanga Pkwy	$0	$0	$0	Between I-15 and Pechanga	100%	100%	1.08	1.42	65%	$0	$0	$0	$0	$0	$0	$0
Southwest	Temecula	SR-79 (Temecula Pkwy)	Pechanga Pkwy	Butterfield Stage	$3,065,000	$3,065,000	$0		0%	0%	0.65	0.88		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	Briggs	Scott	SR-79 (Winchester)	$6,509,000	$6,509,000	$169,000		0%	0%	0.41	0.70		$0	$0	$0	$169,000	$0	$0	$0
Southwest	Unincorporatec	Butterfield Stage	Tucalota Creek	bridge	$0	$0	$0		0%	0%	0.41	0.70		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	Butterfield Stage (Pourroy)	Auld	Murrieta Hot Springs	$23,076,000	$23,076,000	$656,000	Between Auld and Honey Pine	23%	12%	0.88	0.99		$0	$0	$0	$656,000	$0	$0	$0
Southwest	Unincorporatec	Grand	Ortega	Corydon	$68,025,000	$68,025,000	$505,000	Between Zinck and Stoneman, and Ontario and Corydon	16%	16%	0.80	1.06		$0	$0	$0	$505,000	$0	$0	$0
Southwest	Unincorporatec	Horsethief Canyon	Temescal Canyon	I-15	$0	$0	$0		0%	0%	0.81	0.64		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	Indian Truck Trail	Temescal Canyon	I-15	$0	$0	$0		0%	0%	0.15	0.21		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	Murrieta Hot Springs	SR-79 (Winchester)	Pourroy	$0	$0	$0	Between Winchester and Vons	4%	4%	0.46	0.86		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	Pala	Pechanga	San Diego County	$0	$0	$0	Between Pechanga and Rainbow Oaks	48%	48%	0.88	1.48		$0	$0	$0	$0	$0	$0	$0
Southwest	Unincorporatec	Pourroy	SR-79 (Winchester)	Auld	$2,236,000	$2,236,000	$64,000		0%	0%	0.42	0.57		$0	$0	$0	$64,000	$0	$0	$0
Southwest	Unincorporatec	Rancho California	Butterfield Stage	Glen Oaks	$87,369,000	$87,369,000	$482,000		0%	0%	0.65	0.93		$0	$0	$0	$482,000	$0	$0	$0
Southwest	Unincorporatec	Temescal Canyon	Horsethief Canyon Wash	bridge	$3,340,000	$3,340,000	$115,000		0%	0%	0.66	0.86		$0	$0	$0	$115,000	$0	$0	$0
Southwest	Unincorporatec	Temescal Canyon	Indian Truck Trail	I-15	$15,739,000	$15,739,000	$447,000		0%	0%	0.64	0.97		$0	$0	$0	$447,000	$0	$0	$0
Southwest	Unincorporatec	Temescal Canyon	Indian Wash	bridge	$1,462,000	$1,462,000	$50,000		0%	0%	0.61	0.80		$0	$0	$0	$50,000	$0	$0	$0
Southwest	Wildomar	Bundy Canyon	Mission	I-15	$9,704,000	$9,704,000	$72,000		0%	0%	0.60	0.90		$0	$0	$0	$72,000	$0	$0	$0
Southwest	Wildomar	Grand	Corydon	Wildomar Trail	$0	$0	$0		0%	0%	0.72	0.89		$0	$0	$0	$0	$0	$0	$0
Southwest	Wildomar	Mission	Bundy Canyon	Palomar	$0	$0	$0		0%	0%	0.20	0.43		$0	$0	$0	$0	$0	$0	$0
Southwest	Wildomar	Palomar	Clinton Keith	Washington	$3,227,000	$3,227,000	$84,000		0%	0%	0.59	0.88		$0	$0	$0	$84,000	$0	$0	$0
Southwest	Wildomar	Palomar	Mission	Clinton Keith	$13,493,000	$13,493,000	$383,000		0%	0%	0.60	0.88		$0	$0	$0	$383,000	$0	$0	$0
Southwest	Wildomar	Wildomar Trail	I-15	Baxter	$1,281,000	$1,281,000	$33,000	Between I-15 SB On Ramp to Baxter	73%	73%	0.87	1.06		$0	$0	$0	$33,000	$0	$0	$0
Southwest	Wildomar	Wildomar Trail	I-15	interchange	$32,698,000	$27,858,000	$0		0%	0%	0.94	1.15	85%	$4,840,000	$0	$4,840,000	$0	$0	$0	$4,840,000
Southwest	Wildomar	Wildomar Trail	Baxter	Palomar	$11,316,000	$11,316,000	$84,000	Between Baxter and Cervera	35%	35%	0.82	0.94		$0	$0	$0	$84,000	$0	$0	$0
Southwest	Wildomar	Wildomar Trail	Palomar	Grand	$0	$0	$0		0%	0%	0.87	1.03		$0	$0	$0	$0	$0	$0	$0
Subtotal					$2,508,329,000	$1,913,028,000	$23,597,000		13.2%					$365,640,000	$264,315,000	$330,986,000	$32,098,000	$318,000	$318,000	$331,304,000
Totals	**Network**				$ 4,840,250,000	$ 3,874,735,000	$ 53,859,000		12.0%	Network Unfunded Existing Need Adjustment				$ 652,275,000	$ 382,886,000	$ 582,629,000	$ 64,606,000	$ 1,410,000	$ 1,263,000	$ 583,892,000
	Transit				$ 217,870,000	$ 154,831,000			28.9%	Transit Existing Need Adjustment						$ 63,039,000				
	Administration				$ 161,183,000	$ 161,183,000														
	MSHCP				$ 64,606,000	$ 53,859,000										$ 1,263,000				
	TOTAL				**$ 5,283,909,000**	**$ 4,244,608,000**			12.2%	Total Unfunded Existing Need Adjustment						**$ 646,931,000**				

EXHIBIT H-3 Regional Transit Existing Need Share

Summary of Transit Trip Change

Year	Western Riverside Daily Transit Trips
2023*	16,575
2045**	57,282
Growth 2023 - 2045	40,707
Existing Need Share:	28.9%
Future Growth Share:	71.1%

Notes:

* - 2023 actual average weekday daily ridership provided by RTA staff December 1, 2023

** - 2045 forecast average weekday daily ridership obtained from SCAG 2020 RTP/SCS Model as provided by Fehr and Peers November

Maximum TUMF Transit Component Value

RTA Transit Full Mitigation Cost	Existing Need Cost	MAX TUMF TRANSIT VALUE
$217,870,000	$63,039,000	**$154,831,000**

Total MAX TUMF VALUE	***$4,297,490,440***
Transit Share of MAX TUMF VALUE	***3.6%***

Appendix I - Western Riverside County Regional Trip Distribution

In order to ensure an equitable regional/zonal distribution of potential TUMF revenues, the distribution of trips in the WRCOG region was analyzed to determine the distribution between local (intra-zonal) and regional (inter-zonal) trips. This analysis was completed using the Year 2040 No-Build scenario Origin-Destination (O-D) vehicle trip tables from RivCoM. The analysis of vehicle trips based on the respective trip ends as stratified by zone is considered sufficient to establish the rough proportionality between local (intra-zonal) and regional (inter-zonal) trips because this measure is intended to only serve as a guide in the distribution of potential TUMF revenues between regional and local projects, and is not intended to serve as the basis for quantifying the relative magnitude of the impacts of different types of new development on the TUMF network (as described in **Appendix J**)

The first step in the analysis was to create a correspondence table between the traffic analysis zones (TAZ's) in the RivCoM model and the five WRCOG TUMF zones: Northwest, Central, Pass Area, Hemet/San Jacinto, and Southwest. A table detailing the TAZ correspondence for each WRCOG TUMF zone is included as **Exhibit I-1** in this Appendix. The vehicle trip tables by TAZ were aggregated to obtain the trip summary between six districts (five WRCOG TUMF Zones and one for the rest of Southern California region included in the model analysis area)

Table 5.1 and **5.2** of the Nexus Study produce a matrix of total combined AM and PM peak period vehicle trips between the six districts. This information is subsequently weighted by TUMF future network lane miles in **Table 5.3** to determine the relative share of trips that can be allocated between the backbone network and secondary network. **Exhibits I-2** through **I-9** provide the corresponding peak period vehicle trip matrices for each of the four time periods analyzed by the RivCoM model (AM peak, midday, PM peak and overnight) as well as total daily trips between the six districts.

EXHIBIT I-1
RivCoM TAZ Correspondence by WRCOG TUMF Zone - Hemet/San Jacinto

TAZ	County	WRCOG Zone	City
1008	Riverside	Central	Lake Elsinore
1044	Riverside	Central	Menifee
1045	Riverside	Central	Menifee
1046	Riverside	Central	Menifee
1047	Riverside	Central	Menifee
1048	Riverside	Central	Menifee
1049	Riverside	Central	Menifee
1050	Riverside	Central	Menifee
1051	Riverside	Central	Menifee
1052	Riverside	Central	Menifee
1053	Riverside	Central	Menifee
1054	Riverside	Central	Menifee
1055	Riverside	Central	Menifee
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1057	Riverside	Central	Menifee
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1072	Riverside	Central	Menifee
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1076	Riverside	Central	Menifee
1077	Riverside	Central	Menifee
1078	Riverside	Central	Menifee
1079	Riverside	Central	Menifee
1080	Riverside	Central	Menifee
1081	Riverside	Central	Menifee
1082	Riverside	Central	Menifee
1083	Riverside	Central	Menifee
1084	Riverside	Central	Menifee
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1099	Riverside	Central	Menifee
1100	Riverside	Central	Menifee
1101	Riverside	Central	Menifee
1102	Riverside	Central	Menifee
1103	Riverside	Central	Menifee
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1106	Riverside	Central	Menifee
1107	Riverside	Central	Menifee
1108	Riverside	Central	Menifee
1109	Riverside	Central	Menifee
1110	Riverside	Central	Menifee
1111	Riverside	Central	Menifee
1112	Riverside	Central	Menifee
1113	Riverside	Central	Menifee
1114	Riverside	Central	Menifee
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1119	Riverside	Central	Menifee
1120	Riverside	Central	Menifee
1121	Riverside	Central	Menifee
1122	Riverside	Central	Menifee
1123	Riverside	Central	Menifee
1124	Riverside	Central	Menifee
1125	Riverside	Central	Menifee
1126	Riverside	Central	Menifee
1127	Riverside	Central	Menifee
1128	Riverside	Central	Menifee
1129	Riverside	Central	Menifee
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1284	Riverside	Central	Moreno Valley
1285	Riverside	Central	Moreno Valley
1793	Riverside	Central	Perris
1794	Riverside	Central	Perris
1795	Riverside	Central	Perris
1796	Riverside	Central	Perris
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1798	Riverside	Central	Perris
1799	Riverside	Central	Perris
1800	Riverside	Central	Perris
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1802	Riverside	Central	Perris
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1814	Riverside	Central	Perris
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1877	Riverside	Central	Perris
1878	Riverside	Central	Perris
1879	Riverside	Central	Perris
2126	Riverside	Central	Riverside
2127	Riverside	Central	Riverside
2128	Riverside	Central	Riverside
2320	Riverside	Central	Unincorporated
2327	Riverside	Central	Unincorporated
2328	Riverside	Central	Unincorporated
2329	Riverside	Central	Unincorporated
2330	Riverside	Central	Unincorporated
2331	Riverside	Central	Unincorporated
2332	Riverside	Central	Unincorporated
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2334	Riverside	Central	Unincorporated
2335	Riverside	Central	Unincorporated
2336	Riverside	Central	Unincorporated
2337	Riverside	Central	Unincorporated
2339	Riverside	Central	Unincorporated
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2343	Riverside	Central	Unincorporated
2344	Riverside	Central	Unincorporated
2345	Riverside	Central	Unincorporated
2350	Riverside	Central	Unincorporated
2351	Riverside	Central	Unincorporated
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2716	Riverside	Central	Unincorporated
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2719	Riverside	Central	Unincorporated
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2722	Riverside	Central	Unincorporated
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2748	Riverside	Central	Unincorporated
2752	Riverside	Central	Unincorporated
2753	Riverside	Central	Unincorporated
2754	Riverside	Central	Unincorporated
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2756	Riverside	Central	Unincorporated
2757	Riverside	Central	Unincorporated
2758	Riverside	Central	Unincorporated
2759	Riverside	Central	Unincorporated
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2781	Riverside	Central	Unincorporated
2782	Riverside	Central	Unincorporated
2783	Riverside	Central	Unincorporated
2784	Riverside	Central	Unincorporated
2785	Riverside	Central	Unincorporated
2786	Riverside	Central	Unincorporated
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2789	Riverside	Central	Unincorporated
2793	Riverside	Central	Unincorporated
2794	Riverside	Central	Unincorporated
2795	Riverside	Central	Unincorporated
2796	Riverside	Central	Unincorporated
2797	Riverside	Central	Unincorporated
2802	Riverside	Central	Unincorporated
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2807	Riverside	Central	Unincorporated
2809	Riverside	Central	Unincorporated
2825	Riverside	Central	Unincorporated
2853	Riverside	Central	Unincorporated
2857	Riverside	Central	Unincorporated
2862	Riverside	Central	Unincorporated
2863	Riverside	Central	Unincorporated
2864	Riverside	Central	Unincorporated
2869	Riverside	Central	Unincorporated
2870	Riverside	Central	Unincorporated
2872	Riverside	Central	Unincorporated
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2878	Riverside	Central	Unincorporated
2879	Riverside	Central	Unincorporated
2880	Riverside	Central	Unincorporated
2905	Riverside	Central	Unincorporated
2906	Riverside	Central	Unincorporated
2907	Riverside	Central	Unincorporated
3177	Riverside	Central	Unincorporated
3183	Riverside	Central	Unincorporated
3225	Riverside	Central	Unincorporated
3227	Riverside	Central	Unincorporated
3228	Riverside	Central	Unincorporated
3229	Riverside	Central	Unincorporated
3230	Riverside	Central	Unincorporated
3231	Riverside	Central	Unincorporated
3232	Riverside	Central	Unincorporated
3233	Riverside	Central	Unincorporated
3235	Riverside	Central	Unincorporated
3236	Riverside	Central	Unincorporated

EXHIBIT I-1 (continued)
RivCoM TAZ Correspondence by WRCOG TUMF Zone - Hemet/San Jacinto

TAZ	County	WRCOG Zone	City
642	Riverside	Hemet/San Jacinto	Hemet
643	Riverside	Hemet/San Jacinto	Hemet
644	Riverside	Hemet/San Jacinto	Hemet
645	Riverside	Hemet/San Jacinto	Hemet
646	Riverside	Hemet/San Jacinto	Hemet
647	Riverside	Hemet/San Jacinto	Hemet
648	Riverside	Hemet/San Jacinto	Hemet
649	Riverside	Hemet/San Jacinto	Hemet
650	Riverside	Hemet/San Jacinto	Hemet
651	Riverside	Hemet/San Jacinto	Hemet
652	Riverside	Hemet/San Jacinto	Hemet
653	Riverside	Hemet/San Jacinto	Hemet
654	Riverside	Hemet/San Jacinto	Hemet
655	Riverside	Hemet/San Jacinto	Hemet
656	Riverside	Hemet/San Jacinto	Hemet
657	Riverside	Hemet/San Jacinto	Hemet
658	Riverside	Hemet/San Jacinto	Hemet
659	Riverside	Hemet/San Jacinto	Hemet
660	Riverside	Hemet/San Jacinto	Hemet
661	Riverside	Hemet/San Jacinto	Hemet
662	Riverside	Hemet/San Jacinto	Hemet
663	Riverside	Hemet/San Jacinto	Hemet
664	Riverside	Hemet/San Jacinto	Hemet
665	Riverside	Hemet/San Jacinto	Hemet
666	Riverside	Hemet/San Jacinto	Hemet
667	Riverside	Hemet/San Jacinto	Hemet
668	Riverside	Hemet/San Jacinto	Hemet
669	Riverside	Hemet/San Jacinto	Hemet
670	Riverside	Hemet/San Jacinto	Hemet
671	Riverside	Hemet/San Jacinto	Hemet
672	Riverside	Hemet/San Jacinto	Hemet
673	Riverside	Hemet/San Jacinto	Hemet
674	Riverside	Hemet/San Jacinto	Hemet
675	Riverside	Hemet/San Jacinto	Hemet
676	Riverside	Hemet/San Jacinto	Hemet
677	Riverside	Hemet/San Jacinto	Hemet
678	Riverside	Hemet/San Jacinto	Hemet
679	Riverside	Hemet/San Jacinto	Hemet
680	Riverside	Hemet/San Jacinto	Hemet
681	Riverside	Hemet/San Jacinto	Hemet
682	Riverside	Hemet/San Jacinto	Hemet
683	Riverside	Hemet/San Jacinto	Hemet
684	Riverside	Hemet/San Jacinto	Hemet
685	Riverside	Hemet/San Jacinto	Hemet
686	Riverside	Hemet/San Jacinto	Hemet
687	Riverside	Hemet/San Jacinto	Hemet
688	Riverside	Hemet/San Jacinto	Hemet
689	Riverside	Hemet/San Jacinto	Hemet
690	Riverside	Hemet/San Jacinto	Hemet
691	Riverside	Hemet/San Jacinto	Hemet
692	Riverside	Hemet/San Jacinto	Hemet
693	Riverside	Hemet/San Jacinto	Hemet
694	Riverside	Hemet/San Jacinto	Hemet
695	Riverside	Hemet/San Jacinto	Hemet
696	Riverside	Hemet/San Jacinto	Hemet
697	Riverside	Hemet/San Jacinto	Hemet
698	Riverside	Hemet/San Jacinto	Hemet
699	Riverside	Hemet/San Jacinto	Hemet
700	Riverside	Hemet/San Jacinto	Hemet
701	Riverside	Hemet/San Jacinto	Hemet
702	Riverside	Hemet/San Jacinto	Hemet
703	Riverside	Hemet/San Jacinto	Hemet
704	Riverside	Hemet/San Jacinto	Hemet
705	Riverside	Hemet/San Jacinto	Hemet
706	Riverside	Hemet/San Jacinto	Hemet
707	Riverside	Hemet/San Jacinto	Hemet
708	Riverside	Hemet/San Jacinto	Hemet
709	Riverside	Hemet/San Jacinto	Hemet
710	Riverside	Hemet/San Jacinto	Hemet
711	Riverside	Hemet/San Jacinto	Hemet
712	Riverside	Hemet/San Jacinto	Hemet
713	Riverside	Hemet/San Jacinto	Hemet
714	Riverside	Hemet/San Jacinto	Hemet
715	Riverside	Hemet/San Jacinto	Hemet
716	Riverside	Hemet/San Jacinto	Hemet
717	Riverside	Hemet/San Jacinto	Hemet
718	Riverside	Hemet/San Jacinto	Hemet
719	Riverside	Hemet/San Jacinto	Hemet
720	Riverside	Hemet/San Jacinto	Hemet
721	Riverside	Hemet/San Jacinto	Hemet
722	Riverside	Hemet/San Jacinto	Hemet
723	Riverside	Hemet/San Jacinto	Hemet
724	Riverside	Hemet/San Jacinto	Hemet
725	Riverside	Hemet/San Jacinto	Hemet
726	Riverside	Hemet/San Jacinto	Hemet
727	Riverside	Hemet/San Jacinto	Hemet
728	Riverside	Hemet/San Jacinto	Hemet
729	Riverside	Hemet/San Jacinto	Hemet
730	Riverside	Hemet/San Jacinto	Hemet
731	Riverside	Hemet/San Jacinto	Hemet
732	Riverside	Hemet/San Jacinto	Hemet
733	Riverside	Hemet/San Jacinto	Hemet
734	Riverside	Hemet/San Jacinto	Hemet
735	Riverside	Hemet/San Jacinto	Hemet
736	Riverside	Hemet/San Jacinto	Hemet
737	Riverside	Hemet/San Jacinto	Hemet
738	Riverside	Hemet/San Jacinto	Hemet

TAZ	County	WRCOG Zone	City
2135	Riverside	Hemet/San Jacinto	San Jacinto
2136	Riverside	Hemet/San Jacinto	San Jacinto
2137	Riverside	Hemet/San Jacinto	San Jacinto
2138	Riverside	Hemet/San Jacinto	San Jacinto
2139	Riverside	Hemet/San Jacinto	San Jacinto
2140	Riverside	Hemet/San Jacinto	San Jacinto
2141	Riverside	Hemet/San Jacinto	San Jacinto
2142	Riverside	Hemet/San Jacinto	San Jacinto
2143	Riverside	Hemet/San Jacinto	San Jacinto
2144	Riverside	Hemet/San Jacinto	San Jacinto
2145	Riverside	Hemet/San Jacinto	San Jacinto
2146	Riverside	Hemet/San Jacinto	San Jacinto
2147	Riverside	Hemet/San Jacinto	San Jacinto
2148	Riverside	Hemet/San Jacinto	San Jacinto
2149	Riverside	Hemet/San Jacinto	San Jacinto
2150	Riverside	Hemet/San Jacinto	San Jacinto
2151	Riverside	Hemet/San Jacinto	San Jacinto
2152	Riverside	Hemet/San Jacinto	San Jacinto
2153	Riverside	Hemet/San Jacinto	San Jacinto
2154	Riverside	Hemet/San Jacinto	San Jacinto
2155	Riverside	Hemet/San Jacinto	San Jacinto
2156	Riverside	Hemet/San Jacinto	San Jacinto
2157	Riverside	Hemet/San Jacinto	San Jacinto
2158	Riverside	Hemet/San Jacinto	San Jacinto
2159	Riverside	Hemet/San Jacinto	San Jacinto
2160	Riverside	Hemet/San Jacinto	San Jacinto
2161	Riverside	Hemet/San Jacinto	San Jacinto
2162	Riverside	Hemet/San Jacinto	San Jacinto
2163	Riverside	Hemet/San Jacinto	San Jacinto
2164	Riverside	Hemet/San Jacinto	San Jacinto
2165	Riverside	Hemet/San Jacinto	San Jacinto
2166	Riverside	Hemet/San Jacinto	San Jacinto
2167	Riverside	Hemet/San Jacinto	San Jacinto
2168	Riverside	Hemet/San Jacinto	San Jacinto
2169	Riverside	Hemet/San Jacinto	San Jacinto
2170	Riverside	Hemet/San Jacinto	San Jacinto
2171	Riverside	Hemet/San Jacinto	San Jacinto
2172	Riverside	Hemet/San Jacinto	San Jacinto
2173	Riverside	Hemet/San Jacinto	San Jacinto
2174	Riverside	Hemet/San Jacinto	San Jacinto
2175	Riverside	Hemet/San Jacinto	San Jacinto
2176	Riverside	Hemet/San Jacinto	San Jacinto
2177	Riverside	Hemet/San Jacinto	San Jacinto
2178	Riverside	Hemet/San Jacinto	San Jacinto
2179	Riverside	Hemet/San Jacinto	San Jacinto
2180	Riverside	Hemet/San Jacinto	San Jacinto
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2200	Riverside	Hemet/San Jacinto	San Jacinto
2201	Riverside	Hemet/San Jacinto	San Jacinto
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2206	Riverside	Hemet/San Jacinto	San Jacinto
2207	Riverside	Hemet/San Jacinto	San Jacinto
2324	Riverside	Hemet/San Jacinto	Unincorporated
2325	Riverside	Hemet/San Jacinto	Unincorporated
2326	Riverside	Hemet/San Jacinto	Unincorporated
2338	Riverside	Hemet/San Jacinto	Unincorporated
2340	Riverside	Hemet/San Jacinto	Unincorporated
2342	Riverside	Hemet/San Jacinto	Unincorporated
2346	Riverside	Hemet/San Jacinto	Unincorporated
2347	Riverside	Hemet/San Jacinto	Unincorporated
2348	Riverside	Hemet/San Jacinto	Unincorporated
2349	Riverside	Hemet/San Jacinto	Unincorporated
2358	Riverside	Hemet/San Jacinto	Unincorporated
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2625	Riverside	Hemet/San Jacinto	Unincorporated
2626	Riverside	Hemet/San Jacinto	Unincorporated
2628	Riverside	Hemet/San Jacinto	Unincorporated
2630	Riverside	Hemet/San Jacinto	Unincorporated
2631	Riverside	Hemet/San Jacinto	Unincorporated

TAZ	County	WRCOG Zone	City
2625	Riverside	Hemet/San Jacinto	Unincorporated
2626	Riverside	Hemet/San Jacinto	Unincorporated
2628	Riverside	Hemet/San Jacinto	Unincorporated
2630	Riverside	Hemet/San Jacinto	Unincorporated
2631	Riverside	Hemet/San Jacinto	Unincorporated
2632	Riverside	Hemet/San Jacinto	Unincorporated
2633	Riverside	Hemet/San Jacinto	Unincorporated
2634	Riverside	Hemet/San Jacinto	Unincorporated
2635	Riverside	Hemet/San Jacinto	Unincorporated
2641	Riverside	Hemet/San Jacinto	Unincorporated
2642	Riverside	Hemet/San Jacinto	Unincorporated
2643	Riverside	Hemet/San Jacinto	Unincorporated
2644	Riverside	Hemet/San Jacinto	Unincorporated
2645	Riverside	Hemet/San Jacinto	Unincorporated
2646	Riverside	Hemet/San Jacinto	Unincorporated
2647	Riverside	Hemet/San Jacinto	Unincorporated
2648	Riverside	Hemet/San Jacinto	Unincorporated
2649	Riverside	Hemet/San Jacinto	Unincorporated
2651	Riverside	Hemet/San Jacinto	Unincorporated
2652	Riverside	Hemet/San Jacinto	Unincorporated
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2811	Riverside	Hemet/San Jacinto	Unincorporated
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2817	Riverside	Hemet/San Jacinto	Unincorporated
2818	Riverside	Hemet/San Jacinto	Unincorporated
2819	Riverside	Hemet/San Jacinto	Unincorporated
2820	Riverside	Hemet/San Jacinto	Unincorporated
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2822	Riverside	Hemet/San Jacinto	Unincorporated
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2831	Riverside	Hemet/San Jacinto	Unincorporated
2832	Riverside	Hemet/San Jacinto	Unincorporated
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2843	Riverside	Hemet/San Jacinto	Unincorporated
2844	Riverside	Hemet/San Jacinto	Unincorporated
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2850	Riverside	Hemet/San Jacinto	Unincorporated
2851	Riverside	Hemet/San Jacinto	Unincorporated
2856	Riverside	Hemet/San Jacinto	Unincorporated
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2873	Riverside	Hemet/San Jacinto	Unincorporated
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2884	Riverside	Hemet/San Jacinto	Unincorporated
2885	Riverside	Hemet/San Jacinto	Unincorporated
2886	Riverside	Hemet/San Jacinto	Unincorporated
2887	Riverside	Hemet/San Jacinto	Unincorporated
2888	Riverside	Hemet/San Jacinto	Unincorporated
2889	Riverside	Hemet/San Jacinto	Unincorporated
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2893	Riverside	Hemet/San Jacinto	Unincorporated
2894	Riverside	Hemet/San Jacinto	Unincorporated
2895	Riverside	Hemet/San Jacinto	Unincorporated
2919	Riverside	Hemet/San Jacinto	Unincorporated
2920	Riverside	Hemet/San Jacinto	Unincorporated
2921	Riverside	Hemet/San Jacinto	Unincorporated
2922	Riverside	Hemet/San Jacinto	Unincorporated
2934	Riverside	Hemet/San Jacinto	Unincorporated
2935	Riverside	Hemet/San Jacinto	Unincorporated
2936	Riverside	Hemet/San Jacinto	Unincorporated
2937	Riverside	Hemet/San Jacinto	Unincorporated
2938	Riverside	Hemet/San Jacinto	Unincorporated
3194	Riverside	Hemet/San Jacinto	Unincorporated
3195	Riverside	Hemet/San Jacinto	Unincorporated
3196	Riverside	Hemet/San Jacinto	Unincorporated
3197	Riverside	Hemet/San Jacinto	Unincorporated
3198	Riverside	Hemet/San Jacinto	Unincorporated
3242	Riverside	Hemet/San Jacinto	Unincorporated
3243	Riverside	Hemet/San Jacinto	Unincorporated
3244	Riverside	Hemet/San Jacinto	Unincorporated
3245	Riverside	Hemet/San Jacinto	Unincorporated

EXHIBIT I-1 (continued)
RivCoM TAZ Correspondence by WRCOG TUMF Zone - Northwest

TAZ	County	WRCOG Zone	City
332	Riverside	Northwest	Corona
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2088	Riverside	Northwest	Riverside
2089	Riverside	Northwest	Riverside
2090	Riverside	Northwest	Riverside
2091	Riverside	Northwest	Riverside
2092	Riverside	Northwest	Riverside
2093	Riverside	Northwest	Riverside
2094	Riverside	Northwest	Riverside
2095	Riverside	Northwest	Riverside
2096	Riverside	Northwest	Riverside
2097	Riverside	Northwest	Riverside
2098	Riverside	Northwest	Riverside
2099	Riverside	Northwest	Riverside
2100	Riverside	Northwest	Riverside
2101	Riverside	Northwest	Riverside
2102	Riverside	Northwest	Riverside
2103	Riverside	Northwest	Riverside
2104	Riverside	Northwest	Riverside
2105	Riverside	Northwest	Riverside
2106	Riverside	Northwest	Riverside
2107	Riverside	Northwest	Riverside
2108	Riverside	Northwest	Riverside
2109	Riverside	Northwest	Riverside
2110	Riverside	Northwest	Riverside
2111	Riverside	Northwest	Riverside
2112	Riverside	Northwest	Riverside
2113	Riverside	Northwest	Riverside
2114	Riverside	Northwest	Riverside
2115	Riverside	Northwest	Riverside
2116	Riverside	Northwest	Riverside
2117	Riverside	Northwest	Riverside
2118	Riverside	Northwest	Riverside
2119	Riverside	Northwest	Riverside
2120	Riverside	Northwest	Riverside
2121	Riverside	Northwest	Riverside
2122	Riverside	Northwest	Riverside
2123	Riverside	Northwest	Riverside
2124	Riverside	Northwest	Riverside
2125	Riverside	Northwest	Riverside
2129	Riverside	Northwest	Riverside
2130	Riverside	Northwest	Riverside
2131	Riverside	Northwest	Riverside
2132	Riverside	Northwest	Riverside
2133	Riverside	Northwest	Riverside
2134	Riverside	Northwest	Riverside
2321	Riverside	Northwest	Unincorporated
2322	Riverside	Northwest	Unincorporated
2370	Riverside	Northwest	Unincorporated
2371	Riverside	Northwest	Unincorporated
2372	Riverside	Northwest	Unincorporated
2373	Riverside	Northwest	Unincorporated
2374	Riverside	Northwest	Unincorporated
2375	Riverside	Northwest	Unincorporated
2376	Riverside	Northwest	Unincorporated
2377	Riverside	Northwest	Unincorporated
2378	Riverside	Northwest	Unincorporated
2379	Riverside	Northwest	Unincorporated
2380	Riverside	Northwest	Unincorporated
2381	Riverside	Northwest	Unincorporated
2382	Riverside	Northwest	Unincorporated
2383	Riverside	Northwest	Unincorporated
2384	Riverside	Northwest	Unincorporated
2385	Riverside	Northwest	Unincorporated
2386	Riverside	Northwest	Unincorporated
2387	Riverside	Northwest	Unincorporated
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2389	Riverside	Northwest	Unincorporated
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2393	Riverside	Northwest	Unincorporated
2394	Riverside	Northwest	Unincorporated
2397	Riverside	Northwest	Unincorporated
2398	Riverside	Northwest	Unincorporated
2399	Riverside	Northwest	Unincorporated
2400	Riverside	Northwest	Unincorporated
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2405	Riverside	Northwest	Unincorporated
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2408	Riverside	Northwest	Unincorporated
2409	Riverside	Northwest	Unincorporated
2410	Riverside	Northwest	Unincorporated
2411	Riverside	Northwest	Unincorporated
2412	Riverside	Northwest	Unincorporated
2413	Riverside	Northwest	Unincorporated
2586	Riverside	Northwest	Unincorporated
2587	Riverside	Northwest	Unincorporated
2588	Riverside	Northwest	Unincorporated
2589	Riverside	Northwest	Unincorporated
2590	Riverside	Northwest	Unincorporated
2591	Riverside	Northwest	Unincorporated
2592	Riverside	Northwest	Unincorporated
2593	Riverside	Northwest	Unincorporated
2594	Riverside	Northwest	Unincorporated
2595	Riverside	Northwest	Unincorporated
2596	Riverside	Northwest	Unincorporated
2597	Riverside	Northwest	Unincorporated
2598	Riverside	Northwest	Unincorporated
2599	Riverside	Northwest	Unincorporated
2600	Riverside	Northwest	Unincorporated
2601	Riverside	Northwest	Unincorporated
2602	Riverside	Northwest	Unincorporated
2603	Riverside	Northwest	Unincorporated
2604	Riverside	Northwest	Unincorporated
2605	Riverside	Northwest	Unincorporated
2606	Riverside	Northwest	Unincorporated
2607	Riverside	Northwest	Unincorporated
2664	Riverside	Northwest	Unincorporated
2666	Riverside	Northwest	Unincorporated
2671	Riverside	Northwest	Unincorporated
2672	Riverside	Northwest	Unincorporated
2680	Riverside	Northwest	Unincorporated
2681	Riverside	Northwest	Unincorporated
2705	Riverside	Northwest	Unincorporated
2706	Riverside	Northwest	Unincorporated
2707	Riverside	Northwest	Unincorporated
2726	Riverside	Northwest	Unincorporated
2730	Riverside	Northwest	Unincorporated
2731	Riverside	Northwest	Unincorporated
2732	Riverside	Northwest	Unincorporated
2734	Riverside	Northwest	Unincorporated
2735	Riverside	Northwest	Unincorporated
2736	Riverside	Northwest	Unincorporated
2737	Riverside	Northwest	Unincorporated
2738	Riverside	Northwest	Unincorporated
2739	Riverside	Northwest	Unincorporated
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2743	Riverside	Northwest	Unincorporated
2749	Riverside	Northwest	Unincorporated
2750	Riverside	Northwest	Unincorporated
2751	Riverside	Northwest	Unincorporated
2763	Riverside	Northwest	Unincorporated
2764	Riverside	Northwest	Unincorporated
2765	Riverside	Northwest	Unincorporated
2766	Riverside	Northwest	Unincorporated
2767	Riverside	Northwest	Unincorporated
2768	Riverside	Northwest	Unincorporated
2769	Riverside	Northwest	Unincorporated
2770	Riverside	Northwest	Unincorporated
2771	Riverside	Northwest	Unincorporated
2772	Riverside	Northwest	Unincorporated
2773	Riverside	Northwest	Unincorporated
2774	Riverside	Northwest	Unincorporated
2775	Riverside	Northwest	Unincorporated
2776	Riverside	Northwest	Unincorporated
2777	Riverside	Northwest	Unincorporated
2778	Riverside	Northwest	Unincorporated
2779	Riverside	Northwest	Unincorporated
2790	Riverside	Northwest	Unincorporated
2791	Riverside	Northwest	Unincorporated
2792	Riverside	Northwest	Unincorporated
2798	Riverside	Northwest	Unincorporated
2799	Riverside	Northwest	Unincorporated
2800	Riverside	Northwest	Unincorporated
2801	Riverside	Northwest	Unincorporated
2803	Riverside	Northwest	Unincorporated
2805	Riverside	Northwest	Unincorporated
2806	Riverside	Northwest	Unincorporated
2808	Riverside	Northwest	Unincorporated
3093	Riverside	Northwest	Unincorporated
3146	Riverside	Northwest	Unincorporated
3147	Riverside	Northwest	Unincorporated
3148	Riverside	Northwest	Unincorporated
3149	Riverside	Northwest	Unincorporated
3152	Riverside	Northwest	Unincorporated
3174	Riverside	Northwest	Unincorporated
3185	Riverside	Northwest	Unincorporated
3186	Riverside	Northwest	Unincorporated
3187	Riverside	Northwest	Unincorporated
3188	Riverside	Northwest	Unincorporated
3189	Riverside	Northwest	Unincorporated
3190	Riverside	Northwest	Unincorporated
3191	Riverside	Northwest	Unincorporated
3192	Riverside	Northwest	Unincorporated
3193	Riverside	Northwest

EXHIBIT I-1 (continued)
RivCoM TAZ Correspondence by WRCOG TUMF Zone - Pass

TAZ	County	WRCOG Zone	City
1	Riverside	Pass	Banning
2	Riverside	Pass	Banning
3	Riverside	Pass	Banning
4	Riverside	Pass	Banning
5	Riverside	Pass	Banning
6	Riverside	Pass	Banning
7	Riverside	Pass	Banning
8	Riverside	Pass	Banning
9	Riverside	Pass	Banning
10	Riverside	Pass	Banning
11	Riverside	Pass	Banning
12	Riverside	Pass	Banning
13	Riverside	Pass	Banning
14	Riverside	Pass	Banning
15	Riverside	Pass	Banning
16	Riverside	Pass	Banning
17	Riverside	Pass	Banning
18	Riverside	Pass	Banning
19	Riverside	Pass	Banning
20	Riverside	Pass	Banning
21	Riverside	Pass	Banning
22	Riverside	Pass	Banning
23	Riverside	Pass	Banning
24	Riverside	Pass	Banning
25	Riverside	Pass	Banning
26	Riverside	Pass	Banning
27	Riverside	Pass	Banning
28	Riverside	Pass	Banning
29	Riverside	Pass	Banning
30	Riverside	Pass	Banning
31	Riverside	Pass	Banning
32	Riverside	Pass	Banning
33	Riverside	Pass	Banning
34	Riverside	Pass	Banning
35	Riverside	Pass	Banning
36	Riverside	Pass	Banning
37	Riverside	Pass	Banning
38	Riverside	Pass	Banning
39	Riverside	Pass	Banning
40	Riverside	Pass	Banning
41	Riverside	Pass	Banning
42	Riverside	Pass	Banning
43	Riverside	Pass	Banning
44	Riverside	Pass	Banning
45	Riverside	Pass	Banning
46	Riverside	Pass	Banning
47	Riverside	Pass	Banning
48	Riverside	Pass	Banning
49	Riverside	Pass	Banning
50	Riverside	Pass	Banning
51	Riverside	Pass	Banning
52	Riverside	Pass	Banning
53	Riverside	Pass	Banning
54	Riverside	Pass	Banning
55	Riverside	Pass	Banning
56	Riverside	Pass	Banning
57	Riverside	Pass	Beaumont
58	Riverside	Pass	Beaumont
59	Riverside	Pass	Beaumont
60	Riverside	Pass	Beaumont
61	Riverside	Pass	Beaumont
62	Riverside	Pass	Beaumont
63	Riverside	Pass	Beaumont
64	Riverside	Pass	Beaumont
65	Riverside	Pass	Beaumont
66	Riverside	Pass	Beaumont
67	Riverside	Pass	Beaumont
68	Riverside	Pass	Beaumont
69	Riverside	Pass	Beaumont
70	Riverside	Pass	Beaumont
71	Riverside	Pass	Beaumont
72	Riverside	Pass	Beaumont
73	Riverside	Pass	Beaumont
74	Riverside	Pass	Beaumont
75	Riverside	Pass	Beaumont
76	Riverside	Pass	Beaumont
77	Riverside	Pass	Beaumont
78	Riverside	Pass	Beaumont
79	Riverside	Pass	Beaumont
80	Riverside	Pass	Beaumont
81	Riverside	Pass	Beaumont
82	Riverside	Pass	Beaumont
83	Riverside	Pass	Beaumont
84	Riverside	Pass	Beaumont
85	Riverside	Pass	Beaumont
86	Riverside	Pass	Beaumont
87	Riverside	Pass	Beaumont
88	Riverside	Pass	Beaumont
89	Riverside	Pass	Beaumont
90	Riverside	Pass	Beaumont
91	Riverside	Pass	Beaumont
92	Riverside	Pass	Beaumont
93	Riverside	Pass	Beaumont
94	Riverside	Pass	Beaumont
95	Riverside	Pass	Beaumont
96	Riverside	Pass	Beaumont
97	Riverside	Pass	Beaumont
98	Riverside	Pass	Beaumont
99	Riverside	Pass	Beaumont
100	Riverside	Pass	Beaumont
101	Riverside	Pass	Beaumont
102	Riverside	Pass	Beaumont
103	Riverside	Pass	Beaumont
104	Riverside	Pass	Beaumont
105	Riverside	Pass	Beaumont
106	Riverside	Pass	Beaumont
107	Riverside	Pass	Beaumont
108	Riverside	Pass	Beaumont
109	Riverside	Pass	Beaumont
110	Riverside	Pass	Beaumont
111	Riverside	Pass	Beaumont
112	Riverside	Pass	Beaumont
113	Riverside	Pass	Beaumont
114	Riverside	Pass	Beaumont

TAZ	County	WRCOG Zone	City
128	Riverside	Pass	Calimesa
129	Riverside	Pass	Calimesa
130	Riverside	Pass	Calimesa
131	Riverside	Pass	Calimesa
132	Riverside	Pass	Calimesa
133	Riverside	Pass	Calimesa
134	Riverside	Pass	Calimesa
135	Riverside	Pass	Calimesa
136	Riverside	Pass	Calimesa
137	Riverside	Pass	Calimesa
138	Riverside	Pass	Calimesa
139	Riverside	Pass	Calimesa
140	Riverside	Pass	Calimesa
141	Riverside	Pass	Calimesa
142	Riverside	Pass	Calimesa
143	Riverside	Pass	Calimesa
144	Riverside	Pass	Calimesa
145	Riverside	Pass	Calimesa
146	Riverside	Pass	Calimesa
147	Riverside	Pass	Calimesa
148	Riverside	Pass	Calimesa
149	Riverside	Pass	Calimesa
150	Riverside	Pass	Calimesa
151	Riverside	Pass	Calimesa
152	Riverside	Pass	Calimesa
153	Riverside	Pass	Calimesa
154	Riverside	Pass	Calimesa
1278	Riverside	Pass	Moreno Valley
2323	Riverside	Pass	Unincorporated
2355	Riverside	Pass	Unincorporated
2356	Riverside	Pass	Unincorporated
2357	Riverside	Pass	Unincorporated
2363	Riverside	Pass	Unincorporated
2364	Riverside	Pass	Unincorporated
2365	Riverside	Pass	Unincorporated
2627	Riverside	Pass	Unincorporated
2629	Riverside	Pass	Unincorporated
2638	Riverside	Pass	Unincorporated
2639	Riverside	Pass	Unincorporated
2640	Riverside	Pass	Unincorporated
2650	Riverside	Pass	Unincorporated
2656	Riverside	Pass	Unincorporated
2657	Riverside	Pass	Unincorporated
2658	Riverside	Pass	Unincorporated
2659	Riverside	Pass	Unincorporated
2661	Riverside	Pass	Unincorporated
2667	Riverside	Pass	Unincorporated
2674	Riverside	Pass	Unincorporated
2858	Riverside	Pass	Unincorporated
2859	Riverside	Pass	Unincorporated
2896	Riverside	Pass	Unincorporated
2897	Riverside	Pass	Unincorporated
2898	Riverside	Pass	Unincorporated
2899	Riverside	Pass	Unincorporated
2900	Riverside	Pass	Unincorporated
2901	Riverside	Pass	Unincorporated
2902	Riverside	Pass	Unincorporated
2903	Riverside	Pass	Unincorporated
2904	Riverside	Pass	Unincorporated
2908	Riverside	Pass	Unincorporated
2909	Riverside	Pass	Unincorporated
2910	Riverside	Pass	Unincorporated
2911	Riverside	Pass	Unincorporated
2912	Riverside	Pass	Unincorporated
2913	Riverside	Pass	Unincorporated
2914	Riverside	Pass	Unincorporated
2915	Riverside	Pass	Unincorporated
2916	Riverside	Pass	Unincorporated
2917	Riverside	Pass	Unincorporated
2927	Riverside	Pass	Unincorporated
2939	Riverside	Pass	Unincorporated
2940	Riverside	Pass	Unincorporated
2941	Riverside	Pass	Unincorporated
2942	Riverside	Pass	Unincorporated
2943	Riverside	Pass	Unincorporated
2944	Riverside	Pass	Unincorporated
2945	Riverside	Pass	Unincorporated
2946	Riverside	Pass	Unincorporated
2947	Riverside	Pass	Unincorporated
2948	Riverside	Pass	Unincorporated
2949	Riverside	Pass	Unincorporated
2950	Riverside	Pass	Unincorporated
2951	Riverside	Pass	Unincorporated
2952	Riverside	Pass	Unincorporated
3042	Riverside	Pass	Unincorporated
3156	Riverside	Pass	Unincorporated
3157	Riverside	Pass	Unincorporated
3158	Riverside	Pass	Unincorporated
3159	Riverside	Pass	Unincorporated
3160	Riverside	Pass	Unincorporated
3161	Riverside	Pass	Unincorporated
3164	Riverside	Pass	Unincorporated
3216	Riverside	Pass	Unincorporated
3217	Riverside	Pass	Unincorporated
3218	Riverside	Pass	Unincorporated
3219	Riverside	Pass	Unincorporated
3220	Riverside	Pass	Unincorporated
3221	Riverside	Pass	Unincorporated
3222	Riverside	Pass	Unincorporated
3223	Riverside	Pass	Unincorporated

EXHIBIT I-1 (continued)
RivCoM TAZ Correspondence by WRCOG TUMF Zone - Southwest

TAZ	County	WRCOG Zone	City
155	Riverside	Southwest	Canyon Lake
156	Riverside	Southwest	Canyon Lake
157	Riverside	Southwest	Canyon Lake
158	Riverside	Southwest	Canyon Lake
159	Riverside	Southwest	Canyon Lake
160	Riverside	Southwest	Canyon Lake
161	Riverside	Southwest	Canyon Lake
938	Riverside	Southwest	Lake Elsinore
939	Riverside	Southwest	Lake Elsinore
940	Riverside	Southwest	Lake Elsinore
941	Riverside	Southwest	Lake Elsinore
942	Riverside	Southwest	Lake Elsinore
943	Riverside	Southwest	Lake Elsinore
944	Riverside	Southwest	Lake Elsinore
945	Riverside	Southwest	Lake Elsinore
946	Riverside	Southwest	Lake Elsinore
947	Riverside	Southwest	Lake Elsinore
948	Riverside	Southwest	Lake Elsinore
949	Riverside	Southwest	Lake Elsinore
950	Riverside	Southwest	Lake Elsinore
951	Riverside	Southwest	Lake Elsinore
952	Riverside	Southwest	Lake Elsinore
953	Riverside	Southwest	Lake Elsinore
954	Riverside	Southwest	Lake Elsinore
955	Riverside	Southwest	Lake Elsinore
956	Riverside	Southwest	Lake Elsinore
957	Riverside	Southwest	Lake Elsinore
958	Riverside	Southwest	Lake Elsinore
959	Riverside	Southwest	Lake Elsinore
960	Riverside	Southwest	Lake Elsinore
961	Riverside	Southwest	Lake Elsinore
962	Riverside	Southwest	Lake Elsinore
963	Riverside	Southwest	Lake Elsinore
964	Riverside	Southwest	Lake Elsinore
965	Riverside	Southwest	Lake Elsinore
966	Riverside	Southwest	Lake Elsinore
967	Riverside	Southwest	Lake Elsinore
968	Riverside	Southwest	Lake Elsinore
969	Riverside	Southwest	Lake Elsinore
970	Riverside	Southwest	Lake Elsinore
971	Riverside	Southwest	Lake Elsinore
972	Riverside	Southwest	Lake Elsinore
973	Riverside	Southwest	Lake Elsinore
974	Riverside	Southwest	Lake Elsinore
975	Riverside	Southwest	Lake Elsinore
976	Riverside	Southwest	Lake Elsinore
977	Riverside	Southwest	Lake Elsinore
978	Riverside	Southwest	Lake Elsinore
979	Riverside	Southwest	Lake Elsinore
980	Riverside	Southwest	Lake Elsinore
981	Riverside	Southwest	Lake Elsinore
982	Riverside	Southwest	Lake Elsinore
983	Riverside	Southwest	Lake Elsinore
984	Riverside	Southwest	Lake Elsinore
985	Riverside	Southwest	Lake Elsinore
986	Riverside	Southwest	Lake Elsinore
987	Riverside	Southwest	Lake Elsinore
988	Riverside	Southwest	Lake Elsinore
989	Riverside	Southwest	Lake Elsinore
990	Riverside	Southwest	Lake Elsinore
991	Riverside	Southwest	Lake Elsinore
992	Riverside	Southwest	Lake Elsinore
993	Riverside	Southwest	Lake Elsinore
994	Riverside	Southwest	Lake Elsinore
995	Riverside	Southwest	Lake Elsinore
996	Riverside	Southwest	Lake Elsinore
997	Riverside	Southwest	Lake Elsinore
998	Riverside	Southwest	Lake Elsinore
999	Riverside	Southwest	Lake Elsinore
1000	Riverside	Southwest	Lake Elsinore
1001	Riverside	Southwest	Lake Elsinore
1002	Riverside	Southwest	Lake Elsinore
1003	Riverside	Southwest	Lake Elsinore
1004	Riverside	Southwest	Lake Elsinore
1005	Riverside	Southwest	Lake Elsinore
1006	Riverside	Southwest	Lake Elsinore
1007	Riverside	Southwest	Lake Elsinore
1009	Riverside	Southwest	Lake Elsinore
1010	Riverside	Southwest	Lake Elsinore
1011	Riverside	Southwest	Lake Elsinore
1012	Riverside	Southwest	Lake Elsinore
1013	Riverside	Southwest	Lake Elsinore
1014	Riverside	Southwest	Lake Elsinore
1015	Riverside	Southwest	Lake Elsinore
1016	Riverside	Southwest	Lake Elsinore
1017	Riverside	Southwest	Lake Elsinore
1018	Riverside	Southwest	Lake Elsinore
1019	Riverside	Southwest	Lake Elsinore
1020	Riverside	Southwest	Lake Elsinore
1021	Riverside	Southwest	Lake Elsinore
1022	Riverside	Southwest	Lake Elsinore
1023	Riverside	Southwest	Lake Elsinore
1024	Riverside	Southwest	Lake Elsinore
1025	Riverside	Southwest	Lake Elsinore
1026	Riverside	Southwest	Lake Elsinore
1027	Riverside	Southwest	Lake Elsinore
1028	Riverside	Southwest	Lake Elsinore
1029	Riverside	Southwest	Lake Elsinore
1030	Riverside	Southwest	Lake Elsinore
1031	Riverside	Southwest	Lake Elsinore
1032	Riverside	Southwest	Lake Elsinore
1033	Riverside	Southwest	Lake Elsinore
1034	Riverside	Southwest	Lake Elsinore
1035	Riverside	Southwest	Lake Elsinore
1036	Riverside	Southwest	Lake Elsinore
1037	Riverside	Southwest	Lake Elsinore
1038	Riverside	Southwest	Lake Elsinore
1039	Riverside	Southwest	Lake Elsinore
1040	Riverside	Southwest	Lake Elsinore
1041	Riverside	Southwest	Lake Elsinore
1042	Riverside	Southwest	Lake Elsinore
1043	Riverside	Southwest	Lake Elsinore
1286	Riverside	Southwest	Murrieta
1287	Riverside	Southwest	Murrieta
1288	Riverside	Southwest	Murrieta
1289	Riverside	Southwest	Murrieta
1290	Riverside	Southwest	Murrieta
1291	Riverside	Southwest	Murrieta
1292	Riverside	Southwest	Murrieta
1293	Riverside	Southwest	Murrieta
1294	Riverside	Southwest	Murrieta
1295	Riverside	Southwest	Murrieta
1296	Riverside	Southwest	Murrieta
1297	Riverside	Southwest	Murrieta
1298	Riverside	Southwest	Murrieta
1299	Riverside	Southwest	Murrieta
1300	Riverside	Southwest	Murrieta
1301	Riverside	Southwest	Murrieta
1302	Riverside	Southwest	Murrieta
1303	Riverside	Southwest	Murrieta
1304	Riverside	Southwest	Murrieta
1305	Riverside	Southwest	Murrieta
1306	Riverside	Southwest	Murrieta
1307	Riverside	Southwest	Murrieta
1308	Riverside	Southwest	Murrieta
1309	Riverside	Southwest	Murrieta
1310	Riverside	Southwest	Murrieta
1311	Riverside	Southwest	Murrieta
1312	Riverside	Southwest	Murrieta
1313	Riverside	Southwest	Murrieta
1314	Riverside	Southwest	Murrieta
1315	Riverside	Southwest	Murrieta
1316	Riverside	Southwest	Murrieta
1317	Riverside	Southwest	Murrieta
1318	Riverside	Southwest	Murrieta
1319	Riverside	Southwest	Murrieta
1320	Riverside	Southwest	Murrieta
1321	Riverside	Southwest	Murrieta
1322	Riverside	Southwest	Murrieta
1323	Riverside	Southwest	Murrieta
1324	Riverside	Southwest	Murrieta
1325	Riverside	Southwest	Murrieta
1326	Riverside	Southwest	Murrieta
1327	Riverside	Southwest	Murrieta
1328	Riverside	Southwest	Murrieta
1329	Riverside	Southwest	Murrieta
1330	Riverside	Southwest	Murrieta
1331	Riverside	Southwest	Murrieta
1332	Riverside	Southwest	Murrieta
1333	Riverside	Southwest	Murrieta
1334	Riverside	Southwest	Murrieta
1335	Riverside	Southwest	Murrieta
1336	Riverside	Southwest	Murrieta
1337	Riverside	Southwest	Murrieta
1338	Riverside	Southwest	Murrieta
1339	Riverside	Southwest	Murrieta
1340	Riverside	Southwest	Murrieta
1341	Riverside	Southwest	Murrieta
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3241	Riverside	Southwest	Unincorporated
3246	Riverside	Southwest	Wildomar
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3268	Riverside	Southwest	Wildomar

EXHIBIT I-1 (continued)
RivCoM TAZ Correspondence by WRCOG TUMF Zones - Riverside County Outside WRCOG

TAZ	County	WRCOG Zone	City
115	Riverside	Outside TUMF Zones	Blythe
116	Riverside	Outside TUMF Zones	Blythe
117	Riverside	Outside TUMF Zones	Blythe
118	Riverside	Outside TUMF Zones	Blythe
119	Riverside	Outside TUMF Zones	Blythe
120	Riverside	Outside TUMF Zones	Blythe
121	Riverside	Outside TUMF Zones	Blythe
122	Riverside	Outside TUMF Zones	Blythe
123	Riverside	Outside TUMF Zones	Blythe
124	Riverside	Outside TUMF Zones	Blythe
125	Riverside	Outside TUMF Zones	Blythe
126	Riverside	Outside TUMF Zones	Blythe
127	Riverside	Outside TUMF Zones	Blythe
162	Riverside	Outside TUMF Zones	Cathedral City
163	Riverside	Outside TUMF Zones	Cathedral City
164	Riverside	Outside TUMF Zones	Cathedral City
165	Riverside	Outside TUMF Zones	Cathedral City
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184	Riverside	Outside TUMF Zones	Cathedral City
185	Riverside	Outside TUMF Zones	Cathedral City
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240	Riverside	Outside TUMF Zones	Cathedral City
241	Riverside	Outside TUMF Zones	Coachella
242	Riverside	Outside TUMF Zones	Coachella
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328	Riverside	Outside TUMF Zones	Coachella
329	Riverside	Outside TUMF Zones	Coachella
330	Riverside	Outside TUMF Zones	Coachella
331	Riverside	Outside TUMF Zones	Coachella
570	Riverside	Outside TUMF Zones	Desert Hot Springs
571	Riverside	Outside TUMF Zones	Desert Hot Springs
572	Riverside	Outside TUMF Zones	Desert Hot Springs
573	Riverside	Outside TUMF Zones	Desert Hot Springs
574	Riverside	Outside TUMF Zones	Desert Hot Springs
575	Riverside	Outside TUMF Zones	Desert Hot Springs
576	Riverside	Outside TUMF Zones	Desert Hot Springs
577	Riverside	Outside TUMF Zones	Desert Hot Springs
578	Riverside	Outside TUMF Zones	Desert Hot Springs
579	Riverside	Outside TUMF Zones	Desert Hot Springs
580	Riverside	Outside TUMF Zones	Desert Hot Springs
581	Riverside	Outside TUMF Zones	Desert Hot Springs
582	Riverside	Outside TUMF Zones	Desert Hot Springs
583	Riverside	Outside TUMF Zones	Desert Hot Springs
584	Riverside	Outside TUMF Zones	Desert Hot Springs
585	Riverside	Outside TUMF Zones	Desert Hot Springs
586	Riverside	Outside TUMF Zones	Desert Hot Springs
587	Riverside	Outside TUMF Zones	Desert Hot Springs
588	Riverside	Outside TUMF Zones	Desert Hot Springs
589	Riverside	Outside TUMF Zones	Desert Hot Springs
590	Riverside	Outside TUMF Zones	Desert Hot Springs
591	Riverside	Outside TUMF Zones	Desert Hot Springs
592	Riverside	Outside TUMF Zones	Desert Hot Springs
593	Riverside	Outside TUMF Zones	Desert Hot Springs
594	Riverside	Outside TUMF Zones	Desert Hot Springs
595	Riverside	Outside TUMF Zones	Desert Hot Springs
596	Riverside	Outside TUMF Zones	Desert Hot Springs
597	Riverside	Outside TUMF Zones	Desert Hot Springs
598	Riverside	Outside TUMF Zones	Desert Hot Springs
599	Riverside	Outside TUMF Zones	Desert Hot Springs
600	Riverside	Outside TUMF Zones	Desert Hot Springs
601	Riverside	Outside TUMF Zones	Desert Hot Springs
602	Riverside	Outside TUMF Zones	Desert Hot Springs

TAZ	County	WRCOG Zone	City
739	Riverside	Outside TUMF Zones	Indian Wells
740	Riverside	Outside TUMF Zones	Indian Wells
741	Riverside	Outside TUMF Zones	Indian Wells
742	Riverside	Outside TUMF Zones	Indian Wells
743	Riverside	Outside TUMF Zones	Indian Wells
744	Riverside	Outside TUMF Zones	Indian Wells
745	Riverside	Outside TUMF Zones	Indian Wells
746	Riverside	Outside TUMF Zones	Indian Wells
747	Riverside	Outside TUMF Zones	Indian Wells
748	Riverside	Outside TUMF Zones	Indian Wells
749	Riverside	Outside TUMF Zones	Indian Wells
750	Riverside	Outside TUMF Zones	Indian Wells
751	Riverside	Outside TUMF Zones	Indian Wells
752	Riverside	Outside TUMF Zones	Indio
753	Riverside	Outside TUMF Zones	Indio
754	Riverside	Outside TUMF Zones	Indio
755	Riverside	Outside TUMF Zones	Indio
756	Riverside	Outside TUMF Zones	Indio
757	Riverside	Outside TUMF Zones	Indio
758	Riverside	Outside TUMF Zones	Indio
759	Riverside	Outside TUMF Zones	Indio
760	Riverside	Outside TUMF Zones	Indio
761	Riverside	Outside TUMF Zones	Indio
762	Riverside	Outside TUMF Zones	Indio
763	Riverside	Outside TUMF Zones	Indio
764	Riverside	Outside TUMF Zones	Indio
765	Riverside	Outside TUMF Zones	Indio
766	Riverside	Outside TUMF Zones	Indio
767	Riverside	Outside TUMF Zones	Indio
768	Riverside	Outside TUMF Zones	Indio
769	Riverside	Outside TUMF Zones	Indio
770	Riverside	Outside TUMF Zones	Indio
771	Riverside	Outside TUMF Zones	Indio
772	Riverside	Outside TUMF Zones	Indio
773	Riverside	Outside TUMF Zones	Indio
774	Riverside	Outside TUMF Zones	Indio
775	Riverside	Outside TUMF Zones	Indio
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782	Riverside	Outside TUMF Zones	Indio
783	Riverside	Outside TUMF Zones	Indio
784	Riverside	Outside TUMF Zones	Indio
785	Riverside	Outside TUMF Zones	Indio
786	Riverside	Outside TUMF Zones	Indio
787	Riverside	Outside TUMF Zones	Indio
788	Riverside	Outside TUMF Zones	Indio
789	Riverside	Outside TUMF Zones	Indio
790	Riverside	Outside TUMF Zones	Indio
791	Riverside	Outside TUMF Zones	Indio
792	Riverside	Outside TUMF Zones	Indio
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799	Riverside	Outside TUMF Zones	Indio
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809	Riverside	Outside TUMF Zones	Indio
810	Riverside	Outside TUMF Zones	Indio
811	Riverside	Outside TUMF Zones	Indio
812	Riverside	Outside TUMF Zones	Indio
813	Riverside	Outside TUMF Zones	Indio
814	Riverside	Outside TUMF Zones	Indio
815	Riverside	Outside TUMF Zones	Indio
816	Riverside	Outside TUMF Zones	Indio
817	Riverside	Outside TUMF Zones	Indio
818	Riverside	Outside TUMF Zones	Indio
819	Riverside	Outside TUMF Zones	Indio
820	Riverside	Outside TUMF Zones	Indio
821	Riverside	Outside TUMF Zones	Indio
822	Riverside	Outside TUMF Zones	Indio
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825	Riverside	Outside TUMF Zones	Indio
826	Riverside	Outside TUMF Zones	Indio
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830	Riverside	Outside TUMF Zones	Indio
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837	Riverside	Outside TUMF Zones	Indio
838	Riverside	Outside TUMF Zones	Indio
839	Riverside	Outside TUMF Zones	Indio
840	Riverside	Outside TUMF Zones	Indio
841	Riverside	Outside TUMF Zones	Indio
904	Riverside	Outside TUMF Zones	La Quinta
905	Riverside	Outside TUMF Zones	La Quinta
906	Riverside	Outside TUMF Zones	La Quinta
907	Riverside	Outside TUMF Zones	La Quinta
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936	Riverside	Outside TUMF Zones	La Quinta
937	Riverside	Outside TUMF Zones	La Quinta
1569	Riverside	Outside TUMF Zones	Palm Desert
1570	Riverside	Outside TUMF Zones	Palm Desert
1571	Riverside	Outside TUMF Zones	Palm Desert
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1659	Riverside	Outside TUMF Zones	Palm Desert
1660	Riverside	Outside TUMF Zones	Palm Desert

TAZ	County	WRCOG Zone	City
1661	Riverside	Outside TUMF Zones	Palm Desert
1662	Riverside	Outside TUMF Zones	Palm Desert
1663	Riverside	Outside TUMF Zones	Palm Desert
1664	Riverside	Outside TUMF Zones	Palm Desert
1665	Riverside	Outside TUMF Zones	Palm Desert
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1667	Riverside	Outside TUMF Zones	Palm Desert
1668	Riverside	Outside TUMF Zones	Palm Desert
1669	Riverside	Outside TUMF Zones	Palm Desert
1670	Riverside	Outside TUMF Zones	Palm Desert
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1688	Riverside	Outside TUMF Zones	Palm Desert
1689	Riverside	Outside TUMF Zones	Palm Desert
1690	Riverside	Outside TUMF Zones	Palm Desert
1691	Riverside	Outside TUMF Zones	Palm Desert
1692	Riverside	Outside TUMF Zones	Palm Springs
1693	Riverside	Outside TUMF Zones	Palm Springs
1694	Riverside	Outside TUMF Zones	Palm Springs
1695	Riverside	Outside TUMF Zones	Palm Springs
1696	Riverside	Outside TUMF Zones	Palm Springs
1697	Riverside	Outside TUMF Zones	Palm Springs
1698	Riverside	Outside TUMF Zones	Palm Springs
1699	Riverside	Outside TUMF Zones	Palm Springs
1700	Riverside	Outside TUMF Zones	Palm Springs
1701	Riverside	Outside TUMF Zones	Palm Springs
1702	Riverside	Outside TUMF Zones	Palm Springs
1703	Riverside	Outside TUMF Zones	Palm Springs
1704	Riverside	Outside TUMF Zones	Palm Springs
1705	Riverside	Outside TUMF Zones	Palm Springs
1706	Riverside	Outside TUMF Zones	Palm Springs
1707	Riverside	Outside TUMF Zones	Palm Springs
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1732	Riverside	Outside TUMF Zones	Palm Springs
1733	Riverside	Outside TUMF Zones	Palm Springs
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1743	Riverside	Outside TUMF Zones	Palm Springs
1744	Riverside	Outside TUMF Zones	Palm Springs
1745	Riverside	Outside TUMF Zones	Palm Springs
1746	Riverside	Outside TUMF Zones	Palm Springs
1747	Riverside	Outside TUMF Zones	Palm Springs
1748	Riverside	Outside TUMF Zones	Palm Springs
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1750	Riverside	Outside TUMF Zones	Palm Springs
1751	Riverside	Outside TUMF Zones	Palm Springs
1752	Riverside	Outside TUMF Zones	Palm Springs
1753	Riverside	Outside TUMF Zones	Palm Springs
1754	Riverside	Outside TUMF Zones	Palm Springs
1755	Riverside	Outside TUMF Zones	Palm Springs
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1762	Riverside	Outside TUMF Zones	Palm Springs
1763	Riverside	Outside TUMF Zones	Palm Springs
1764	Riverside	Outside TUMF Zones	Palm Springs
1765	Riverside	Outside TUMF Zones	Palm Springs
1766	Riverside	Outside TUMF Zones	Palm Springs
1767	Riverside	Outside TUMF Zones	Palm Springs
1768	Riverside	Outside TUMF Zones	Palm Springs
1769	Riverside	Outside TUMF Zones	Pal

EXHIBIT I-1 (continued)
RivCoM TAZ Correspondence by WRCOG TUMF Zones - Outside Riverside County

TAZ	County	WRCOG Zone
3300	Orange	Outside TUMF Zones
3301	Orange	Outside TUMF Zones
3302	Orange	Outside TUMF Zones
3303	Orange	Outside TUMF Zones
3304	Orange	Outside TUMF Zones
3305	Orange	Outside TUMF Zones
3306	Orange	Outside TUMF Zones
3307	Orange	Outside TUMF Zones
3308	Orange	Outside TUMF Zones
3309	Orange	Outside TUMF Zones
3310	Orange	Outside TUMF Zones
3311	Orange	Outside TUMF Zones
3312	Orange	Outside TUMF Zones
3313	Orange	Outside TUMF Zones
3314	Orange	Outside TUMF Zones
3315	Orange	Outside TUMF Zones
3316	Orange	Outside TUMF Zones
3317	Orange	Outside TUMF Zones
3318	Orange	Outside TUMF Zones
3319	Orange	Outside TUMF Zones
3320	Orange	Outside TUMF Zones
3321	Orange	Outside TUMF Zones
3322	Orange	Outside TUMF Zones
3323	Orange	Outside TUMF Zones
3324	Orange	Outside TUMF Zones
3325	Orange	Outside TUMF Zones
3326	Orange	Outside TUMF Zones
3327	Orange	Outside TUMF Zones
3328	Orange	Outside TUMF Zones
3329	Orange	Outside TUMF Zones
3330	Orange	Outside TUMF Zones
3331	Orange	Outside TUMF Zones
3332	Orange	Outside TUMF Zones
3333	Orange	Outside TUMF Zones
3334	Orange	Outside TUMF Zones
3335	Orange	Outside TUMF Zones
3336	Orange	Outside TUMF Zones
3337	Orange	Outside TUMF Zones
3338	Orange	Outside TUMF Zones
3339	Orange	Outside TUMF Zones
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3341	Orange	Outside TUMF Zones
3342	Orange	Outside TUMF Zones
3343	Orange	Outside TUMF Zones
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3346	Orange	Outside TUMF Zones
3347	Orange	Outside TUMF Zones
3348	Orange	Outside TUMF Zones
3349	Orange	Outside TUMF Zones
3350	Orange	Outside TUMF Zones
3351	Orange	Outside TUMF Zones
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3360	Orange	Outside TUMF Zones
3361	Orange	Outside TUMF Zones
3362	Orange	Outside TUMF Zones
3363	Orange	Outside TUMF Zones
3364	Orange	Outside TUMF Zones
3365	Orange	Outside TUMF Zones
3366	Orange	Outside TUMF Zones
3367	Orange	Outside TUMF Zones
3368	Orange	Outside TUMF Zones
3369	Orange	Outside TUMF Zones

TAZ	County	WRCOG Zone
3384	San Bernardino	Outside TUMF Zones
3385	San Bernardino	Outside TUMF Zones
3386	San Bernardino	Outside TUMF Zones
3387	San Bernardino	Outside TUMF Zones
3388	San Bernardino	Outside TUMF Zones
3389	San Bernardino	Outside TUMF Zones
3390	San Bernardino	Outside TUMF Zones
3391	San Bernardino	Outside TUMF Zones
3392	San Bernardino	Outside TUMF Zones
3393	San Bernardino	Outside TUMF Zones
3394	San Bernardino	Outside TUMF Zones
3395	San Bernardino	Outside TUMF Zones
3396	San Bernardino	Outside TUMF Zones
3397	San Bernardino	Outside TUMF Zones
3398	San Bernardino	Outside TUMF Zones
3399	San Bernardino	Outside TUMF Zones
3400	San Bernardino	Outside TUMF Zones
3401	San Bernardino	Outside TUMF Zones
3402	San Bernardino	Outside TUMF Zones
3403	San Bernardino	Outside TUMF Zones
3404	San Bernardino	Outside TUMF Zones
3405	San Bernardino	Outside TUMF Zones
3406	San Bernardino	Outside TUMF Zones
3407	San Bernardino	Outside TUMF Zones
3408	San Bernardino	Outside TUMF Zones
3409	San Bernardino	Outside TUMF Zones
3410	San Bernardino	Outside TUMF Zones
3411	San Bernardino	Outside TUMF Zones
3412	San Bernardino	Outside TUMF Zones
3413	San Bernardino	Outside TUMF Zones
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3431	San Bernardino	Outside TUMF Zones
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3433	San Bernardino	Outside TUMF Zones
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3435	San Bernardino	Outside TUMF Zones
3436	San Bernardino	Outside TUMF Zones
3437	San Bernardino	Outside TUMF Zones
3438	San Bernardino	Outside TUMF Zones
3439	San Bernardino	Outside TUMF Zones
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3449	San Bernardino	Outside TUMF Zones
3450	San Bernardino	Outside TUMF Zones
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3452	San Bernardino	Outside TUMF Zones
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3461	San Bernardino	Outside TUMF Zones
3462	San Bernardino	Outside TUMF Zones
3463	San Bernardino	Outside TUMF Zones
3464	San Bernardino	Outside TUMF Zones
3465	San Bernardino	Outside TUMF Zones
3466	San Bernardino	Outside TUMF Zones
3467	San Bernardino	Outside TUMF Zones
3468	San Bernardino	Outside TUMF Zones
3469	San Bernardino	Outside TUMF Zones
3470	San Bernardino	Outside TUMF Zones
3471	San Bernardino	Outside TUMF Zones
3472	San Bernardino	Outside TUMF Zones
3473	San Bernardino	Outside TUMF Zones
3474	San Bernardino	Outside TUMF Zones
3475	San Bernardino	Outside TUMF Zones
3476	San Bernardino	Outside TUMF Zones
3477	San Bernardino	Outside TUMF Zones
3478	San Bernardino	Outside TUMF Zones
3479	San Bernardino	Outside TUMF Zones
3480	San Bernardino	Outside TUMF Zones
3481	San Bernardino	Outside TUMF Zones
3482	San Bernardino	Outside TUMF Zones

TAZ	County	WRCOG Zone
3370	San Diego	Outside TUMF Zones
3371	San Diego	Outside TUMF Zones
3372	San Diego	Outside TUMF Zones
3373	San Diego	Outside TUMF Zones
3374	San Diego	Outside TUMF Zones
3375	San Diego	Outside TUMF Zones
3376	San Diego	Outside TUMF Zones
3377	San Diego	Outside TUMF Zones
3378	San Diego	Outside TUMF Zones
3379	San Diego	Outside TUMF Zones
3380	San Diego	Outside TUMF Zones
3381	San Diego	Outside TUMF Zones
3382	San Diego	Outside TUMF Zones
3383	San Diego	Outside TUMF Zones

EXHIBIT I-2 - 2045 AM Peak Period Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	187,280	10,596	40,037	2,900	24,865	25,446	**291,124**
Hemet/San Jacinto	13,060	93,350	3,815	3,847	7,263	8,090	**129,424**
Northwest	26,655	1,189	333,593	1,239	4,956	86,710	**454,342**
Pass Area	3,663	3,372	2,768	49,166	402	14,458	**73,828**
Southwest	25,061	7,304	14,708	914	298,362	27,954	**374,302**
Outside WRCOG	15,413	3,353	86,546	11,208	14,949		**131,469**
TOTAL	**271,131**	**119,163**	**481,467**	**69,274**	**350,797**	**162,658**	**1,454,490**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

EXHIBIT I-3 - 2045 AM Peak Period Percent Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	64.3%	3.6%	13.8%	1.0%	8.5%	8.7%	**100%**
Hemet/San Jacinto	10.1%	72.1%	2.9%	3.0%	5.6%	6.3%	**100%**
Northwest	5.9%	0.3%	73.4%	0.3%	1.1%	19.1%	**100%**
Pass Area	5.0%	4.6%	3.7%	66.6%	0.5%	19.6%	**100%**
Southwest	6.7%	2.0%	3.9%	0.2%	79.7%	7.5%	**100%**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

EXHIBIT I-4 - 2045 PM Peak Period Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	230,328	12,878	49,743	3,401	30,237	32,112	**358,698**
Hemet/San Jacinto	16,341	115,656	4,833	4,586	8,818	9,988	**160,221**
Northwest	31,923	1,495	409,641	1,448	6,076	109,331	**559,914**
Pass Area	4,405	4,214	3,346	61,219	506	17,876	**91,566**
Southwest	30,752	8,928	18,144	1,062	368,893	34,759	**462,537**
Outside WRCOG	18,495	4,221	106,166	13,282	18,918		**161,080**
TOTAL	**332,244**	**147,391**	**591,872**	**84,997**	**433,447**	**204,065**	**1,794,017**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

EXHIBIT I-5 - 2045 PM Peak Period Percent Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	64.2%	3.6%	13.9%	0.9%	8.4%	9.0%	**100%**
Hemet/San Jacinto	10.2%	72.2%	3.0%	2.9%	5.5%	6.2%	**100%**
Northwest	5.7%	0.3%	73.2%	0.3%	1.1%	19.5%	**100%**
Pass Area	4.8%	4.6%	3.7%	66.9%	0.6%	19.5%	**100%**
Southwest	6.6%	1.9%	3.9%	0.2%	79.8%	7.5%	**100%**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

EXHIBIT I-6 - 2045 Off-Peak Period Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	313,691	17,511	64,577	3,948	39,446	41,718	**480,890**
Hemet/San Jacinto	21,579	162,035	5,659	6,318	10,987	11,533	**218,110**
Northwest	43,461	1,848	565,759	1,528	7,406	160,552	**780,554**
Pass Area	6,068	6,269	4,125	91,253	631	24,354	**132,700**
Southwest	40,442	11,861	22,506	1,132	508,327	40,698	**624,964**
Outside WRCOG	25,307	5,301	145,054	16,534	23,061		**215,257**
TOTAL	**450,546**	**204,825**	**807,679**	**120,712**	**589,859**	**278,854**	**2,452,475**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

Table I-7 - 2045 Off-Peak Period Percent Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	65.2%	3.6%	13.4%	0.8%	8.2%	8.7%	**100%**
Hemet/San Jacinto	9.9%	74.3%	2.6%	2.9%	5.0%	5.3%	**100%**
Northwest	5.6%	0.2%	72.5%	0.2%	0.9%	20.6%	**100%**
Pass Area	4.6%	4.7%	3.1%	68.8%	0.5%	18.4%	**100%**
Southwest	6.5%	1.9%	3.6%	0.2%	81.3%	6.5%	**100%**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

EXHIBIT I-8 - 2045 Daily Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	731,298	40,985	154,356	10,249	94,547	99,276	**1,130,712**
Hemet/San Jacinto	50,980	371,040	14,306	14,750	27,068	29,611	**507,755**
Northwest	102,039	4,532	1,308,993	4,215	18,439	356,593	**1,794,811**
Pass Area	14,136	13,855	10,239	201,638	1,539	56,688	**298,095**
Southwest	96,254	28,093	55,358	3,108	1,175,582	103,410	**1,461,804**
Outside WRCOG	59,214	12,874	337,766	41,024	56,927		**507,806**
TOTAL	**1,053,921**	**471,379**	**1,881,018**	**274,984**	**1,374,103**	**645,578**	**5,700,982**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

EXHIBIT I-9 - 2045 Percent Daily Vehicle Trips by WRCOG Zone*

TO / FROM	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	64.7%	3.6%	13.7%	0.9%	8.4%	8.8%	**100%**
Hemet/San Jacinto	10.0%	73.1%	2.8%	2.9%	5.3%	5.8%	**100%**
Northwest	5.7%	0.3%	72.9%	0.2%	1.0%	19.9%	**100%**
Pass Area	4.7%	4.6%	3.4%	67.6%	0.5%	19.0%	**100%**
Southwest	6.6%	1.9%	3.8%	0.2%	80.4%	7.1%	**100%**

* Based on RIVCOM Year 2045 No-Build Scenario, February 2024

Appendix J - Western Riverside County Regional Trip Purpose

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law, fundamentally changing the way that transportation impacts are to be assessed pursuant to the California Environmental Quality Act (CEQA). The new law requires CEQA guidelines to be amended to provide an alternative to Level of Service for evaluating transportation impacts. The intent of the change is to introduce alternate criteria that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (New Public Resources Code Section 21099(b)(1).) The primary effect of the new law is to establish the use of vehicle miles of travel (VMT) as the preferred basis for measuring traffic impacts, in recognition of the fact that VMT more accurately reflects traffic impacts as it takes into account both the number of trips being made and the distance of those trips. Although CEQA and the specific provision of SB 743 do not generally apply directly to impact fee programs (which are governed by the provision of the Mitigation Fee Act), the reasoning behind SB 743 establishing VMT as the preferred basis for CEQA traffic impact measurement is sound and equally applicable for impact fee nexus determination.

Linking the TUMF to VMT does enable developers to continue to use TUMF participation as demonstration of partial mitigation for their cumulative regional transportation impacts under the new SB 743 requirements. Furthermore, consistent with SB 743, consideration of travel impacts in terms of peak period VMT more accurately reflects the realities of travel behavior as the basis for determining impacts on the regional transportation system by reflecting the peak demands on the system based on the number of trips and the cumulative distance these trips occupy facilities in the system. Variation in trip length for different trip purposes is important to quantify since the impact associated with a trip is not limited to whether a trip occurs or not. A longer distance trip occupies more roadways over a longer period of time (all else being equal), and therefore goes through more intersections and consumes more capacity, thus requiring greater levels of mitigation. As the purpose of the TUMF is to mitigate the cumulative regional traffic impacts of future growth, a VMT based approach to defining the rough proportionality of impacts resulting from various differing types of new development better aligns with this purpose.

RivCoM is the primary analytical toll used to forecast VMT in Riverside County. RivCoM was developed based on the SCAG regional travel demand model, whose underlying model travel characteristics were developed based on national and regional travel behavior surveys, including the U.S. Census and the California Household Travel Survey. The methodology for using travel demand models, including RivCoM, as the basis for calculating and measuring VMT is consistent with NEPA and CEQA guidance, and accepted transportation planning practice.

The RivCoM model produces person-trips (irrespective of mode choice) on the basis of five trip purposes including home-based-work (HBW), home-based-other (HBO), home-based-school (HBS), home-based-university (HBU), and non-home based (NHB). Peak period, off-peak period and daily vehicle trips and VMT are derived from the person-trip productions based on mode choice assignments and differing trip length

characteristics embedded on the model parameters. Daily VMT results were aggregated into home-based VMT and non-home-based VMT for each scenario to represent the level of travel demand and impact on the transportation system attributable to each trip purpose.

The attribution of VMT associated with home-based trip purposes to residential land uses and non-home-based trips to non-residential land uses is consistent with the provisions of NCHRP Report #187 Quick Response Urban Travel Estimation Techniques and Transferable Parameters User's Guide (Transportation Research Board, 1978), a widely-referenced source for travel estimation techniques used for travel demand modeling. Chapter 2 of this report, which details trip generation estimation, states that "HBW (Home Based Work) and HBNW (Home Based Non Work) trips are generated at the households, whereas the NHB (Non-Home Based) trips are generated elsewhere." Consistent with NCHRP Report #187, aggregating person trip productions and associated VMT into home-based (combining home-based-work, home-based-other and home-based-school) and non-home-based (combining work-based-other, and other-based-other) represents an appropriate way to allocate trip generation and associated impacts between residential and non-residential land uses for the purpose of estimating the rough proportionality of the TUMF fee.

Exhibits J-1 through **J-36** of this Appendix include the RivCoM model data aggregated for peak period, off-peak period and daily person VMT for each trip purpose between the respective TUMF zones, and for both model year scenarios. The growth in daily VMT for each trip purpose was calculated as the difference between the daily VMT in the 2018 Existing scenario and the daily VMT in the 2045 No Build scenario. The growth in home-based daily VMT represents 77.7% of the total growth in daily VMT, and the growth in non-home-based daily VMT represents 22.3% of the total growth in daily VMT, as shown in **Table 5.4.** The relative share of the growth in daily VMT summarized in **Table 5.4** provides the basis for estimating the rough proportionality of the TUMF network impacts and related mitigation costs (and associated fees) attributable to new residential and non-residential development, respectively.

EXHIBIT J-1
VMT BY WRCOG TUMF ZONE
TOTAL PEAK PERIOD TRIPS FOR ALL PURPOSES - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	1,084,569	176,144	919,950	98,767	494,843	1,672,280	**4,446,553**
Hemet/San Jacinto	202,282	474,270	189,620	93,211	207,871	736,736	**1,903,990**
Northwest	471,239	62,909	3,082,883	69,489	235,185	3,500,199	**7,421,903**
Pass Area	86,956	66,611	120,609	230,246	31,017	531,753	**1,067,192**
Southwest	474,113	188,640	635,435	61,535	1,822,831	2,240,495	**5,423,048**
Outside WRCOG	833,664	293,941	3,584,150	403,303	1,245,556	129,717,014	**136,077,627**
TOTAL	**3,152,824**	**1,262,514**	**8,532,646**	**956,551**	**4,037,302**	**138,398,477**	**156,340,314**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-2
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-WORK TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	165,241	58,992	411,439	65,622	197,893	1,220,777	**2,119,965**
Hemet/San Jacinto	70,807	53,805	128,758	48,898	103,290	567,394	**972,951**
Northwest	143,340	37,259	674,676	53,185	136,185	1,920,635	**2,965,279**
Pass Area	25,983	15,665	65,646	34,287	18,981	304,632	**465,194**
Southwest	165,236	76,537	376,007	49,330	410,382	1,721,102	**2,798,594**
Outside WRCOG	420,948	169,433	1,777,239	260,161	753,400	45,139,830	**48,521,011**
TOTAL	**991,555**	**411,691**	**3,433,764**	**511,483**	**1,620,131**	**50,874,369**	**57,842,994**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-3
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-OTHER TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	673,880	84,730	364,070	26,370	227,784	361,436	**1,738,269**
Hemet/San Jacinto	100,994	306,411	50,898	33,509	84,214	146,284	**722,311**
Northwest	239,023	20,386	1,679,367	13,441	81,648	1,178,130	**3,211,995**
Pass Area	45,133	33,006	42,321	129,128	10,013	167,567	**427,168**
Southwest	234,369	82,255	197,098	10,679	1,016,873	402,898	**1,944,172**
Outside WRCOG	326,013	98,751	1,241,409	108,093	389,492	54,404,000	**56,567,758**
TOTAL	**1,619,412**	**625,538**	**3,575,162**	**321,221**	**1,810,024**	**56,660,315**	**64,611,673**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-4
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-SCHOOL TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	110,735	3,642	21,950	387	16,486	6,055	**159,255**
Hemet/San Jacinto	8,004	43,231	162	666	2,726	70	**54,859**
Northwest	20,225	79	221,291	28	2,091	56,821	**300,535**
Pass Area	1,326	1,697	103	16,564	7	4,939	**24,635**
Southwest	19,735	3,035	4,593	7	138,861	1,084	**167,315**
Outside WRCOG	6,136	402	60,940	5,117	10,948	5,978,607	**6,062,150**
TOTAL	**166,161**	**52,086**	**309,039**	**22,769**	**171,120**	**6,047,576**	**6,768,750**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-5
VMT BY WRCOG TUMF ZONE
PEAK PERIOD NON-HOME-BASED TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	116,617	17,407	82,092	6,004	49,146	58,568	**329,833**
Hemet/San Jacinto	20,422	60,529	6,881	9,918	17,117	18,684	**133,551**
Northwest	61,455	2,779	414,635	2,683	14,253	282,505	**778,310**
Pass Area	12,768	11,566	8,715	49,680	1,935	47,061	**131,725**
Southwest	40,694	13,037	27,856	1,225	237,362	49,558	**369,732**
Outside WRCOG	65,953	13,263	341,047	28,498	87,982	22,327,971	**22,864,713**
TOTAL	**317,908**	**118,582**	**881,227**	**98,008**	**407,795**	**22,784,346**	**24,607,865**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-6
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-UNIVERSITY TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	18,096	11,373	40,399	384	3,534	25,445	**99,231**
Hemet/San Jacinto	2,056	10,293	2,922	220	523	4,304	**20,318**
Northwest	7,195	2,406	92,914	152	1,007	62,109	**165,784**
Pass Area	1,747	4,677	3,824	587	80	7,554	**18,470**
Southwest	14,080	13,775	29,881	293	19,353	65,853	**143,236**
Outside WRCOG	14,614	12,092	163,514	1,433	3,734	1,866,606	**2,061,994**
TOTAL	**57,788**	**54,616**	**333,455**	**3,070**	**28,232**	**2,031,871**	**2,509,032**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-7
VMT BY WRCOG TUMF ZONE
TOTAL OFF PEAK TRIPS FOR ALL PURPOSES - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	801,662	128,869	640,224	56,860	339,965	988,339	**2,955,918**
Hemet/San Jacinto	140,692	363,274	109,533	65,159	132,656	415,778	**1,227,093**
Northwest	340,558	37,798	2,341,566	37,213	141,992	2,394,837	**5,293,964**
Pass Area	67,550	54,436	80,501	191,165	19,798	353,246	**766,697**
Southwest	330,176	130,997	414,647	31,788	1,358,749	1,284,306	**3,550,663**
Outside WRCOG	569,970	187,134	2,517,328	247,784	764,704	97,045,358	**101,332,277**
TOTAL	**2,250,608**	**902,509**	**6,103,800**	**629,968**	**2,757,864**	**102,481,863**	**115,126,612**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-8
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-WORK TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	64,053	23,015	164,150	25,429	78,516	519,620	**874,784**
Hemet/San Jacinto	27,710	20,523	51,954	19,949	40,698	244,713	**405,547**
Northwest	57,811	15,473	261,251	21,801	56,354	811,368	**1,224,059**
Pass Area	10,592	6,429	27,063	12,994	8,220	128,530	**193,828**
Southwest	65,794	29,706	153,862	20,870	157,689	724,854	**1,152,774**
Outside WRCOG	187,105	76,293	763,815	115,048	322,353	17,962,924	**19,427,539**
TOTAL	**413,065**	**171,439**	**1,422,095**	**216,091**	**663,831**	**20,392,010**	**23,278,531**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-9
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-OTHER TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	518,247	66,043	291,090	21,528	180,073	324,734	**1,401,715**
Hemet/San Jacinto	77,692	230,275	41,945	28,302	64,944	130,834	**573,991**
Northwest	181,766	15,629	1,296,905	11,001	63,383	1,010,885	**2,579,569**
Pass Area	35,416	25,064	34,290	99,409	8,287	138,571	**341,037**
Southwest	181,290	62,892	165,057	8,746	793,860	357,826	**1,569,671**
Outside WRCOG	262,051	76,387	1,010,627	87,034	296,373	42,030,568	**43,763,040**
TOTAL	**1,256,461**	**476,289**	**2,839,914**	**256,020**	**1,406,920**	**43,993,419**	**50,229,023**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-10
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-SCHOOL TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	29,899	1,018	5,963	112	4,495	1,879	**43,367**
Hemet/San Jacinto	2,171	11,723	46	212	743	22	**14,915**
Northwest	5,315	22	59,984	8	572	16,387	**82,287**
Pass Area	367	460	31	4,489	2	1,358	**6,707**
Southwest	5,242	828	1,239	2	37,812	304	**45,428**
Outside WRCOG	1,679	106	16,999	1,337	2,522	1,608,845	**1,631,488**
TOTAL	**44,671**	**14,158**	**84,261**	**6,159**	**46,147**	**1,628,796**	**1,824,191**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-11
VMT BY WRCOG TUMF ZONE
OFF PEAK NON-HOME-BASED TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	171,868	26,165	127,774	9,573	74,861	103,539	**513,780**
Hemet/San Jacinto	31,023	89,467	11,465	16,561	25,978	33,500	**207,994**
Northwest	88,808	4,136	620,263	4,317	21,165	472,709	**1,211,397**
Pass Area	19,327	17,223	13,991	73,960	3,239	74,839	**202,580**
Southwest	61,789	19,268	45,891	1,951	356,701	84,988	**570,589**
Outside WRCOG	103,831	20,636	536,313	43,581	141,283	33,374,718	**34,220,361**
TOTAL	**476,647**	**176,895**	**1,355,697**	**149,943**	**623,228**	**34,144,292**	**36,926,701**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-12
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-UNIVERSITY TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	17,594	12,628	51,247	218	2,019	38,566	**122,272**
Hemet/San Jacinto	2,097	11,286	4,124	136	292	6,709	**24,645**
Northwest	6,858	2,539	103,163	86	517	83,488	**196,652**
Pass Area	1,849	5,259	5,127	313	49	9,947	**22,544**
Southwest	16,062	18,302	48,598	219	12,688	116,334	**212,202**
Outside WRCOG	15,304	13,712	189,575	784	2,172	2,068,303	**2,289,850**
TOTAL	**59,764**	**63,727**	**401,834**	**1,755**	**17,738**	**2,323,347**	**2,868,164**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-13
VMT BY WRCOG TUMF ZONE
TOTAL DAILY TRIPS FOR ALL PURPOSES - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	1,886,231	305,013	1,560,174	155,627	834,808	2,660,619	**7,402,471**
Hemet/San Jacinto	342,975	837,544	299,154	158,370	340,527	1,152,514	**3,131,082**
Northwest	811,797	100,707	5,424,449	106,702	377,177	5,895,035	**12,715,867**
Pass Area	154,507	121,047	201,110	421,411	50,814	884,999	**1,833,889**
Southwest	804,289	319,636	1,050,082	93,323	3,181,580	3,524,801	**8,973,711**
Outside WRCOG	1,403,634	481,075	6,101,478	651,086	2,010,260	226,762,371	**237,409,905**
TOTAL	**5,403,432**	**2,165,023**	**14,636,446**	**1,586,519**	**6,795,166**	**240,880,340**	**271,466,925**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-14
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-WORK TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	229,295	82,007	575,590	91,051	276,409	1,740,397	**2,994,749**
Hemet/San Jacinto	98,516	74,328	180,712	68,847	143,988	812,107	**1,378,498**
Northwest	201,151	52,731	935,927	74,986	192,540	2,732,003	**4,189,337**
Pass Area	36,574	22,095	92,709	47,281	27,201	433,163	**659,022**
Southwest	231,030	106,243	529,869	70,200	568,071	2,445,955	**3,951,368**
Outside WRCOG	608,054	245,727	2,541,054	375,209	1,075,753	63,102,754	**67,948,550**
TOTAL	**1,404,620**	**583,131**	**4,855,859**	**727,574**	**2,283,962**	**71,266,379**	**81,121,525**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-15
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-OTHER TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	1,192,127	150,772	655,160	47,898	407,857	686,170	**3,139,984**
Hemet/San Jacinto	178,686	536,686	92,843	61,811	149,158	277,118	**1,296,302**
Northwest	420,789	36,015	2,976,272	24,442	145,031	2,189,015	**5,791,564**
Pass Area	80,549	58,070	76,610	228,537	18,300	306,138	**768,205**
Southwest	415,659	145,147	362,155	19,425	1,810,733	760,724	**3,513,843**
Outside WRCOG	588,064	175,138	2,252,036	195,127	685,865	96,434,568	**100,330,798**
TOTAL	**2,875,873**	**1,101,828**	**6,415,076**	**577,241**	**3,216,945**	**100,653,734**	**114,840,696**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-16
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-SCHOOL TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	140,634	4,660	27,913	499	20,981	7,934	**202,622**
Hemet/San Jacinto	10,175	54,954	207	877	3,469	92	**69,775**
Northwest	25,540	101	281,274	36	2,663	73,208	**382,822**
Pass Area	1,692	2,157	134	21,053	9	6,297	**31,343**
Southwest	24,977	3,864	5,832	9	176,673	1,388	**212,743**
Outside WRCOG	7,814	508	77,939	6,454	13,470	7,587,452	**7,693,638**
TOTAL	**210,832**	**66,244**	**393,299**	**28,928**	**217,266**	**7,676,372**	**8,592,941**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-17
VMT BY WRCOG TUMF ZONE
DAILY NON-HOME-BASED TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	288,485	43,572	209,866	15,577	124,008	162,106	**843,613**
Hemet/San Jacinto	51,445	149,996	18,346	26,479	43,095	52,184	**341,544**
Northwest	150,263	6,915	1,034,898	7,000	35,418	755,213	**1,989,708**
Pass Area	32,095	28,790	22,706	123,641	5,174	121,900	**334,305**
Southwest	102,482	32,305	73,748	3,176	594,063	134,546	**940,320**
Outside WRCOG	169,784	33,899	877,360	72,079	229,264	55,702,689	**57,085,075**
TOTAL	**794,554**	**295,477**	**2,236,924**	**247,951**	**1,031,023**	**56,928,638**	**61,534,566**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-18
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-UNIVERSITY TRIPS ONLY - 2018 EXISTING

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	35,690	24,001	91,646	601	5,553	64,011	**221,503**
Hemet/San Jacinto	4,153	21,580	7,046	356	815	11,012	**44,963**
Northwest	14,054	4,945	196,077	238	1,525	145,596	**362,435**
Pass Area	3,596	9,936	8,951	900	129	17,502	**41,014**
Southwest	30,142	32,078	78,478	512	32,040	182,188	**355,438**
Outside WRCOG	29,918	25,804	353,089	2,217	5,906	3,934,909	**4,351,844**
TOTAL	**117,553**	**118,344**	**735,288**	**4,825**	**45,970**	**4,355,218**	**5,377,197**

Based on RivCOM Year 2018 Existing Scenario, November 2023

EXHIBIT J-19
VMT BY WRCOG TUMF ZONE
TOTAL PEAK PERIOD TRIPS FOR ALL PURPOSES - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	1,799,333	331,707	1,246,839	150,237	725,077	2,074,041	**6,327,234**
Hemet/San Jacinto	419,876	828,755	285,137	155,667	345,759	1,006,889	**3,042,083**
Northwest	719,180	87,427	3,652,429	90,736	283,636	3,816,550	**8,649,959**
Pass Area	166,143	123,928	189,122	408,274	39,950	805,993	**1,733,411**
Southwest	823,445	350,410	894,926	84,115	3,062,054	3,170,545	**8,385,495**
Outside WRCOG	1,208,763	420,070	4,001,373	598,622	1,482,553	151,663,404	**159,374,786**
TOTAL	**5,136,740**	**2,142,297**	**10,269,827**	**1,487,652**	**5,939,029**	**162,537,422**	**187,512,968**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-20
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-WORK TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	373,364	119,251	639,446	100,864	284,454	1,576,209	**3,093,588**
Hemet/San Jacinto	172,286	134,504	208,376	88,310	169,783	827,421	**1,600,680**
Northwest	244,964	48,849	905,169	66,860	143,376	2,007,531	**3,416,748**
Pass Area	69,297	34,601	118,258	72,874	25,101	465,215	**785,345**
Southwest	346,327	152,164	600,641	69,322	654,211	2,572,563	**4,395,228**
Outside WRCOG	627,554	220,846	2,057,129	369,322	678,800	52,699,890	**56,653,540**
TOTAL	**1,833,791**	**710,214**	**4,529,019**	**767,551**	**1,955,725**	**60,148,829**	**69,945,130**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-21
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-OTHER TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	1,062,642	154,854	432,156	38,451	340,614	392,364	**2,421,080**
Hemet/San Jacinto	190,962	506,337	65,022	49,916	143,277	154,174	**1,109,688**
Northwest	352,592	31,203	1,941,227	19,896	116,947	1,347,877	**3,809,741**
Pass Area	73,295	60,143	56,197	230,606	12,927	245,844	**679,013**
Southwest	365,033	139,169	213,955	13,093	1,806,167	430,821	**2,968,236**
Outside WRCOG	473,253	165,371	1,354,389	176,377	669,783	64,072,996	**66,912,168**
TOTAL	**2,517,777**	**1,057,076**	**4,062,946**	**528,338**	**3,089,715**	**66,644,076**	**77,899,927**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-22
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-SCHOOL TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	136,895	5,994	23,940	484	20,215	6,298	**193,827**
Hemet/San Jacinto	13,675	57,088	301	975	4,113	107	**76,259**
Northwest	23,198	110	237,602	33	2,279	66,566	**329,788**
Pass Area	1,880	2,406	139	26,717	7	9,600	**40,749**
Southwest	24,598	3,842	4,731	7	228,422	1,295	**262,895**
Outside WRCOG	6,723	624	64,150	5,947	16,481	6,271,751	**6,365,676**
TOTAL	**206,969**	**70,065**	**330,863**	**34,163**	**271,517**	**6,355,617**	**7,269,194**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-23
VMT BY WRCOG TUMF ZONE
PEAK PERIOD NON-HOME-BASED TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	202,038	35,728	103,488	10,029	74,959	74,079	**500,322**
Hemet/San Jacinto	40,465	115,618	8,342	16,222	27,829	20,983	**229,458**
Northwest	89,752	4,817	459,879	3,793	19,949	335,223	**913,414**
Pass Area	19,244	20,136	9,751	77,216	1,839	73,705	**201,892**
Southwest	63,376	22,555	29,308	1,251	322,054	43,941	**482,484**
Outside WRCOG	88,138	21,358	372,582	45,519	113,947	26,519,796	**27,161,341**
TOTAL	**503,012**	**220,212**	**983,351**	**154,031**	**560,578**	**27,067,727**	**29,488,911**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-24
VMT BY WRCOG TUMF ZONE
PEAK PERIOD HOME-BASED-UNIVERSITY TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	24,394	15,880	47,809	408	4,835	25,090	**118,417**
Hemet/San Jacinto	2,488	15,208	3,096	245	757	4,204	**25,998**
Northwest	8,674	2,448	108,552	155	1,085	59,353	**180,268**
Pass Area	2,428	6,642	4,777	861	76	11,629	**26,412**
Southwest	24,112	32,680	46,293	442	51,199	121,926	**276,652**
Outside WRCOG	13,096	11,872	153,123	1,456	3,543	2,098,971	**2,282,060**
TOTAL	**75,191**	**84,731**	**363,649**	**3,568**	**61,494**	**2,321,174**	**2,909,807**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-25
VMT BY WRCOG TUMF ZONE
TOTAL OFF PEAK TRIPS FOR ALL PURPOSES - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	1,318,612	243,507	855,399	90,116	512,253	1,362,381	**4,382,268**
Hemet/San Jacinto	307,848	620,261	182,200	112,414	232,480	632,480	**2,087,683**
Northwest	514,466	58,795	2,686,245	50,935	187,731	2,945,148	**6,443,318**
Pass Area	125,325	101,371	126,342	322,595	27,752	586,766	**1,290,151**
Southwest	594,702	254,789	612,135	48,790	2,229,187	1,999,442	**5,739,044**
Outside WRCOG	857,986	292,176	2,897,700	380,089	960,617	114,223,362	**119,611,929**
TOTAL	**3,718,939**	**1,570,899**	**7,360,021**	**1,004,939**	**4,150,019**	**121,749,579**	**139,554,395**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-26
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-WORK TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	139,109	48,317	252,879	40,263	116,636	745,260	**1,342,464**
Hemet/San Jacinto	68,574	47,643	92,129	35,673	67,839	402,851	**714,710**
Northwest	98,150	23,283	337,214	28,227	65,852	940,673	**1,493,399**
Pass Area	28,513	15,183	50,763	26,317	12,905	221,065	**354,746**
Southwest	143,010	60,883	254,955	32,890	244,955	1,155,616	**1,892,308**
Outside WRCOG	302,064	116,183	938,244	166,464	326,211	21,226,888	**23,076,054**
TOTAL	**779,420**	**311,492**	**1,926,184**	**329,834**	**834,398**	**24,692,353**	**28,873,681**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-27
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-OTHER TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	817,753	121,802	362,911	33,093	271,714	415,042	**2,022,315**
Hemet/San Jacinto	161,868	374,441	65,747	46,266	116,874	172,568	**937,763**
Northwest	270,238	25,096	1,486,279	16,476	90,978	1,281,165	**3,170,231**
Pass Area	61,546	47,031	50,231	174,731	11,410	223,207	**568,155**
Southwest	303,367	111,492	202,017	12,889	1,405,767	465,133	**2,500,666**
Outside WRCOG	387,066	126,440	1,130,769	140,486	452,722	49,373,980	**51,611,462**
TOTAL	**2,001,838**	**806,301**	**3,297,953**	**423,940**	**2,349,465**	**51,931,094**	**60,810,592**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-28
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-SCHOOL TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	37,552	1,684	7,015	142	5,504	2,210	**54,106**
Hemet/San Jacinto	4,077	15,458	110	341	1,168	42	**21,196**
Northwest	6,276	32	64,909	10	605	20,422	**92,254**
Pass Area	563	684	47	7,234	2	2,659	**11,190**
Southwest	6,927	1,090	1,449	3	62,653	584	**72,705**
Outside WRCOG	2,040	166	19,074	1,704	3,185	1,683,458	**1,709,627**
TOTAL	**57,435**	**19,114**	**92,604**	**9,433**	**73,117**	**1,709,376**	**1,961,079**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-29
VMT BY WRCOG TUMF ZONE
OFF PEAK NON-HOME-BASED TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	299,738	55,092	169,871	16,381	115,948	153,204	**810,234**
Hemet/San Jacinto	70,174	166,706	18,278	29,966	46,159	47,597	**378,880**
Northwest	131,414	7,633	681,134	6,136	29,764	610,663	**1,466,744**
Pass Area	31,940	31,225	18,232	113,898	3,385	123,898	**322,577**
Southwest	104,433	36,376	55,746	2,580	484,258	98,486	**781,879**
Outside WRCOG	151,333	34,517	620,329	70,600	176,455	39,604,640	**40,657,873**
TOTAL	**789,032**	**331,549**	**1,563,590**	**239,561**	**855,969**	**40,638,488**	**44,418,188**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-30
VMT BY WRCOG TUMF ZONE
OFF PEAK HOME-BASED-UNIVERSITY TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	24,461	16,612	62,722	237	2,451	46,666	**153,148**
Hemet/San Jacinto	3,155	16,013	5,936	169	440	9,422	**35,134**
Northwest	8,389	2,752	116,708	85	532	92,226	**220,691**
Pass Area	2,763	7,248	7,069	416	50	15,937	**33,483**
Southwest	36,965	44,949	97,968	427	31,554	279,623	**491,486**
Outside WRCOG	15,482	14,869	189,285	835	2,045	2,334,396	**2,556,912**
TOTAL	**91,214**	**102,442**	**479,690**	**2,170**	**37,070**	**2,778,268**	**3,490,855**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-31
VMT BY WRCOG TUMF ZONE
TOTAL DAILY TRIPS FOR ALL PURPOSES - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	3,117,946	575,214	2,102,238	240,353	1,237,329	3,436,422	**10,709,502**
Hemet/San Jacinto	727,723	1,449,016	467,337	268,082	578,239	1,639,369	**5,129,767**
Northwest	1,233,645	146,222	6,338,674	141,671	471,367	6,761,699	**15,093,278**
Pass Area	291,468	225,299	315,464	730,869	67,702	1,392,759	**3,023,562**
Southwest	1,418,147	605,199	1,507,061	132,904	5,291,241	5,169,987	**14,124,539**
Outside WRCOG	2,066,749	712,246	6,899,073	978,711	2,443,170	265,886,766	**278,986,715**
TOTAL	**8,855,679**	**3,713,196**	**17,629,848**	**2,492,590**	**10,089,048**	**284,287,001**	**327,067,363**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-32
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-WORK TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	512,473	167,568	892,325	141,127	401,091	2,321,469	**4,436,052**
Hemet/San Jacinto	240,860	182,148	300,505	123,983	237,623	1,230,272	**2,315,390**
Northwest	343,114	72,132	1,242,383	95,087	209,228	2,948,204	**4,910,147**
Pass Area	97,810	49,784	169,021	99,191	38,005	686,279	**1,140,090**
Southwest	489,337	213,047	855,596	102,212	899,166	3,728,179	**6,287,536**
Outside WRCOG	929,618	337,029	2,995,373	535,786	1,005,010	73,926,778	**79,729,594**
TOTAL	**2,613,211**	**1,021,707**	**6,455,203**	**1,097,385**	**2,790,123**	**84,841,182**	**98,818,811**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-33
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-OTHER TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	1,880,395	276,656	795,067	71,544	612,328	807,406	**4,443,395**
Hemet/San Jacinto	352,830	880,778	130,769	96,181	260,151	326,742	**2,047,451**
Northwest	622,829	56,299	3,427,506	36,372	207,925	2,629,041	**6,979,972**
Pass Area	134,842	107,173	106,427	405,337	24,337	469,052	**1,247,168**
Southwest	668,400	250,661	415,972	25,982	3,211,934	895,954	**5,468,902**
Outside WRCOG	860,319	291,810	2,485,158	316,863	1,122,505	113,446,976	**118,523,630**
TOTAL	**4,519,614**	**1,863,377**	**7,360,898**	**952,278**	**5,439,180**	**118,575,170**	**138,710,519**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-34
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-SCHOOL TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	174,447	7,678	30,955	627	25,718	8,507	**247,933**
Hemet/San Jacinto	17,752	72,546	411	1,316	5,281	149	**97,455**
Northwest	29,474	142	302,511	43	2,884	86,988	**422,042**
Pass Area	2,443	3,091	186	33,950	9	12,260	**51,939**
Southwest	31,524	4,932	6,180	10	291,076	1,879	**335,600**
Outside WRCOG	8,764	790	83,223	7,651	19,666	7,955,209	**8,075,303**
TOTAL	**264,404**	**89,179**	**423,467**	**43,596**	**344,634**	**8,064,992**	**9,230,272**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-35
VMT BY WRCOG TUMF ZONE
DAILY NON-HOME-BASED TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	501,776	90,820	273,360	26,410	190,907	227,284	**1,310,557**
Hemet/San Jacinto	110,639	282,324	26,620	46,188	73,988	68,580	**608,338**
Northwest	221,166	12,450	1,141,014	9,929	49,713	945,886	**2,380,158**
Pass Area	51,183	51,361	27,984	191,114	5,224	197,603	**524,469**
Southwest	167,809	58,931	85,053	3,831	806,312	142,426	**1,264,363**
Outside WRCOG	239,471	55,876	992,911	116,119	290,402	66,124,436	**67,819,215**
TOTAL	**1,292,044**	**551,761**	**2,546,941**	**393,592**	**1,416,547**	**67,706,215**	**73,907,099**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

EXHIBIT J-36
VMT BY WRCOG TUMF ZONE
DAILY HOME-BASED-UNIVERSITY TRIPS ONLY - 2045 NO BUILD

To / From	Central	Hemet/San Jacinto	Northwest	Pass Area	Southwest	Outside WRCOG	TOTAL
Central	48,855	32,492	110,531	645	7,286	71,756	**271,565**
Hemet/San Jacinto	5,642	31,221	9,033	414	1,197	13,626	**61,132**
Northwest	17,063	5,200	225,260	240	1,617	151,579	**400,959**
Pass Area	5,191	13,890	11,846	1,278	126	27,566	**59,896**
Southwest	61,077	77,629	144,261	870	82,752	401,549	**768,138**
Outside WRCOG	28,578	26,741	342,408	2,292	5,587	4,433,366	**4,838,972**
TOTAL	**166,406**	**187,172**	**843,339**	**5,738**	**98,564**	**5,099,442**	**6,400,662**

Based on RivCOM Year 2045 No-Build Scenario, November 2023

Appendix K - Residential Fee Calculation

In general, the fee for the TUMF program is calculated based on the following formula:

$$\frac{\text{Unit Cost Assumptions} \times \text{Recommended Network Improvements}}{\text{Change in Residential and Non-Residential Development}} = \textbf{TUMF}$$

Applying this formula, Unit Cost Assumptions for the various eligible TUMF project types are used to estimate the overall cost to improve the TUMF Network as described in the TUMF Nexus Study. The resultant network improvement cost is then divided proportionally between various residential and non-residential development categories such that each new development type contributes its 'fair share' to the program. Any change in one formula variable has a related impact on the overall TUMF fee, although it is important to note that the resultant impact to the overall fee is not necessarily directly proportional to the formula variable change due to the intricacies of the fee calculation.

The residential fee was calculated by multiplying the estimated TUMF Network improvements cost attributable to mitigating the cumulative regional impacts of new development (**Section 4.0**) by the proportion of all regional trips that are generated by residential land uses (**Section 5.3**), and dividing this number by the projected increase in residential units between 2018 and 2045 (**Table 2.3**).

To account for the difference in trip generation rates between single-family residential units and multi-family residential units, the fee value was normalized for each of these housing types by first multiplying the proposed growth in households between 2018 and 2045 by the existing proportional share of each household type, and then multiplying the resultant values by the respective trip generation rate as published in the Institute of Traffic Engineers Trip Generation Manual, Eleventh Edition, 2021. The respective uniform fee values are presented in **Section 6.1**. **Exhibit K-1** details the calculation of the uniform single-family and multi-family residential fees (and non-residential fees).

On September 28, 2021, California Governor Gavin Newsome signed Assembly Bill 602 (AB 602) approving several changes to the Mitigation Fee Act, including the additional of §66016.5 to the California Government Code (CGC). §66016.5(a)(5)(A) states "A nexus study adopted after July 1, 2022, shall calculate a fee imposed on a housing development project proportionately to the square footage of proposed units of the development…." unless certain findings are made. These findings include:

"(i) An explanation as to why square footage is not appropriate metric to calculate fees imposed on housing development project.
(ii) An explanation that an alternative basis of calculating the fee bears a reasonable relationship between the fee charged and the burden posed by the development.

(iii) That other policies in the fee structure support smaller developments, or otherwise ensure that smaller developments are not charged disproportionate fees."

To address these provisions of AB 602, WRCOG analyzed the trip generation characteristics of both single-family and multi-family housing units of various sizes to determine whether there was a variation in trip generation rates based on housing unit size substantiating that TUMF should be imposed based on the square footage of the respective housing type. The findings of the analyses for single-family and multi-family, respectively, were summarized in technical memoranda that are included as **Exhibit K-2** for single-family residential units, and **Exhibit K-3** for multi-family residential units.

The findings of the analysis of single-family residential units, as presented in **Exhibit K-2**, indicates that the trip generation rates for these units do vary by housing size, especially for units of 2,500 square feet or less. The findings also noted that variations in trip generation characteristics tended to be more closely correlated to total household population, number of children and number of workers.

Figure 9 in **Exhibit K-2** illustrates Daily Vehicle Trips per Median Square Footage for Single-Family housing units. The figure generally reflects a linear increase in trip generation rate as housing size increases until the unit size reaches between 2,500 and 2,900 square feet, after which the trip generation rate stabilizes at approximately 10 to 12 trips per day. The figure also indicates some clustering of trip generation rates for housing units below 1,800 square feet, and similarly for housing units between 1,800 and 2,300 square feet. Based on these findings, WRCOG has determined that the fee for single-family residential units should be adjusted in four tiers to correlate to the trip generation characteristics associated with various ranges of single-family housing sizes to demonstrate compliance with AB 602.

To develop these tiers, WRCOG reviewed all single-family permits for which TUMF was assessed in the 2022/2023 Fiscal Year, which totaled 3,875 permits. These permit data indicated the square footage for these units ranged from 900 square feet to over 10,000 square feet with the majority of the units being between 1,800 square feet and 3,000 square feet. According to these data, the average square footage of these units was 2,300 square feet. WRCOG then examined the permit distribution to determine how units of various sizes should be grouped for the purposes of assessing TUMF to account for variations in the trip generation rates for single-family residential units of different sizes. An analysis of the different home sizes determined that it would be reasonable to stratify the home sizes into four tiers as presented in **Table K.1**. As indicated in **Table K.1**, approximately ½ of all single-family permits fall into Tier 1 and Tier 2 while the remaining ½ fall into Tier 3 and Tier 4.

Table K.1 – Single-Family Residential Unit Size Distribution in Western Riverside County
(based on FY 2022/2023 Single-Family Residential Unit Permits Issued in Western Riverside County)

Home Size Range (square feet)	Number of Permits	Percentage of Permits
Less than or equal to 1,800	451	12%
1,801 to 2,300	1,409	36%
2,301 to 2,700	1,121	29%
More than 2,700	894	23%
Total	**3,875**	**100%**

The tiers reflecting the adjustments to the standard uniform single-family residential fee per dwelling unit (as calculated in **Table 6.1**) for differing ranges of single-family unit sizes are summarized in **Table K.2**. Consistent with §66016.5(a)(5)(A), the adjustments to the standard single-family residential fee for each tier is roughly proportional to the relative trip generation rates for the units of varying sizes described in each tier. Furthermore, the assessment of the single-family residential fee at the adjusted levels would result in a roughly proportional fee collection for all single-family residential units compared to the assessment of a standard uniform fee across all single-family residential units. This ensures that new single-family residential units continue to contribute their fair share towards the cost of mitigating the cumulative regional impact of new development on the regional transportation system thereby maintaining the program nexus outlined in this document and represented by the fee schedule presented in Table 7.1.

Table K.2 – Single-Family Residential Fee Adjustments by Unit Size

Adjustment Tier	Housing Unit Size Range (in square feet)	Standard Fee Adjustment
Tier 1	Less than or equal to 1,800	80%
Tier 2	1,801 to 2,300	90%
Tier 3	2,301 to 2,700	100%
Tier 4	More than 2,700	125%

Exhibit K-3 presents the findings for multi-family housing units. For multi-family residential units, the results indicate little variation in trip generation rates across the range of multi-family residential unit sizes prompting WRCOG to determine that the fee for multi-family residential units would be most appropriately imposed uniformly across all multi-family dwelling units, regardless of their size.

EXHIBIT K-1 Western Riverside County TUMF Estimate
by Percent of TUMF Share Weighted by PM Peak Hour Trip Generation Rate
Based on Needed Improvements to the Regional System of Highways and Arterials

Residential	Dwelling Units			PM Peak Hour Trip Generation Rate	PM Peak Hour Trip Change	Percentage of PM Peak Hour Trip Change	Fee/DU
	2018	2045	Change				
Single Family Residential	397,407	564,898	167,491	0.99	165,816	78.6%	**$15,476**
Multi Family Residential	157,166	247,501	90,335	0.50	45,168	21.4%	**$7,816**
Total	554,573	812,399	257,826		210,984	100.0%	

Non-Residential	Employees			PM Peak Hour Trip Generation Rate	Peak Hour Trip Char	Percentage of PM Peak Hour Trip Change	Change in SF of GFA	Fee/SF of GFA
	2018	2045	Change					
Industrial	169,334	245,915	76,581	0.6	45,949	15.1%	61,489,565	**$2.33**
Retail	73,814	86,929	13,115	1.8	23,607	7.8%	6,557,500	**$11.21**
Service	308,703	482,958	174,255	1.2	209,106	68.8%	66,735,957	**$9.76**
Government/Public Sector	18,569	30,640	12,071	2.1	25,349	8.3%	3,420,665	**$23.07**
Total	570,420	846,442	276,022		304,011	100.0%	138,203,688	

Notes:
- trip generation rates based on ITE Trip Generation 11th Edition (2021) rates for weekday PM peak hour by generator trip ends
- residential formula: [(TUMF cost share)(residential share of VMT) / (change in housing units)] * (percentage of trip change)
- non-residential formula: [(TUMF cost share)(non-residential share of VMT) / (change in SF of GFA)] * (percentage of trip change)

Calculation Inputs:

residential share of daily VMT	**77.7%**
non-residential share of daily VMT	**22.3%**
total regional mitigation cost	$5,283,909,000
existing obligated improvement funding	$382,886,000
unfunded existing need cost	$646,931,000
MAX TUMF VALUE	**$4,244,608,000**
MAX TUMF SHARE	**80.3%**
Residential Value	$3,298,060,000
Non-Residential Value	$946,548,000

EXHIBIT K-2

[Single-Family] Residential Trip Generation Memorandum
Fehr & Peers, November 16, 2022

FEHR PEERS

Memorandum

Date: November 16, 2022

To: Suzanne Peterson, Christopher Gray, and Chris Tzeng – WRCOG

From: Mike Wallace, Eleanor Hunts, and Jason Pack – Fehr & Peers

Subject: **WRCOG Residential Trip Generation**
Contract No. 2022-65-1400-004 / Task Order No. 2022-65-1400-004-003

OC22- 0864

This memo summarizes the goals, data and analysis, key findings, and recommendations relating to the evaluation of vehicle trip generation and residential development characteristics. Specifically, this memo is intended to inform the Transportation Uniform Mitigation Fee (TUMF) guidelines on the relationship between residential trip generation and home size (square footage) as prescribed in California Assembly Bill 602 (AB 602). This draft memo will be followed-up with a phone call to discuss the recommendations and the memo will be revised and finalized based on the call.

Key Findings

Questions answered through the analysis and the findings are listed below.

- Is home size a key predictor of residential vehicle trip generation? **Yes, for homes of 2,500 square feet or less the trips increase with the larger home size. After 2,500 square feet the number of trips stay constant with home size, all else being equal.**
- Are there other characteristics that have a higher predictive relationship than home size? **Yes, the trip generation increases with the total household population, average number of children, and average number workers. Home size accounts for approximately 50% of the increase in home size for homes less than 2,500 square feet with the remaining 50% explained by multiple factors of the people within the home.**
- Does the location (i.e. TUMF zone) change the relationship of home size or the other characteristics? **No, the home location may influence the size, number of people, or household income, and/or the distance the trips travel, but does not influence the trips generated.**

- Are there recommended changes to the TUMF based on the findings? If so, what is the potential impact to the TUMF collection and home owners? **Yes, it is recommended that smaller homes pay a fee based on home size. The appropriate fee should be evaluated by the TUMF fee consultant to determine the potential impact to fee collected compared to the current fee expectation. Smaller homes paying less could potentially make home ownership less expensive overall compared to larger homes.**

Data Collection

This section describes the data that were used to evaluate the trip generation. Specifically, the identification and selection of study areas, method for obtaining and results of the travel activity, and collection of residential characteristics.

Study Area Selection

To determine the home characteristics that might influence trip generation, representative residential neighborhoods in each of the TUMF zones were identified. The criteria used for selecting neighborhoods included the following:

- Residential land use could be isolated from other uses
- Minimal cut through traffic
- As close to Census Blocks or Block Groups as possible to obtain demographic information
- Minimal construction activity that would change the number of units
- Diverse home size, household income

Based on local knowledge, aerial photos, Census geography, and home information from Zillow, WRCOG staff identified a preliminary list of potential study locations in each TUMF zone. Through discussions and review of each location, Fehr & Peers narrowed down the list of study locations to 23 neighborhoods, shown on **Figure 1**.

Travel Activity

StreetLight Data from smart phones were collected at 23 residential neighborhoods shown on Figure 1 were collected for trips that started or ended within each neighborhood. This method excluded trips that cut through the neighborhood. To avoid holidays, vacations, and to reflect travel when school is in session, data from March 1st through April 30th and September 1st through October 31st for all weekdays in 2019 were collected to represent the average vehicle trips per day for all homes within each study area.

Since StreetLight Data are based on location-based services (LBS) derived from cellular phone applications, 48-hour traffic counts were conducted at eight of the 23 study area locations as a point of comparison. The eight representative count locations were selected to have at least one

location in each TUMF zone, minimize the number of roadways accessing the land use, and to allow the most accurate representation of trips associated with the residential homes without capturing cut through traffic. The eight locations where 48-hour counts were collected are shown on **Figure 2**.

As shown on **Figure 3**, the 48-hour traffic count variation from day to day and the StreetLight Data average are very similar, giving confidence that the StreetLight Data for all study areas would be representative.

Residential Characteristics

The number of homes and characteristics for the homes within each study area were obtained from multiple sources, as summarized in **Table 1**. To identify outliers and the range of values for each variable that would be used to estimate the trip generation, plots of each study location by TUMF zone were developed and are summarized below with reference to the appropriate figure.

- **Figure 4 – Median Square Footage**: good distribution across study areas and within each TUMF zone
- **Figure 5 – Average Persons per Household**: good distribution across study areas and within each TUMF zone
- **Figure 6 – Average Children per Household**: good distribution across study areas and within each TUMF zone, including one study area that has very high children per household and another study area that has very low children per household
- **Figure 7 – Average Workers per Household:** good distribution across study areas and within each TUMF zone
- **Figure 8 – Median Cost per Square Foot**: good distribution across study areas and within each TUMF zone

Based on the review of each variable, the range across the study areas and within each TUMF zone are appropriate for use in the trip generation analysis.

Trip Generation Results

The StreetLight Data daily vehicle trips were used to visually display the relationship of each home characteristic for each study area and within each TUMF zone. The appropriate figure number and conclusion for the relationship are listed below.

- **Figure 9 – Daily Vehicle Trips per Median Square Footage**: slight increase in vehicle trips as median square footage increases
- **Figure 10 – Daily Vehicle Trips per Average Persons per Household**: slight increase in vehicle trips as total number of people per household increases

- **Figure 11 – Daily Vehicle Trips per Average Children per Household**: slight increase in vehicle trips as average number of children per household increases
- **Figure 12 – Daily Vehicle Trips per Average Workers per Household:** slight increase in vehicle trips as average number of workers per household increases
- **Figure 13 – Daily Vehicle Trips per Median Cost per Square Foot**: no clear relationship between average number of workers and trip generation

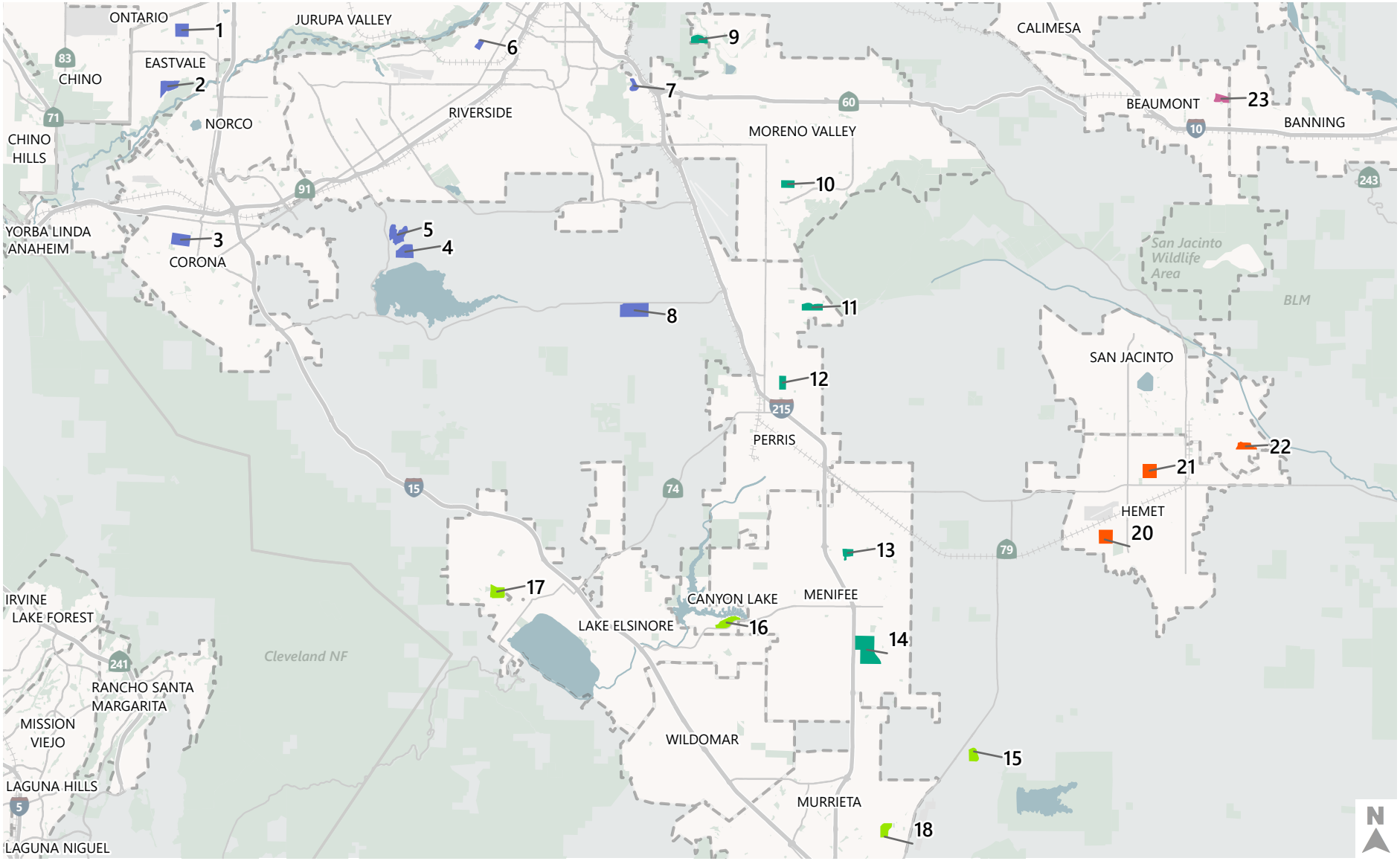
In addition to visual representations of the data, statistical analysis was performed to obtain the correlation between the variables to daily vehicle trips and to determine the regression equations.

Figure 16 – Correlation Matrix for All Variables: the correlation values in the green box for average and median home size of 0.7 indicate a strong positive correlation and mean as home size increases the number of trips increase. The correlation value of 0.7 results in an R-square of 0.49, meaning nearly half of the increase in trip generation is related to home size.

Based on Figures 10 and 11, the relationship between trip generation appeared to be linear, with the relationship possibly changing around 2,500 square feet. The linear regression analysis of average home size was performed for all home sizes, homes 2,500 square feet or smaller, and homes larger than 2,500 square feet. The results of the analysis are summarized in **Table 2**. The results show for home sizes of 2,500 square feet or less, the influence of the home size (represented by the coefficient) is nearly double that when all home sizes are included in the regression. The nearly zero coefficient and very high constant for the regression of home sizes above 2.500 square feet indicate that the trip generation is nearly constant for homes above 2,500 square feet.

Recommendations and Next Steps

Although home characteristics other than square footage have a slight increase in trip generation, the ability to forecast or control all of the characteristics other than home square footage is very difficult. Based on the results of trip generation and discussions with WRCOG regarding the feasible size of homes being constructed in the region, WRCOG will work with the TUMF fee consultant to identify and recommend appropriate fee adjustments based on square footage.



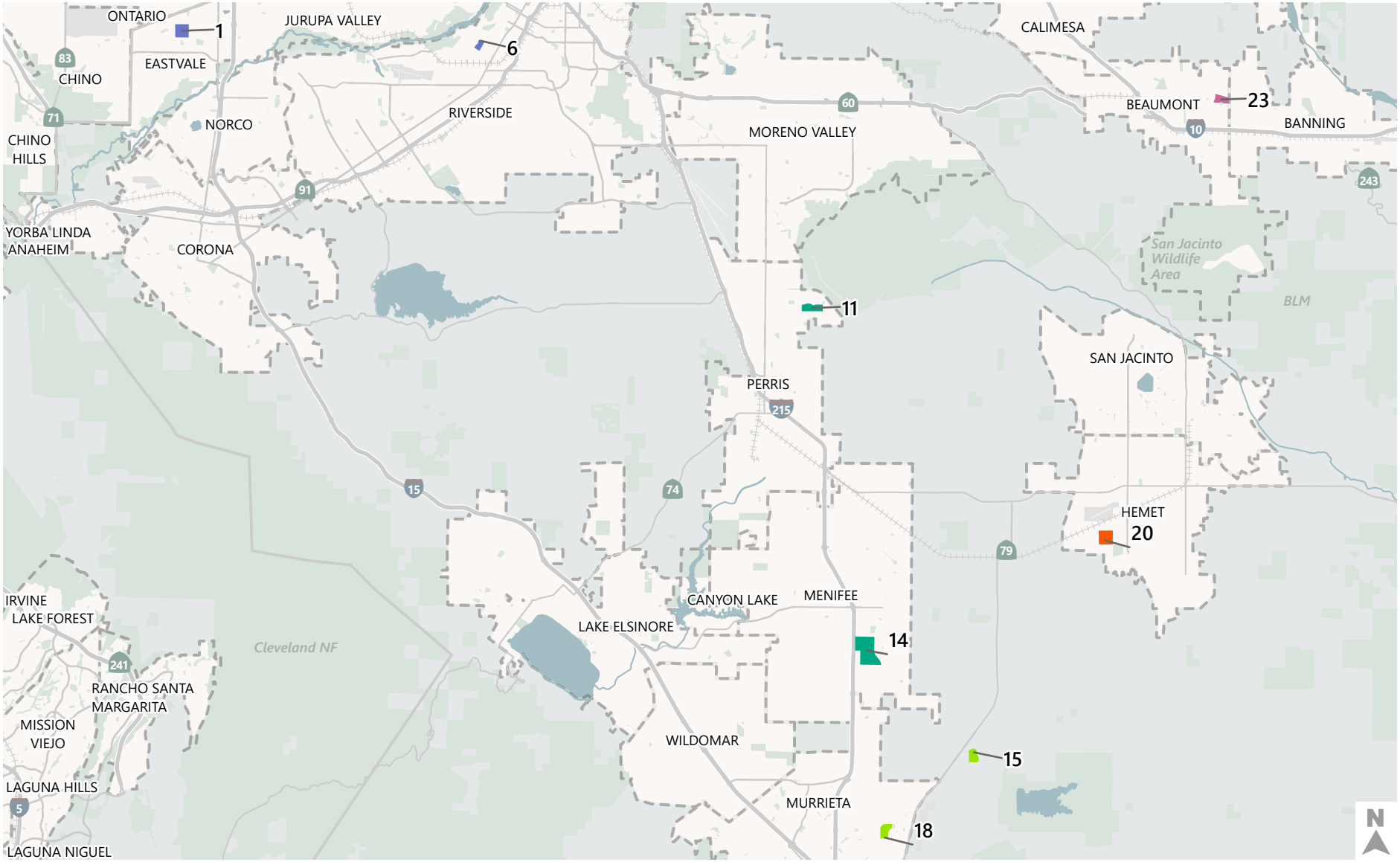
Study Location by TUMF Zone

- Central
- Hemet/San Jacinto
- Northwest
- Pass
- Southwest

City Boundaries

Figure 1

StreetLight Data Collection Locations



Study Location by TUMF Zone

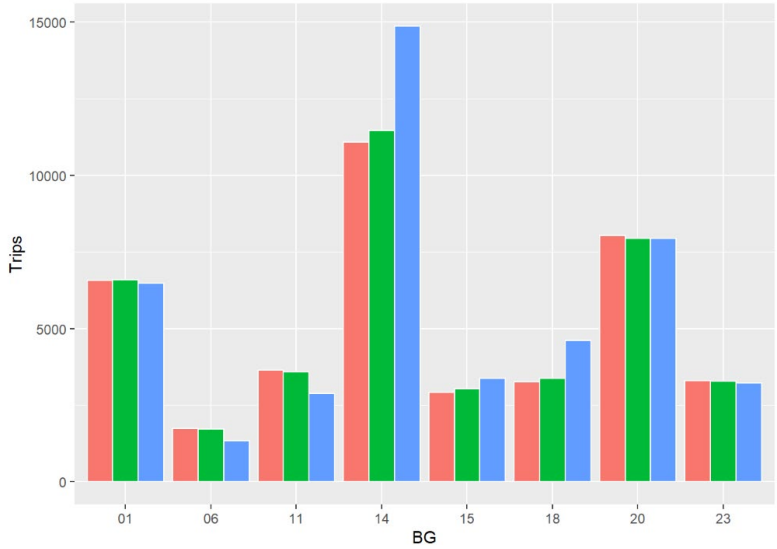
- Central
- Hemet/San Jacinto
- Northwest
- Pass
- Southwest

City Boundaries

Figure 2

Traffic Count Data Collection Locations

Figure 3 – Comparison of Individual Traffic Counts and StreetLight Data Average



Note: Red and green are the two days of manual count collection and blue are the StreetLight Data average. The BG number corresponds to the number on Figure 2.

Figure 4 – Median Square Footage

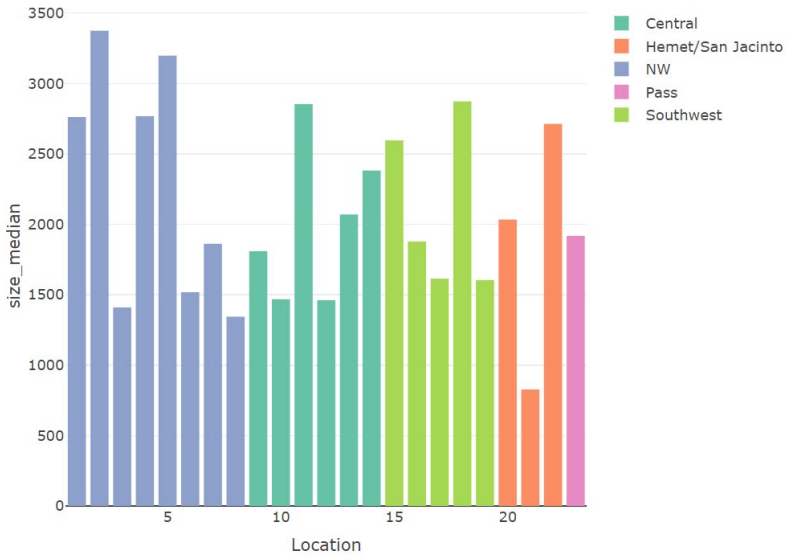


Figure 5 – Average Persons per Household

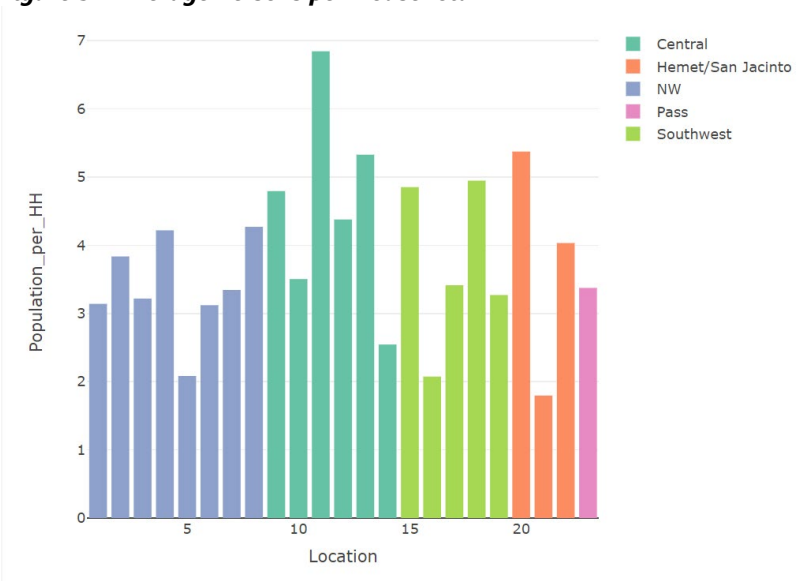


Figure 6 – Average Children per Household

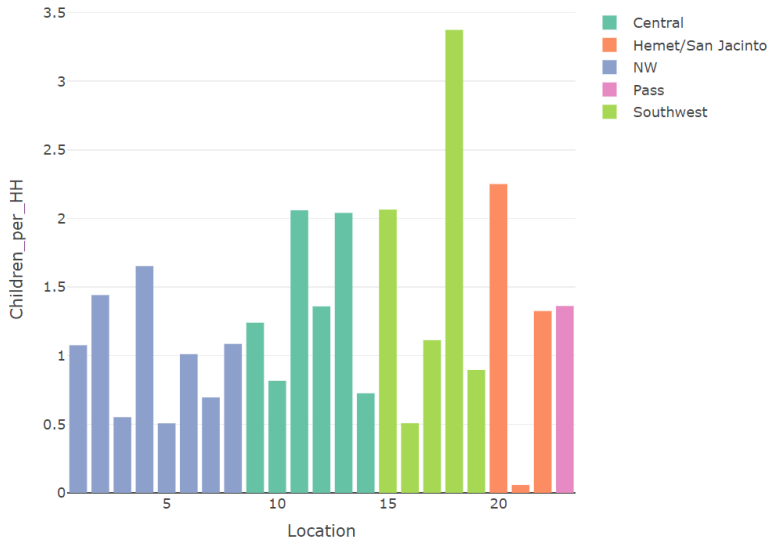


Figure 7 – Average Workers per Household

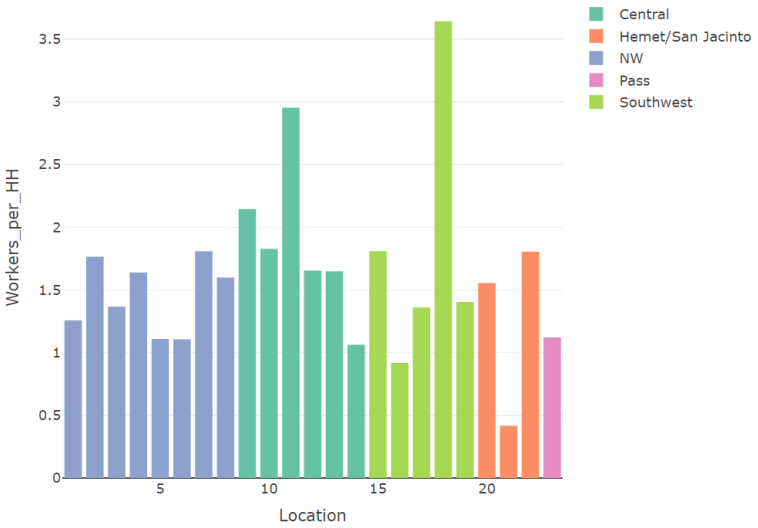


Figure 8 – Median Cost per Square Foot

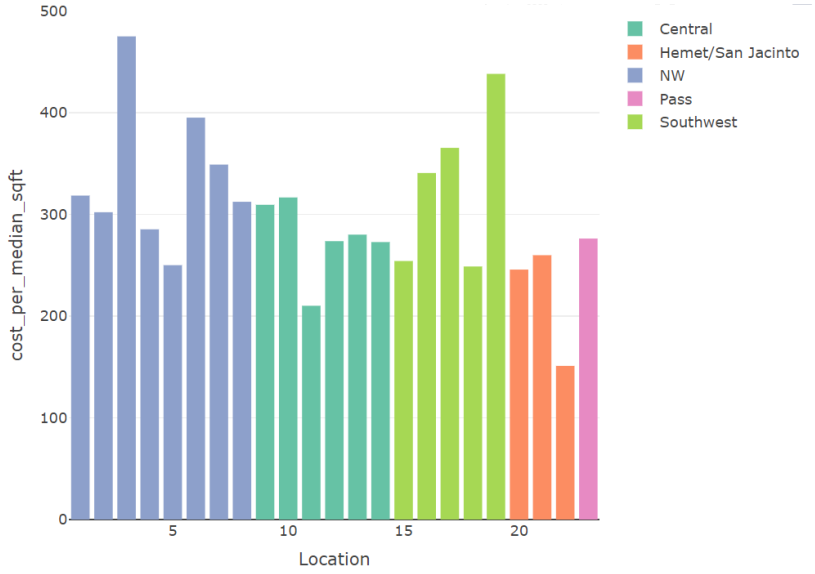


Figure 9 – Daily Vehicle Trips per Median Square Footage

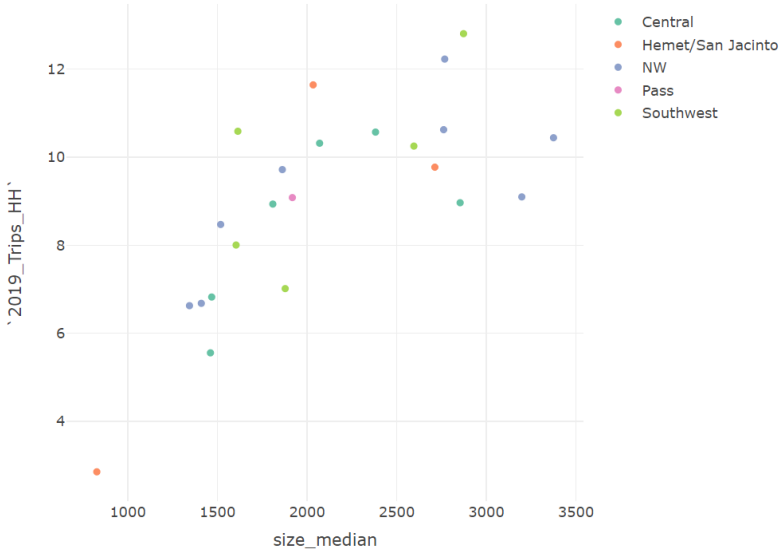


Figure 10 – Daily Vehicle Trips per Average Persons per Household

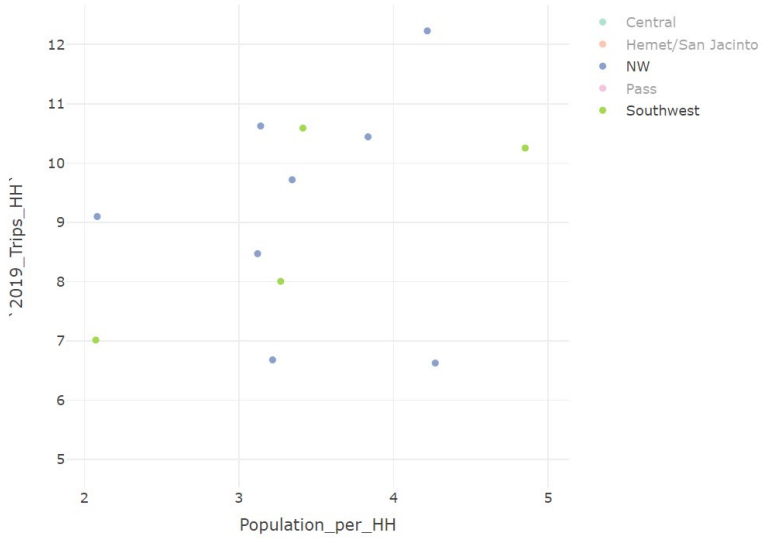


Figure 11 – Daily Vehicle Trips per Average Children per Household

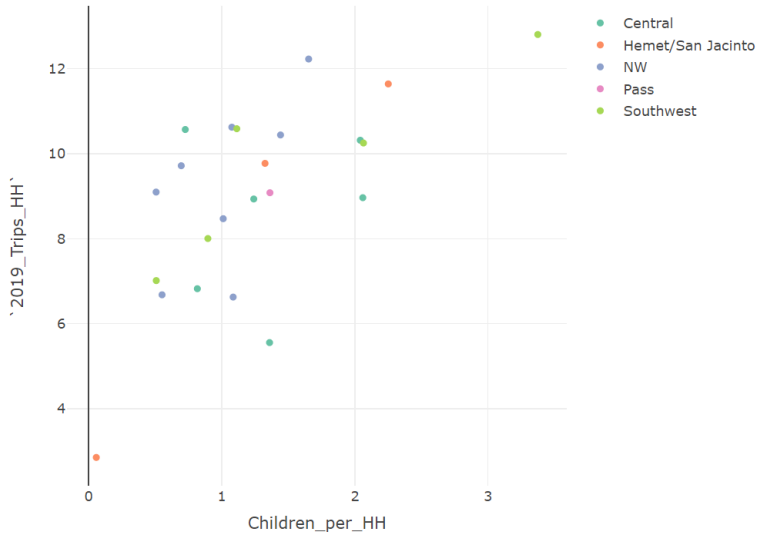


Figure 12 – Daily Vehicle Trips per Average Workers per Household

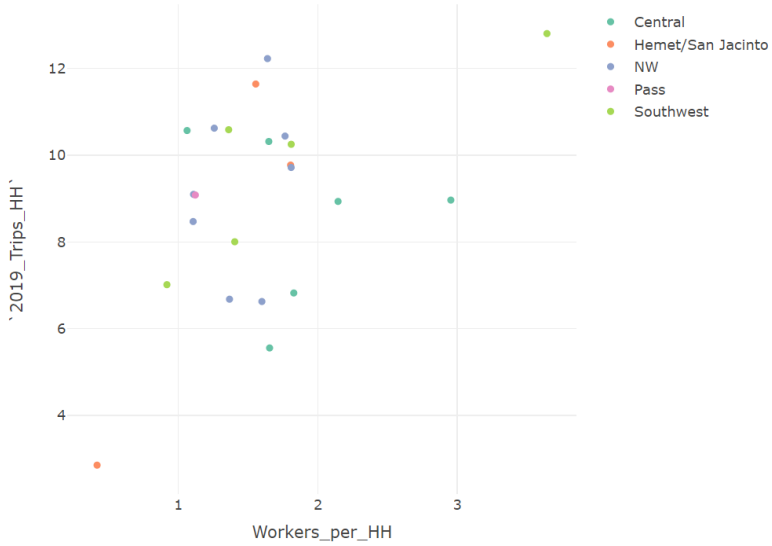


Figure 13 – Daily Vehicle Trips per Median Cost per Square Foot

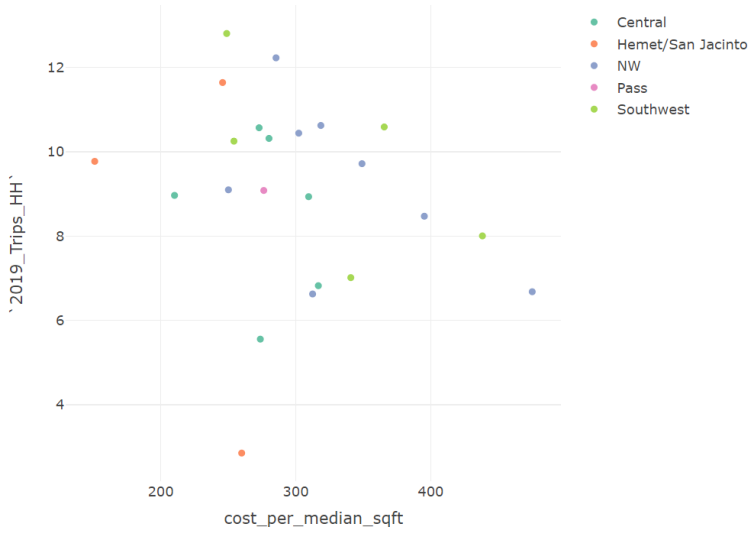


Figure 14 – Correlation Matrix for All Variables

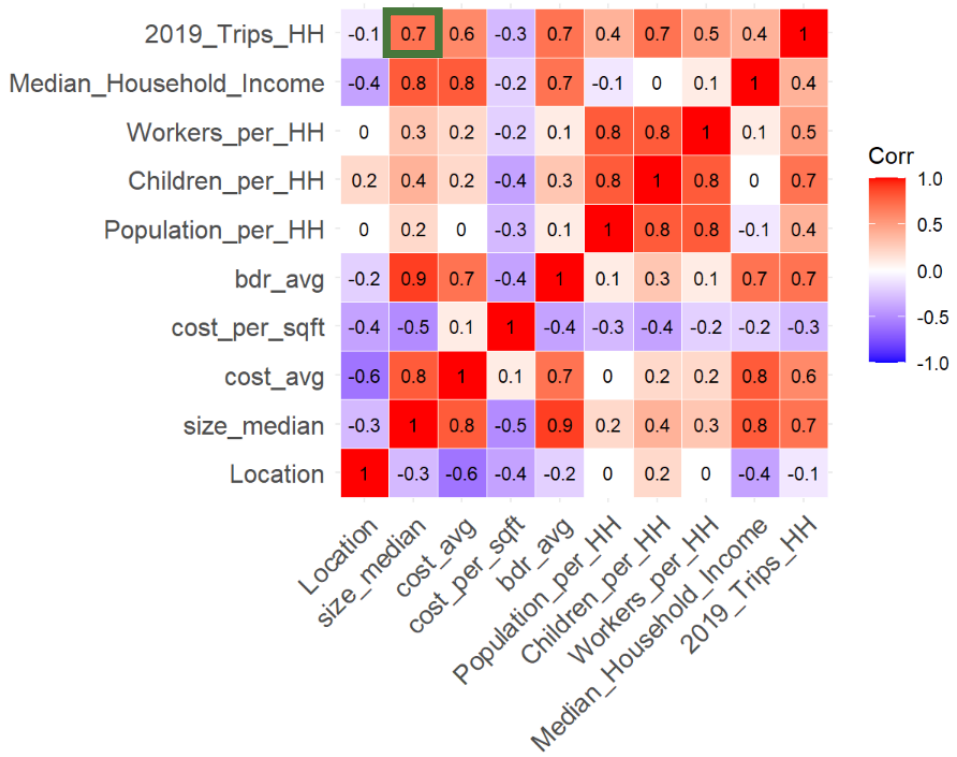


Table 1: Residential Home Data and Sources

Value	Source
Median Home Size	Zillow
Average Home Rooms	Zillow
Average Household Population	ACS 5 year and 1 year
Average Number of Children	ACS 5 year and 1 year
Average Number of Workers	ACS 5 year and 1 year
TUMF Zone	WRCOG
Average Household Income	ACS 5 year and 1 year

Table 2: Daily Total Vehicle Trip Regression Equation Summary

Home Size Variable	Coefficient	Constant	R-Squared
All home sizes			
Median Home Size (KSF)	2.26	4.22	0.507
Homes 2.5 KSF or smaller			
Median Home Size (KSF)	4.11	1.22	0.553
Homes over 2.5 KSF			
Median Home Size (KSF)	-0.3	11.57	0.007

Notes: KSF= Thousand Square Feet

Regression Equations

All home sizes.
Daily total vehicle trips = 2.26 * Median Home Size in Thousand Square Feet + 4.22

Homes l 2.50 thousand square feet or less.
Daily total vehicle trips = 4.11 * Median Home Size in Thousand Square Feet + 1.22

Homes more than 2.50 thousand square feet.
Daily total vehicle trips = -0.3 * Median Home Size in Thousand Square Feet + 11.57

EXHIBIT K-3

Multi-Family Residential Counts and Trip Generation Memorandum
Fehr & Peers, May 12, 2023

FEHR PEERS

Memorandum

Date: May 12, 2023

To: Christopher Gray - WRCOG
Chris Tzeng – WRCOG

From: Jason D. Pack, P.E.
Delia Votsch, P.E.
Raymond Poss

Subject: **DRAFT TUMF Multifamily Residential Counts and Trip Generation**
Task Order No. 2022-65-1400-004-007

OC23-0955

This memorandum summarizes the goals, data collection and analyses, key findings, and recommendations regarding the evaluation of multifamily development characteristics and trip generation. This memo is intended to inform the Western Riverside Council of Governments (WRCOG) Transportation Uniform Mitigation Fee (TUMF) guidelines on the relationship between multifamily trip generation, number of bedrooms per dwelling unit, and average size of dwelling unit.

Key Findings

Questions answered through the data analyses and findings are listed below.

- Are the size of the dwelling unit or number of bedrooms in a dwelling unit key predictors of residential multifamily trip generation? **No, the size of dwelling unit nor the number of bedrooms in a dwelling unit are key predicters of trip generation.**
- Are there other characteristics that have a higher predictive relationship than the number of dwelling units? **No, the number of dwelling units has the highest predictive relationship.**
- Are there recommended changes to the TUMF program or fee calculations based on the findings? If so, what is the potential impact to the TUMF collection process and to developers? **No, it is not recommended that TUMF be updated from basing multifamily development fees on number of dwelling units.**

Background

Western Riverside Council of Governments (WRCOG) provides local roadway funding in part through collection of fees through the Transportation Uniform Mitigation Fee (TUMF) program as part of new developments. These fees vary based on the level of impact the new development will have on traffic as determined by the characteristics of the development. The impact fee for multifamily residential developments is currently determined by the number of dwelling units (DUs).

As required by new state legislature (AB-602), agencies are required to account for the size of the dwelling unit when developing impact fees. As such, Fehr & Peers was contracted to evaluate the relationship between trips generated by multifamily apartment complexes to determine if attributes other than number of dwelling units, including number bedrooms per dwelling unit and average size of dwelling unit, significantly affect trip generation.

Data Collection

This section describes the data used to evaluate multifamily trip generation, including the selection of locations and methods for collecting trip data, apartment characteristics, and regional Census data.

Study Selection Area

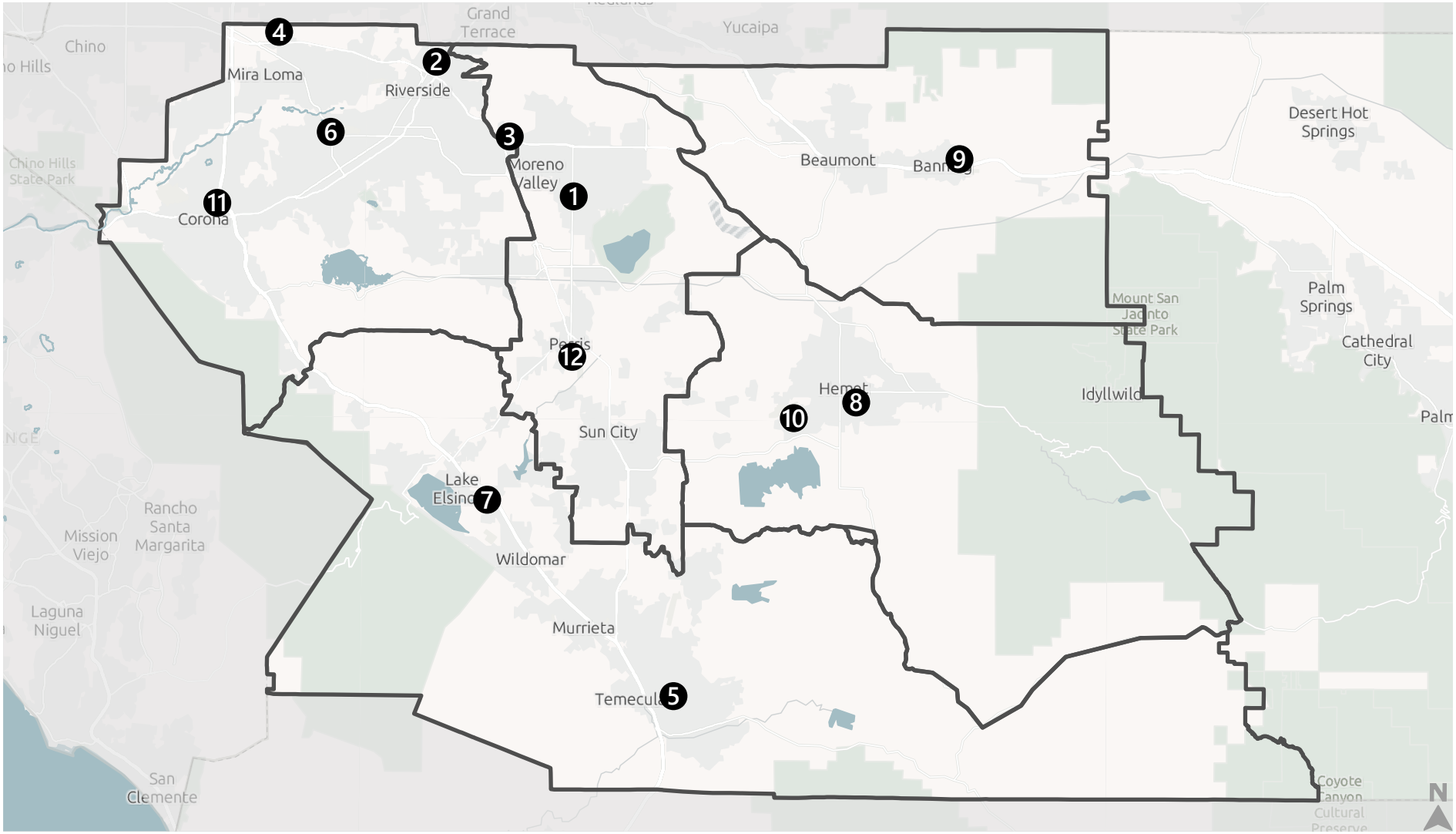
To evaluate the effect of dwelling unit size and number of dwelling unit bedrooms on multifamily trip generation, the following criteria were used to select the apartment complexes within Western Riverside County:

- Minimum of one complex per TUMF Zone (five zones total)
- Complexes not within a Transit Priority Area (TPA)
- Complexes not near a college or university

Through discussions and review of each location with WRCOG, Fehr & Peers narrowed the study locations to 12 multifamily apartment complexes as shown on **Figure 1**.

Travel Activity

Trips were observed at each of the 12 complexes by collecting vehicle counts during typical weekdays at each driveway over a three-day period. Trip observations for each complex were averaged over the three-day period and summarized below in **Table 1** for Daily, AM Peak Period, and PM Peak Period counts. Raw data counts taken over the three-day period can be found **Appendix A**.



Study Locations

TUMF Zone Boundary

Figure 1

WRCOG TUMF Multifamily Trip Generation Study Sites

Table 1: Multifamily Complex Trip Observations

Study Site #	Location Name	Daily Trips			AM Peak			PM Peak		
		Trips	% In	% Out	Trip Rate	In %	Out %	Trip Rate	In %	Out %
1	Oakwood Apartments	2,089	50%	50%	168	40%	60%	170	56%	44%
2	Springbrook Park Apartments	841	50%	50%	68	34%	66%	69	58%	42%
3	Vista Springs Apartments	1,117	49%	51%	106	36%	64%	82	55%	45%
4	Vesada Apartment Homes	1,625	50%	50%	126	35%	65%	126	62%	38%
5	Morning Ridge Apartments	1,130	51%	49%	88	30%	70%	102	59%	41%
6	Stonegate Apartments	952	56%	44%	67	42%	58%	81	64%	36%
7	River's Edge Apartment Homes	1,045	50%	50%	93	34%	66%	91	57%	43%
8	Mayberry Colony Apartments	616	50%	50%	49	39%	61%	54	52%	48%
9	Summit Ridge Apartments	777	50%	50%	67	39%	61%	57	54%	46%
10	Riverdale Apartments	737	50%	50%	65	32%	68%	67	57%	43%
11	Parkridge Meadows Apartments	744	50%	50%	58	34%	66%	54	63%	37%
12	Hunt Club Apartments	1,422	51%	49%	143	36%	64%	106	60%	40%

Source: Fehr & Peers (2023)

Residential Characteristics

Apartment characteristics, listed below, were obtained from a variety of sources, including conversations with apartment leasing agents, property webpages, Census data, Zillow.com, and the Assessor's Office of Riverside County web page.

- Number of dwelling units
- Number of apartment styles (i.e., number of one-bedroom units, two-bedroom units, etc.)
- Average size (square footage) of dwelling units
- Average number of bedrooms per dwelling unit
- Median monthly household income by Census Tract
- Average number of persons per household by Census Tract
- Proximity to nearest public school

The average size of each dwelling unit was calculated by dividing the total size of all combined dwelling units by the total number of dwelling units. Similarly, the average number of bedrooms per dwelling unit were calculated by dividing the total number of bedrooms by the number of dwelling units. These apartment characteristics are shown below in **Table 2**. Specific information related to each apartment complex are provided in **Appendix B**.

Table 2: Apartment Characteristics

Study Site #	Location Name	# of DUs	Average Size of DU (Sq. Ft.)	Average Number of Bedrooms	Median Monthly Household Income (Dollars)	Average # of Persons per Household	Proximity to Nearest School (Mi)
1	Oakwood Apartments	241	1,040	3.0	$65,240	3.92	0.2
2	Springbrook Park Apartments	112	955	2.0	$77,148	3.6	0.5
3	Vista Springs Apartments	212	822	1.5	$74,333	3.3	0.7
4	Vesada Apartment Homes	261	938	1.7	$79,199	4.53	1.1
5	Morning Ridge Apartments	200	850	1.6	$63,279	2.73	0.6
6	Stonegate Apartments	160	802	1.5	$68,250	3.14	0.7
7	River's Edge Apartment Homes	184	918	1.5	$78,222	3.74	0.4
8	Mayberry Colony Apartments	89	896	1.6	$51,653	3.71	0.7
9	Summit Ridge Apartments	80	529	2.5	$43,100	3.47	0.3
10	Riverdale Apartments	96	1,015	2.6	$87,532	4.33	0.3
11	Parkridge Meadows Apartments	88	771	2.0	$74,886	3.53	0.1
12	Hunt Club Apartments	203	962	2.0	$58,200	4.5	0.8

Sources: Fehr & Peers (2023), U.S. Census Bureau 5-Year American Community Survey (2016-2021), Zillow.com (2023), Riverside County Assessor (2023)

Trip Generation Analysis

Using the data described above, a statistical analysis, including a regression and correlation assessment, was performed to evaluate if a statistically significant relationship exists between multifamily trip generation and the following variables to determine if an update to the development fee calculation was justified.

- Number of dwelling units
- Average size of dwelling units
- Average number of bedrooms per dwelling unit
- Median monthly income
- Average number of persons per household
- Proximity to nearest public school

Correlation Analysis

A correlation analysis was also performed to determine if a one-to-one relationship exists between daily trip generation and an apartment characteristic listed above. **Figure 2**, below, shows the results of the correlation analysis, with darker green cells representing a stronger, positive correlation.

The correlation analysis indicates that daily trip generation has a **strong, positive correlation with the number of dwelling units** and a **moderate, positive correlation with average size of dwelling unit**. All other variables are indicated to have a weak or very weak positive correlation with trip generation.

Figure 2: Trip Generation Correlation Matrix

	Total Vehicles	# of DUs	Average # of Bedrooms per DU	Average DU Size (Sq. Ft.)	Median Monthly Income	Average Household Size	Proximity to Nearest School
Total Vehicles	1.00	0.87	0.29	0.46	0.06	0.34	0.21
# of DUs	0.87	1.00	-0.17	0.43	0.20	0.18	0.51
Average # of Bedrooms per DU	0.29	-0.17	1.00	0.13	-0.09	0.36	-0.60
Average DU Size (Sq. Ft.)	0.46	0.43	0.13	1.00	0.55	0.51	0.16
Median Monthly Income	0.06	0.20	-0.09	0.55	1.00	0.25	-0.02
Average Household Size	0.34	0.18	0.36	0.51	0.25	1.00	0.21
Proximity to Nearest School	0.21	0.51	-0.60	0.16	-0.02	0.21	1.00

Source: Fehr & Peers (2023)

Regression Analysis

An ordinary least squares regression at a 95% confidence interval was performed on the above variables against daily trip generation to screen out variables that yielded statistically insignificant results. The results of the first regression are shown in **Table 3**.

Table 3: Regression Results

Variable	P-Value[1]	Statistically Significant
Number of dwelling units	<0.05	Yes
Average size (square footage) of dwelling units	>0.05	No
Average number of bedrooms per dwelling unit	<0.05	Yes
Median monthly household income	>0.05	No
Average number of persons per household	>0.05	No
Proximity to nearest public school	>0.05	No

Source: Fehr & Peers (2023)

1. P-Values < 0.05 are considered statistically significant. P-Values > 0.05 are considered statistically insignificant.

A subsequent regression was run with the least statistically significant (highest P-value) variable removed. This process was repeated until all remaining variables yielded statistically significant P-values (less than 0.05), resulting in the number of dwelling units and average size of dwelling unit as the remaining variables. The P-Values for these variables are shown below in **Table 4**.

Table 4: Filtered Regression Results

Variable	P-Value[1]	Statistically Significant
Number of dwelling units	$4.8x10^{-07}$	Yes
Average size (square footage) of dwelling units	0.0002	Yes

Source: Fehr & Peers (2023)

1. P-Values < 0.05 are considered statistically significant. P-Values > 0.05 are considered statistically insignificant.

The regression analysis indicates that **number of dwelling units** and **average size of dwelling unit are statistically significant predictors of multifamily trip generation**.

To validate these results, a forward stepwise regression was also completed. A forward stepwise regression is completed by beginning with no variables in the model, and then adding them one at a time based on which has the smallest p-value when tested one at a time. This isolates any possible relationships between the variables and further helps confirm if the vehicle trip rate has a statistically valid correlation to the variables tested.

Table 5: Forward Stepwise Regression Results

Variable	Relationship Rank[1]	P-Value[2]	Statistically Significant
Average size (square footage) of dwelling units	4	0.377	Yes
Average number of bedrooms per dwelling unit	1	0.0008	No
Median monthly household income	3	0.249	Yes
Average number of persons per household	5	0.509	Yes
Proximity to nearest public school	2	0.0239	No

Source: Fehr & Peers (2023)

1. Relationship rank indicates which variable has the strongest correlation with daily vehicle trip rate.
2. P-Values < 0.05 are considered statistically significant. P-Values > 0.05 are considered statistically insignificant.

As noted in Table 5, the variables with the strongest relationship to daily vehicle trip rate (number of bedrooms and distance to nearest school) are not statistically significant.

Trip Generation Results

In both the regression and correlation analyses, the number of dwelling units was found to be the strongest predictor of daily trip generation. All other variables had positive but weaker correlations to daily trip generation, and none were found to be statistically significant predictors of multifamily daily trip generation under both regression analyses.

Table 6: Summary of Trip Generation Results

Variable	Overall Relationship Ranking[1]	Statistically Significant	
		Filtered Regression	Forward Regression
Number of Dwelling Units	1	Yes	Yes
Average number of bedrooms per dwelling unit	2	Yes	No
Proximity to nearest public school	3	No	No
Average size (square footage) of dwelling units	4	No	Yes
Average number of persons per household	5	No	Yes
Median monthly household income	6	No	Yes

Source: Fehr & Peers (2023)

1. Overall relationship rank indicates which variable has the strongest relationship with daily vehicle trip rate under the correlation and forward stepwise regression analyses.

Recommendations and Next Steps

The results of this statistical analysis indicate that the best predictor of trip generation for multifamily apartment complexes in Western Riverside County is the number of dwelling units (the current basis for development fee calculation). Although other variables showed a positive correlation with trip generation, none yielded as strong a relationship. Based on this statistical analysis, it is not recommended that these other variables be incorporated into the TUMF program.

Appendix A: Three-Day Trip Observations

A021323

Study Site 1 - Oakwood Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS79 Southern Dwy east of Perris.

AM	IN					
TIME	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1
0:15	0	0	0	0	0	0
0:30	1	0	0	0	0	1
0:45	0	0	0	0	0	0
1:00	1	0	0	0	0	1
1:15	0	0	0	0	0	0
1:30	1	0	0	0	0	1
1:45	0	0	0	0	0	0
2:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0
2:45	0	0	0	0	0	0
3:00	0	0	0	0	0	0
3:15	0	0	0	0	0	0
3:30	1	0	0	0	0	1
3:45	0	0	0	0	0	0
4:00	0	0	0	0	0	0
4:15	0	0	0	0	0	0
4:30	0	0	0	0	0	0
4:45	0	0	0	0	0	0
5:00	0	0	0	0	0	0
5:15	1	0	0	0	0	1
5:30	0	0	0	0	0	0
5:45	0	0	0	0	0	0
6:00	1	0	0	0	0	1
6:15	0	0	0	0	0	0
6:30	0	0	0	0	0	0
6:45	0	0	0	0	0	0
7:00	1	0	0	0	0	1
7:15	0	3	0	0	0	3
7:30	0	0	0	0	0	0
7:45	0	0	0	0	0	0
8:00	0	0	0	0	0	0
8:15	0	0	0	0	0	0
8:30	0	0	0	0	0	0
8:45	0	0	0	0	0	0
9:00	0	0	0	0	0	0
9:15	2	0	0	0	0	2
9:30	2	1	0	0	0	3
9:45	0	0	0	0	0	0
10:00	1	1	0	0	0	2
10:15	0	0	0	0	0	0
10:30	0	0	0	0	0	0
10:45	1	0	0	0	0	1
11:00	1	0	0	0	0	1
11:15	1	0	0	0	0	1
11:30	0	0	0	0	0	0
11:45	1	0	0	0	0	1
TOTAL	17	5	0	0	0	22

AM PEAK HOUR	9:15 AM
AM PEAK VOLUME	7

PM	IN					
Time	1	2	3	4	5	TOTAL
12:00	1	0	0	0	0	1
12:15	0	0	0	0	0	0
12:30	1	0	1	0	0	2
12:45	0	1	0	0	0	1
13:00	0	0	0	0	0	0
13:15	0	0	0	0	0	0
13:30	0	0	0	0	0	0
13:45	2	0	0	0	0	2
14:00	0	0	0	0	0	0
14:15	0	0	0	0	0	0
14:30	0	0	0	0	0	0
14:45	0	0	0	0	0	0
15:00	1	0	0	0	0	1
15:15	0	2	0	0	0	2
15:30	2	2	0	0	0	4
15:45	2	0	0	0	0	2
16:00	1	0	0	0	0	1
16:15	2	0	0	0	0	2
16:30	1	0	0	0	0	1
16:45	0	0	0	0	0	0
17:00	2	0	0	0	0	2
17:15	0	0	0	0	0	0
17:30	1	0	0	0	0	1
17:45	1	0	0	0	0	1
18:00	0	0	0	0	0	0
18:15	2	0	0	0	0	2
18:30	1	0	0	0	0	1
18:45	0	0	0	0	0	0
19:00	3	1	0	0	0	4
19:15	0	0	0	0	0	0
19:30	0	0	0	0	0	0
19:45	1	0	0	0	0	1
20:00	0	0	0	0	0	0
20:15	1	0	0	0	0	1
20:30	0	0	0	0	0	0
20:45	0	0	0	0	0	0
21:00	0	0	0	0	0	0
21:15	1	0	0	0	0	1
21:30	1	0	0	0	0	1
21:45	0	0	0	0	0	0
22:00	1	0	0	0	0	1
22:15	0	0	0	0	0	0
22:30	1	0	0	0	0	1
22:45	0	0	0	0	0	0
23:00	0	0	0	0	0	0
23:15	0	0	0	0	0	0
23:30	0	0	0	0	0	0
23:45	0	0	0	0	0	0
TOTAL	29	6	1	0	0	36

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	9

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	46	11	1	0	0	58
% OF TOTAL	79.3%	19.0%	1.7%	0.0%	0.0%	100.0%
AM PEAK	1	3	0	0	0	4
PM PEAK	5	0	0	0	0	5

A13123

Study Site 1 - Oakwood Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS79 Southern Dwy east of Perris.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	1	0	0	0	0	1
0:15	0	0	0	0	0	0	12:15	0	0	0	0	0	0
0:30	1	0	0	0	0	1	12:30	1	0	1	0	0	2
0:45	0	0	0	0	0	0	12:45	0	0	0	0	0	0
1:00	1	0	0	0	0	1	13:00	0	1	0	0	0	1
1:15	0	0	0	0	0	0	13:15	0	0	0	0	0	0
1:30	1	0	0	0	0	1	13:30	0	0	0	0	0	0
1:45	0	0	0	0	0	0	13:45	2	0	0	0	0	2
2:00	0	0	0	0	0	0	14:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0	14:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0	14:30	0	0	0	0	0	0
2:45	0	0	0	0	0	0	14:45	0	0	0	0	0	0
3:00	0	0	0	0	0	0	15:00	1	0	0	0	0	1
3:15	0	0	0	0	0	0	15:15	0	2	0	0	0	2
3:30	0	0	0	0	0	0	15:30	1	1	0	0	0	2
3:45	1	0	0	0	0	1	15:45	3	1	0	0	0	4
4:00	0	0	0	0	0	0	16:00	1	0	0	0	0	1
4:15	0	0	0	0	0	0	16:15	3	0	0	0	0	3
4:30	0	0	0	0	0	0	16:30	1	0	0	0	0	1
4:45	0	0	0	0	0	0	16:45	0	0	0	0	0	0
5:00	1	0	0	0	0	1	17:00	2	0	0	0	0	2
5:15	1	0	0	0	0	1	17:15	0	0	0	0	0	0
5:30	0	0	0	0	0	0	17:30	1	0	0	0	0	1
5:45	0	0	0	0	0	0	17:45	1	0	0	0	0	1
6:00	1	0	0	0	0	1	18:00	1	0	0	0	0	1
6:15	0	0	0	0	0	0	18:15	1	0	0	0	0	1
6:30	0	0	0	0	0	0	18:30	3	0	0	0	0	3
6:45	0	0	0	0	0	0	18:45	0	0	0	0	0	0
7:00	1	0	0	0	0	1	19:00	2	1	0	0	0	3
7:15	0	3	0	0	0	3	19:15	1	0	0	0	0	1
7:30	0	0	0	0	0	0	19:30	0	0	0	0	0	0
7:45	0	0	0	0	0	0	19:45	1	0	0	0	0	1
8:00	0	0	0	0	0	0	20:00	0	0	0	0	0	0
8:15	0	0	0	0	0	0	20:15	1	0	0	0	0	1
8:30	0	0	0	0	0	0	20:30	0	0	0	0	0	0
8:45	0	0	0	0	0	0	20:45	0	0	0	0	0	0
9:00	0	0	0	0	0	0	21:00	0	0	0	0	0	0
9:15	2	0	0	0	0	2	21:15	1	0	0	0	0	1
9:30	2	1	0	0	0	3	21:30	0	0	0	0	0	0
9:45	0	0	0	0	0	0	21:45	1	0	0	0	0	1
10:00	1	1	0	0	0	2	22:00	1	0	0	0	0	1
10:15	0	0	0	0	0	0	22:15	0	0	0	0	0	0
10:30	0	0	0	0	0	0	22:30	1	0	0	0	0	1
10:45	2	0	0	0	0	2	22:45	0	0	0	0	0	0
11:00	1	0	0	0	0	1	23:00	0	0	0	0	0	0
11:15	0	0	0	0	0	0	23:15	0	0	0	0	0	0
11:30	1	0	0	0	0	1	23:30	0	0	0	0	0	0
11:45	1	0	0	0	0	1	23:45	0	0	0	0	0	0
TOTAL	19	5	0	0	0	24	TOTAL	32	6	1	0	0	39

AM PEAK HOUR	9:15 AM
AM PEAK VOLUME	7

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	10

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	51	11	1	0	0	63
% OF TOTAL	81.0%	17.5%	1.6%	0.0%	0.0%	100.0%
AM PEAK	1	3	0	0	0	4
PM PEAK	6	0	0	0	0	6

A021323

Study Site 1 - Oakwood Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS80 Northern Dwy east of Perris.

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	9	0	0	0	0	9	12:00	35	0	0	0	0	35
0:15	6	0	0	0	0	6	12:15	42	1	0	0	0	43
0:30	20	0	0	0	0	20	12:30	36	1	1	0	0	38
0:45	12	0	0	0	0	12	12:45	58	0	0	0	0	58
1:00	16	0	0	0	0	16	13:00	44	0	0	0	0	44
1:15	5	0	0	0	0	5	13:15	39	1	0	0	0	40
1:30	5	0	0	0	0	5	13:30	38	0	0	0	0	38
1:45	7	0	0	0	0	7	13:45	55	0	0	0	0	55
2:00	7	0	0	0	0	7	14:00	44	0	0	0	0	44
2:15	2	0	0	0	0	2	14:15	65	0	0	0	0	65
2:30	2	0	0	0	0	2	14:30	51	0	0	0	0	51
2:45	4	0	0	0	0	4	14:45	63	0	0	0	0	63
3:00	1	0	0	0	0	1	15:00	53	0	0	0	0	53
3:15	2	0	0	0	0	2	15:15	64	2	0	0	0	66
3:30	5	0	0	0	0	5	15:30	66	2	0	0	0	68
3:45	0	0	0	0	0	0	15:45	75	1	0	0	0	76
4:00	6	0	0	0	0	6	16:00	73	0	0	0	0	73
4:15	9	0	0	0	0	9	16:15	67	0	0	0	0	67
4:30	1	0	0	0	0	1	16:30	62	0	0	0	0	62
4:45	2	0	0	0	0	2	16:45	80	0	0	0	0	80
5:00	8	0	0	0	0	8	17:00	48	2	0	0	0	50
5:15	7	0	0	0	0	7	17:15	68	0	0	0	0	68
5:30	5	0	0	0	0	5	17:30	53	0	0	0	0	53
5:45	11	0	0	0	0	11	17:45	60	0	0	0	0	60
6:00	9	0	0	0	0	9	18:00	79	0	0	0	0	79
6:15	11	0	0	0	0	11	18:15	70	0	0	0	0	70
6:30	8	0	0	0	0	8	18:30	60	0	0	0	0	60
6:45	13	0	0	0	0	13	18:45	54	0	0	0	0	54
7:00	10	0	0	0	0	10	19:00	53	0	0	0	0	53
7:15	29	0	0	0	0	29	19:15	43	0	0	0	0	43
7:30	48	0	0	0	0	48	19:30	38	0	0	0	0	38
7:45	70	0	0	0	0	70	19:45	35	0	0	0	0	35
8:00	52	0	0	0	0	52	20:00	48	0	0	0	0	48
8:15	27	0	0	0	0	27	20:15	38	0	0	0	0	38
8:30	52	0	0	0	0	52	20:30	38	0	0	0	0	38
8:45	36	0	1	0	0	37	20:45	32	0	0	0	0	32
9:00	21	1	0	0	0	22	21:00	47	0	0	0	0	47
9:15	19	1	0	0	0	20	21:15	36	0	0	0	0	36
9:30	22	0	0	0	0	22	21:30	35	0	0	0	0	35
9:45	29	1	0	0	0	30	21:45	25	0	0	0	0	25
10:00	28	1	0	0	0	29	22:00	35	0	0	0	0	35
10:15	24	0	0	0	0	24	22:15	24	0	0	0	0	24
10:30	24	0	0	0	0	24	22:30	23	0	0	0	0	23
10:45	35	0	0	0	0	35	22:45	21	0	0	0	0	21
11:00	31	0	0	0	0	31	23:00	16	0	0	0	0	16
11:15	16	0	0	0	0	16	23:15	30	0	0	0	0	30
11:30	20	0	0	0	0	20	23:30	10	0	0	0	0	10
11:45	29	3	0	0	0	32	23:45	17	0	0	0	0	17
TOTAL	815	7	1	0	0	823	TOTAL	2,246	10	1	0	0	2,257

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	201

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	284

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	3,061	17	2	0	0	3,080
% OF TOTAL	99.4%	0.6%	0.1%	0.0%	0.0%	100.0%
AM PEAK	201	0	0	0	0	201
PM PEAK	282	0	0	0	0	282

A13123

Study Site 1 - Oakwood Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS80 Northern Dwy east of Perris.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	5	1	0	0	0	6	12:00	59	1	0	0	0	60
0:15	8	0	0	0	0	8	12:15	38	2	0	0	0	40
0:30	7	0	0	0	0	7	12:30	34	0	0	0	0	34
0:45	7	0	0	0	0	7	12:45	32	1	0	0	0	33
1:00	5	1	0	0	0	6	13:00	40	0	0	0	0	40
1:15	6	0	0	0	0	6	13:15	47	0	1	0	0	48
1:30	3	0	0	0	0	3	13:30	51	1	0	0	0	52
1:45	5	0	0	0	0	5	13:45	46	0	0	0	0	46
2:00	3	0	0	0	0	3	14:00	60	0	0	0	0	60
2:15	2	0	0	0	0	2	14:15	49	0	0	0	0	49
2:30	1	0	0	0	0	1	14:30	52	0	0	0	0	52
2:45	3	0	0	0	0	3	14:45	48	0	0	0	0	48
3:00	2	0	0	0	0	2	15:00	57	0	0	0	0	57
3:15	4	0	0	0	0	4	15:15	56	0	0	0	0	56
3:30	5	0	0	0	0	5	15:30	61	1	0	0	0	62
3:45	10	0	0	0	0	10	15:45	37	0	0	0	0	37
4:00	14	0	0	0	0	14	16:00	71	0	0	0	0	71
4:15	17	0	0	0	0	17	16:15	39	0	0	0	0	39
4:30	20	0	0	0	0	20	16:30	53	1	0	0	0	54
4:45	11	0	0	0	0	11	16:45	53	0	0	0	0	53
5:00	15	0	0	0	0	15	17:00	63	0	0	0	0	63
5:15	19	0	0	0	0	19	17:15	46	1	0	0	0	47
5:30	21	0	0	0	0	21	17:30	48	0	0	0	0	48
5:45	23	0	0	0	0	23	17:45	42	0	0	0	0	42
6:00	28	0	0	0	0	28	18:00	48	0	0	0	0	48
6:15	29	0	0	0	0	29	18:15	57	0	0	0	0	57
6:30	27	0	0	0	0	27	18:30	30	0	0	0	0	30
6:45	38	0	0	0	0	38	18:45	33	0	0	0	0	33
7:00	48	0	0	0	0	48	19:00	41	0	0	0	0	41
7:15	79	0	0	0	0	79	19:15	20	0	0	0	0	20
7:30	82	0	0	0	0	82	19:30	32	1	0	0	0	33
7:45	78	0	0	0	0	78	19:45	33	0	0	0	0	33
8:00	57	0	0	0	0	57	20:00	33	0	0	0	0	33
8:15	61	0	0	0	0	61	20:15	31	0	0	0	0	31
8:30	36	1	0	0	0	37	20:30	32	1	0	0	0	33
8:45	34	0	0	0	0	34	20:45	35	0	0	0	0	35
9:00	27	0	0	0	0	27	21:00	29	0	0	0	0	29
9:15	33	0	0	0	0	33	21:15	24	0	0	0	0	24
9:30	27	2	1	0	0	30	21:30	28	0	0	0	0	28
9:45	44	1	0	0	0	45	21:45	24	0	0	0	0	24
10:00	28	1	0	0	0	29	22:00	19	0	0	0	0	19
10:15	39	1	0	0	0	40	22:15	14	0	0	0	0	14
10:30	27	2	0	0	0	29	22:30	16	0	0	0	0	16
10:45	32	0	0	0	0	32	22:45	16	0	0	0	0	16
11:00	36	0	0	0	0	36	23:00	16	0	0	0	0	16
11:15	37	0	0	0	0	37	23:15	19	0	0	0	0	19
11:30	26	0	0	0	0	26	23:30	8	0	0	0	0	8
11:45	39	1	0	0	0	40	23:45	13	0	0	0	0	13
TOTAL	1,208	11	1	0	0	1,220	TOTAL	1,833	10	1	0	0	1,844

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	296

AM PEAK HOUR	3:15 PM
AM PEAK VOLUME	226

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	3,041	21	2	0	0	3,064
% OF TOTAL	99.2%	0.7%	0.1%	0.0%	0.0%	100.0%
AM PEAK	296	0	0	0	0	296
PM PEAK	216	1	0	0	0	217

A021323

Study Site 2 - Springbrook Park Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS75 Eastern Dwy south of Orange.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	6	0	0	0	0	6
0:15	1	0	0	0	0	1	12:15	6	0	0	0	0	6
0:30	1	0	0	0	0	1	12:30	4	0	0	0	0	4
0:45	2	0	0	0	0	2	12:45	7	1	0	0	0	8
1:00	1	0	0	0	0	1	13:00	7	0	0	0	0	7
1:15	1	0	0	0	0	1	13:15	7	0	0	0	0	7
1:30	1	0	0	0	0	1	13:30	8	0	0	0	0	8
1:45	1	0	0	0	0	1	13:45	10	0	0	0	0	10
2:00	0	0	0	0	0	0	14:00	8	0	0	0	0	8
2:15	3	0	0	0	0	3	14:15	6	1	0	0	0	7
2:30	0	0	0	0	0	0	14:30	17	1	0	0	0	18
2:45	0	0	0	0	0	0	14:45	8	0	0	0	0	8
3:00	0	0	0	0	0	0	15:00	11	0	0	0	0	11
3:15	1	0	0	0	0	1	15:15	5	0	0	0	0	5
3:30	1	0	0	0	0	1	15:30	16	0	0	0	0	16
3:45	3	0	0	0	0	3	15:45	22	0	0	0	0	22
4:00	0	0	0	0	0	0	16:00	10	0	0	0	0	10
4:15	1	0	0	0	0	1	16:15	9	2	0	0	0	11
4:30	3	0	0	0	0	3	16:30	14	0	0	0	0	14
4:45	2	0	0	0	0	2	16:45	11	0	0	0	0	11
5:00	1	0	0	0	0	1	17:00	10	0	0	0	0	10
5:15	0	0	0	0	0	0	17:15	12	0	0	0	0	12
5:30	2	0	0	0	0	2	17:30	17	0	0	0	0	17
5:45	3	0	0	0	0	3	17:45	11	0	0	0	0	11
6:00	4	0	0	0	0	4	18:00	5	0	0	0	0	5
6:15	1	3	0	0	0	4	18:15	7	0	0	0	0	7
6:30	0	0	0	0	0	0	18:30	15	0	0	0	0	15
6:45	2	1	0	0	0	3	18:45	13	0	0	0	0	13
7:00	4	2	0	0	0	6	19:00	8	0	0	0	0	8
7:15	4	3	0	0	0	7	19:15	9	0	0	0	0	9
7:30	4	0	0	0	0	4	19:30	9	0	0	0	0	9
7:45	5	0	0	0	0	5	19:45	8	0	0	0	0	8
8:00	5	0	0	0	0	5	20:00	6	0	0	0	0	6
8:15	11	0	0	0	0	11	20:15	10	0	0	0	0	10
8:30	7	0	0	0	0	7	20:30	4	0	0	0	0	4
8:45	6	0	0	0	0	6	20:45	7	0	0	0	0	7
9:00	4	0	0	0	0	4	21:00	4	0	0	0	0	4
9:15	4	0	0	0	0	4	21:15	2	0	0	0	0	2
9:30	1	0	0	0	0	1	21:30	6	0	0	0	0	6
9:45	2	1	0	0	0	3	21:45	8	0	0	0	0	8
10:00	1	0	0	0	0	1	22:00	3	0	0	0	0	3
10:15	6	1	0	0	0	7	22:15	5	0	0	0	0	5
10:30	8	0	0	0	0	8	22:30	5	0	0	0	0	5
10:45	1	0	0	0	0	1	22:45	3	0	0	0	0	3
11:00	4	1	0	0	0	5	23:00	1	0	0	0	0	1
11:15	2	0	1	0	0	3	23:15	5	0	0	0	0	5
11:30	2	0	0	0	0	2	23:30	0	0	0	0	0	0
11:45	10	1	1	0	0	12	23:45	0	0	0	0	0	0
TOTAL	128	13	2	0	0	143	TOTAL	385	5	0	0	0	390

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	29

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	59

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	513	18	2	0	0	533
% OF TOTAL	96.2%	3.4%	0.4%	0.0%	0.0%	100.0%
AM PEAK	29	0	0	0	0	29
PM PEAK	50	0	0	0	0	50

A13123

Study Site 2 - Springbrook Park Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS75 Eastern Dwy south of Orange.

AM	OUT					
TIME	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1
0:15	0	0	0	0	0	0
0:30	0	0	0	0	0	0
0:45	2	0	0	0	0	2
1:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0
1:30	0	0	0	0	0	0
1:45	0	0	0	0	0	0
2:00	0	0	0	0	0	0
2:15	3	0	0	0	0	3
2:30	2	0	0	0	0	2
2:45	5	0	0	0	0	5
3:00	0	0	0	0	0	0
3:15	4	0	0	0	0	4
3:30	6	0	0	0	0	6
3:45	1	0	0	0	0	1
4:00	3	0	0	0	0	3
4:15	1	0	0	0	0	1
4:30	5	0	0	0	0	5
4:45	7	0	0	0	0	7
5:00	4	0	0	0	0	4
5:15	7	0	0	0	0	7
5:30	3	0	0	0	0	3
5:45	6	0	0	0	0	6
6:00	5	0	0	0	0	5
6:15	9	0	0	0	0	9
6:30	6	0	0	0	0	6
6:45	7	0	0	0	0	7
7:00	5	0	0	0	0	5
7:15	12	0	0	0	0	12
7:30	19	0	1	0	0	20
7:45	19	0	0	0	0	19
8:00	7	0	0	0	0	7
8:15	9	0	0	0	0	9
8:30	4	0	1	0	0	5
8:45	9	0	0	0	0	9
9:00	3	0	0	0	0	3
9:15	6	0	0	0	0	6
9:30	4	0	0	0	0	4
9:45	1	0	0	0	0	1
10:00	5	0	0	0	0	5
10:15	8	0	0	0	0	8
10:30	4	0	0	0	0	4
10:45	3	0	0	0	0	3
11:00	11	1	0	0	0	12
11:15	6	0	0	0	0	6
11:30	4	1	0	0	0	5
11:45	8	0	0	0	0	8
TOTAL	234	2	2	0	0	238

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	58

PM	OUT					
Time	1	2	3	4	5	TOTAL
12:00	8	1	0	0	0	9
12:15	6	0	0	0	0	6
12:30	6	2	1	0	0	9
12:45	4	0	0	0	0	4
13:00	5	0	0	0	0	5
13:15	6	0	0	0	0	6
13:30	3	0	0	0	0	3
13:45	8	0	0	0	0	8
14:00	12	0	0	0	0	12
14:15	9	0	0	0	0	9
14:30	9	0	0	0	0	9
14:45	8	0	0	0	0	8
15:00	6	0	0	0	0	6
15:15	7	0	0	0	0	7
15:30	9	0	0	0	0	9
15:45	3	0	0	0	0	3
16:00	15	0	0	0	0	15
16:15	11	0	0	0	0	11
16:30	15	0	0	0	0	15
16:45	9	0	0	0	0	9
17:00	5	0	0	0	0	5
17:15	11	0	0	0	0	11
17:30	6	0	0	0	0	6
17:45	10	0	0	0	0	10
18:00	5	0	0	0	0	5
18:15	9	0	0	0	0	9
18:30	5	0	0	0	0	5
18:45	6	0	0	0	0	6
19:00	10	0	0	0	0	10
19:15	10	0	0	0	0	10
19:30	5	0	0	0	0	5
19:45	5	0	0	0	0	5
20:00	5	0	0	0	0	5
20:15	2	0	0	0	0	2
20:30	5	0	0	0	0	5
20:45	3	0	0	0	0	3
21:00	5	0	0	0	0	5
21:15	2	0	0	0	0	2
21:30	9	0	0	0	0	9
21:45	5	0	0	0	0	5
22:00	1	0	0	0	0	1
22:15	3	0	0	0	0	3
22:30	5	0	0	0	0	5
22:45	6	0	0	0	0	6
23:00	3	0	0	0	0	3
23:15	0	0	0	0	0	0
23:30	4	0	0	0	0	4
23:45	2	0	0	0	0	2
TOTAL	306	3	1	0	0	310

AM PEAK HOUR	4:00 PM
AM PEAK VOLUME	50

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	540	5	3	0	0	548
% OF TOTAL	98.5%	0.9%	0.5%	0.0%	0.0%	100.0%
AM PEAK	57	0	1	0	0	58
PM PEAK	50	0	0	0	0	50

A021323

Study Site 2 - Springbrook Park Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS76 Western Dwy south of Orange.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	7	1	0	0	0	8
0:15	3	0	0	0	0	3	12:15	11	0	0	0	0	11
0:30	1	0	0	0	0	1	12:30	12	2	1	0	0	15
0:45	3	0	0	0	0	3	12:45	6	0	0	0	0	6
1:00	0	0	0	0	0	0	13:00	13	0	0	0	0	13
1:15	1	0	0	0	0	1	13:15	11	1	0	0	0	12
1:30	0	0	0	0	0	0	13:30	10	0	0	0	0	10
1:45	1	0	0	0	0	1	13:45	9	0	0	0	0	9
2:00	1	0	0	0	0	1	14:00	13	0	0	0	0	13
2:15	0	0	0	0	0	0	14:15	10	0	0	0	0	10
2:30	0	0	0	0	0	0	14:30	13	0	0	0	0	13
2:45	4	0	0	0	0	4	14:45	10	0	0	0	0	10
3:00	0	0	0	0	0	0	15:00	12	0	0	0	0	12
3:15	1	0	0	0	0	1	15:15	13	0	0	0	0	13
3:30	0	0	0	0	0	0	15:30	16	0	0	0	0	16
3:45	0	0	0	0	0	0	15:45	15	0	0	0	0	15
4:00	0	0	0	0	0	0	16:00	13	1	0	0	0	14
4:15	0	0	0	0	0	0	16:15	14	0	0	0	0	14
4:30	2	0	0	0	0	2	16:30	13	0	0	0	0	13
4:45	1	0	0	0	0	1	16:45	14	0	0	0	0	14
5:00	1	0	0	0	0	1	17:00	16	0	0	0	0	16
5:15	5	0	0	0	0	5	17:15	13	0	0	0	0	13
5:30	4	0	0	0	0	4	17:30	24	0	0	0	0	24
5:45	2	0	0	0	0	2	17:45	17	0	0	0	0	17
6:00	5	0	0	0	0	5	18:00	20	0	0	0	0	20
6:15	5	0	0	0	0	5	18:15	15	0	0	0	0	15
6:30	2	0	0	0	0	2	18:30	10	0	0	0	0	10
6:45	1	0	0	0	0	1	18:45	9	0	0	0	0	9
7:00	2	0	0	0	0	2	19:00	18	0	0	0	0	18
7:15	2	0	1	0	0	3	19:15	13	0	0	0	0	13
7:30	7	0	0	0	0	7	19:30	8	0	0	0	0	8
7:45	15	0	0	0	0	15	19:45	7	0	0	0	0	7
8:00	9	0	0	0	0	9	20:00	11	0	0	0	0	11
8:15	6	0	1	0	0	7	20:15	11	0	0	0	0	11
8:30	10	0	0	0	0	10	20:30	7	0	0	0	0	7
8:45	8	0	0	0	0	8	20:45	9	0	0	0	0	9
9:00	10	0	0	0	0	10	21:00	14	0	0	0	0	14
9:15	7	0	0	0	0	7	21:15	11	0	0	0	0	11
9:30	3	1	0	0	0	4	21:30	7	0	0	0	0	7
9:45	3	0	0	0	0	3	21:45	15	0	0	0	0	15
10:00	10	1	0	0	0	11	22:00	5	0	0	0	0	5
10:15	3	0	0	0	0	3	22:15	7	0	0	0	0	7
10:30	8	0	0	0	0	8	22:30	4	0	0	0	0	4
10:45	7	0	0	0	0	7	22:45	5	0	0	0	0	5
11:00	3	0	0	0	0	3	23:00	4	0	0	0	0	4
11:15	7	0	0	0	0	7	23:15	3	0	0	0	0	3
11:30	2	1	0	0	0	3	23:30	7	0	0	0	0	7
11:45	7	0	0	0	0	7	23:45	6	0	0	0	0	6
TOTAL	174	3	2	0	0	179	TOTAL	531	5	1	0	0	537

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	41

AM PEAK HOUR	5:30 PM
AM PEAK VOLUME	76

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	705	8	3	0	0	716
% OF TOTAL	98.5%	1.1%	0.4%	0.0%	0.0%	100.0%
AM PEAK	40	0	1	0	0	41
PM PEAK	70	0	0	0	0	70

A13123

Study Site 2 - Springbrook Park Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS76 Western Dwy south of Orange.

AM	OUT					
TIME	1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0
0:15	1	0	0	0	0	1
0:30	0	0	0	0	0	0
0:45	1	0	0	0	0	1
1:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0
1:30	1	0	0	0	0	1
1:45	0	0	0	0	0	0
2:00	1	0	0	0	0	1
2:15	1	0	0	0	0	1
2:30	0	0	0	0	0	0
2:45	0	0	0	0	0	0
3:00	0	0	0	0	0	0
3:15	1	0	0	0	0	1
3:30	6	0	0	0	0	6
3:45	9	0	0	0	0	9
4:00	4	0	0	0	0	4
4:15	8	0	0	0	0	8
4:30	5	0	0	0	0	5
4:45	6	0	0	0	0	6
5:00	5	0	0	0	0	5
5:15	6	0	0	0	0	6
5:30	6	0	0	0	0	6
5:45	6	0	0	0	0	6
6:00	7	0	0	0	0	7
6:15	5	3	0	0	0	8
6:30	13	0	0	0	0	13
6:45	2	0	0	0	0	2
7:00	7	3	0	0	0	10
7:15	17	3	0	0	0	20
7:30	18	0	0	0	0	18
7:45	24	0	0	0	0	24
8:00	16	0	0	0	0	16
8:15	12	0	0	0	0	12
8:30	17	0	0	0	0	17
8:45	14	0	0	0	0	14
9:00	8	0	0	0	0	8
9:15	9	0	0	0	0	9
9:30	10	1	0	0	0	11
9:45	1	1	0	0	0	2
10:00	13	0	0	0	0	13
10:15	12	2	0	0	0	14
10:30	9	0	0	0	0	9
10:45	6	0	0	0	0	6
11:00	11	0	0	0	0	11
11:15	3	0	0	0	0	3
11:30	5	0	1	0	0	6
11:45	8	1	0	0	0	9
TOTAL	314	14	1	0	0	329

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	78

PM	OUT					
Time	1	2	3	4	5	TOTAL
12:00	6	0	1	0	0	7
12:15	9	0	0	0	0	9
12:30	9	0	0	0	0	9
12:45	4	0	0	0	0	4
13:00	6	1	0	0	0	7
13:15	11	1	0	0	0	12
13:30	20	0	0	0	0	20
13:45	11	0	0	0	0	11
14:00	13	0	0	0	0	13
14:15	11	0	0	0	0	11
14:30	11	2	0	0	0	13
14:45	9	0	0	0	0	9
15:00	21	0	0	0	0	21
15:15	11	0	0	0	0	11
15:30	9	0	0	0	0	9
15:45	9	0	0	0	0	9
16:00	9	1	0	0	0	10
16:15	8	1	0	0	0	9
16:30	8	1	0	0	0	9
16:45	10	0	0	0	0	10
17:00	3	0	0	0	0	3
17:15	9	0	0	0	0	9
17:30	11	0	0	0	0	11
17:45	11	0	0	0	0	11
18:00	15	0	0	0	0	15
18:15	10	0	0	0	0	10
18:30	9	0	0	0	0	9
18:45	9	0	0	0	0	9
19:00	4	0	0	0	0	4
19:15	9	0	0	0	0	9
19:30	10	0	0	0	0	10
19:45	4	0	0	0	0	4
20:00	7	0	0	0	0	7
20:15	4	0	0	0	0	4
20:30	11	0	0	0	0	11
20:45	5	0	0	0	0	5
21:00	6	0	0	0	0	6
21:15	7	0	0	0	0	7
21:30	3	0	0	0	0	3
21:45	4	0	0	0	0	4
22:00	11	0	0	0	0	11
22:15	2	0	0	0	0	2
22:30	5	0	0	0	0	5
22:45	0	0	0	0	0	0
23:00	3	0	0	0	0	3
23:15	3	0	0	0	0	3
23:30	3	0	0	0	0	3
23:45	1	0	0	0	0	1
TOTAL	384	7	1	0	0	392

AM PEAK HOUR	1:15 PM
AM PEAK VOLUME	56

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	698	21	2	0	0	721
% OF TOTAL	96.8%	2.9%	0.3%	0.0%	0.0%	100.0%
AM PEAK	75	3	0	0	0	78
PM PEAK	35	3	0	0	0	38

A021323

Study Site 3 - Vista Springs Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS77 Dwy east of Clark

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	4	0	0	0	0	4	12:00	13	0	0	0	0	13
0:15	3	0	0	0	0	3	12:15	3	0	0	0	0	3
0:30	1	0	0	0	0	1	12:30	8	0	0	0	0	8
0:45	5	0	0	0	0	5	12:45	11	0	0	0	0	11
1:00	3	0	0	0	0	3	13:00	8	0	0	0	0	8
1:15	1	0	0	0	0	1	13:15	12	0	0	0	0	12
1:30	0	0	0	0	0	0	13:30	12	0	0	0	0	12
1:45	1	0	0	0	0	1	13:45	6	0	0	0	0	6
2:00	0	0	0	0	0	0	14:00	12	0	1	0	0	13
2:15	1	0	0	0	0	1	14:15	14	0	0	0	0	14
2:30	0	0	0	0	0	0	14:30	11	0	0	0	0	11
2:45	1	0	0	0	0	1	14:45	4	0	0	0	0	4
3:00	0	0	0	0	0	0	15:00	6	0	0	0	0	6
3:15	0	0	0	0	0	0	15:15	11	0	0	0	0	11
3:30	0	0	0	0	0	0	15:30	11	0	0	0	0	11
3:45	1	0	0	0	0	1	15:45	10	0	0	0	0	10
4:00	0	0	0	0	0	0	16:00	5	0	0	0	0	5
4:15	2	0	0	0	0	2	16:15	16	0	0	0	0	16
4:30	2	0	0	0	0	2	16:30	10	0	0	0	0	10
4:45	4	0	0	0	0	4	16:45	13	0	0	0	0	13
5:00	4	0	0	0	0	4	17:00	14	0	0	0	0	14
5:15	2	0	0	0	0	2	17:15	16	0	0	0	0	16
5:30	1	0	0	0	0	1	17:30	10	0	0	0	0	10
5:45	1	0	0	0	0	1	17:45	12	0	0	0	0	12
6:00	0	0	0	0	0	0	18:00	8	0	0	0	0	8
6:15	1	0	0	0	0	1	18:15	10	0	0	0	0	10
6:30	0	0	0	0	0	0	18:30	16	0	0	0	0	16
6:45	1	0	0	0	0	1	18:45	9	0	0	0	0	9
7:00	2	0	0	0	0	2	19:00	8	0	0	0	0	8
7:15	10	0	0	0	0	10	19:15	17	0	0	0	0	17
7:30	18	0	0	0	0	18	19:30	13	0	0	0	0	13
7:45	16	0	0	0	0	16	19:45	4	0	0	0	0	4
8:00	10	0	0	0	0	10	20:00	16	0	0	0	0	16
8:15	10	0	0	0	0	10	20:15	5	0	0	0	0	5
8:30	6	0	0	0	0	6	20:30	13	0	0	0	0	13
8:45	7	0	0	0	0	7	20:45	11	0	0	0	0	11
9:00	5	0	0	0	0	5	21:00	9	0	0	0	0	9
9:15	6	0	0	0	0	6	21:15	11	0	0	0	0	11
9:30	5	0	0	0	0	5	21:30	5	0	0	0	0	5
9:45	4	0	0	0	0	4	21:45	8	0	0	0	0	8
10:00	6	0	0	0	0	6	22:00	8	0	0	0	0	8
10:15	4	1	0	0	0	5	22:15	2	0	0	0	0	2
10:30	3	1	0	0	0	4	22:30	1	0	0	0	0	1
10:45	1	0	0	0	0	1	22:45	6	0	0	0	0	6
11:00	2	0	0	0	0	2	23:00	4	0	0	0	0	4
11:15	3	0	0	0	0	3	23:15	2	0	0	0	0	2
11:30	4	0	0	0	0	4	23:30	0	0	0	0	0	0
11:45	8	0	0	0	0	8	23:45	4	0	0	0	0	4
TOTAL	169	2	0	0	0	171	TOTAL	438	0	1	0	0	439

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	54

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	53

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	607	2	1	0	0	610
% OF TOTAL	99.5%	0.3%	0.2%	0.0%	0.0%	100.0%
AM PEAK	54	0	0	0	0	54
PM PEAK	53	0	0	0	0	53

A13123

Study Site 3 - Vista Springs Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS77 Dwy east of Clark

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	10	0	0	0	0	10
0:15	2	0	0	0	0	2	12:15	13	0	0	0	0	13
0:30	1	0	0	0	0	1	12:30	10	0	0	0	0	10
0:45	2	0	0	0	0	2	12:45	10	1	0	0	0	11
1:00	1	0	0	0	0	1	13:00	11	0	0	0	0	11
1:15	1	0	0	0	0	1	13:15	10	0	0	0	0	10
1:30	3	0	0	0	0	3	13:30	16	0	1	0	0	17
1:45	0	0	0	0	0	0	13:45	19	0	0	0	0	19
2:00	0	0	0	0	0	0	14:00	18	0	0	0	0	18
2:15	0	0	0	0	0	0	14:15	19	0	0	0	0	19
2:30	1	0	0	0	0	1	14:30	10	0	0	0	0	10
2:45	0	0	0	0	0	0	14:45	16	0	0	0	0	16
3:00	1	0	0	0	0	1	15:00	12	0	0	0	0	12
3:15	3	0	0	0	0	3	15:15	13	0	0	0	0	13
3:30	6	0	0	0	0	6	15:30	13	0	0	0	0	13
3:45	1	0	0	0	0	1	15:45	9	0	0	0	0	9
4:00	5	0	0	0	0	5	16:00	8	0	0	0	0	8
4:15	11	0	0	0	0	11	16:15	11	0	0	0	0	11
4:30	4	0	0	0	0	4	16:30	10	0	0	0	0	10
4:45	2	0	0	0	0	2	16:45	8	0	0	0	0	8
5:00	5	0	0	0	0	5	17:00	13	0	0	0	0	13
5:15	8	0	0	0	0	8	17:15	11	0	0	0	0	11
5:30	4	0	0	0	0	4	17:30	8	0	0	0	0	8
5:45	4	0	0	0	0	4	17:45	4	0	0	0	0	4
6:00	10	0	0	0	0	10	18:00	6	0	0	0	0	6
6:15	8	0	0	0	0	8	18:15	7	0	0	0	0	7
6:30	14	0	0	0	0	14	18:30	15	0	0	0	0	15
6:45	8	0	0	0	0	8	18:45	19	1	0	0	0	20
7:00	23	0	0	0	0	23	19:00	7	0	0	0	0	7
7:15	26	0	0	0	0	26	19:15	4	0	0	0	0	4
7:30	27	0	0	0	0	27	19:30	7	0	0	0	0	7
7:45	31	0	0	0	0	31	19:45	5	0	0	0	0	5
8:00	31	0	0	0	0	31	20:00	6	0	0	0	0	6
8:15	21	0	0	0	0	21	20:15	3	0	0	0	0	3
8:30	15	0	0	0	0	15	20:30	2	0	0	0	0	2
8:45	12	0	0	0	0	12	20:45	9	0	0	0	0	9
9:00	9	0	0	0	0	9	21:00	5	0	0	0	0	5
9:15	11	0	0	0	0	11	21:15	7	0	0	0	0	7
9:30	8	0	0	0	0	8	21:30	9	0	0	0	0	9
9:45	12	0	0	0	0	12	21:45	7	0	0	0	0	7
10:00	13	1	0	0	0	14	22:00	6	0	0	0	0	6
10:15	4	1	0	0	0	5	22:15	4	0	0	0	0	4
10:30	8	0	0	0	0	8	22:30	5	0	0	0	0	5
10:45	6	1	0	0	0	7	22:45	0	0	0	0	0	0
11:00	8	0	0	0	0	8	23:00	1	0	0	0	0	1
11:15	6	1	0	0	0	7	23:15	2	0	0	0	0	2
11:30	9	0	0	0	0	9	23:30	0	0	0	0	0	0
11:45	12	0	0	0	0	12	23:45	0	0	0	0	0	0
TOTAL	398	4	0	0	0	402	**TOTAL**	418	2	1	0	0	421

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	115

AM PEAK HOUR	1:30 PM
AM PEAK VOLUME	73

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	816	6	1	0	0	823
% OF TOTAL	99.1%	0.7%	0.1%	0.0%	0.0%	100.0%
AM PEAK	115	0	0	0	0	115
PM PEAK	42	0	0	0	0	42

A021323

Study Site 3 - Vista Springs Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS78 Dwy north of Box Springs

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	8	0	0	0	0	8	12:00	9	0	0	0	0	9
0:15	5	0	0	0	0	5	12:15	15	0	0	0	0	15
0:30	1	0	0	0	0	1	12:30	17	1	1	0	0	19
0:45	3	0	0	0	0	3	12:45	12	1	0	0	0	13
1:00	1	0	0	0	0	1	13:00	14	0	0	0	0	14
1:15	5	0	0	0	0	5	13:15	16	0	1	0	0	17
1:30	2	0	0	0	0	2	13:30	9	1	0	0	0	10
1:45	4	0	0	0	0	4	13:45	8	0	0	0	0	8
2:00	3	0	0	0	0	3	14:00	20	0	0	0	0	20
2:15	3	0	0	0	0	3	14:15	22	0	0	0	0	22
2:30	2	0	0	0	0	2	14:30	20	0	0	0	0	20
2:45	0	0	0	0	0	0	14:45	11	0	0	0	0	11
3:00	0	0	0	0	0	0	15:00	15	0	0	0	0	15
3:15	1	0	0	0	0	1	15:15	29	0	0	0	0	29
3:30	0	0	0	0	0	0	15:30	27	0	0	0	0	27
3:45	0	0	0	0	0	0	15:45	13	0	0	0	0	13
4:00	3	0	0	0	0	3	16:00	19	0	0	0	0	19
4:15	2	0	0	0	0	2	16:15	21	0	0	0	0	21
4:30	1	0	0	0	0	1	16:30	26	0	0	0	0	26
4:45	2	0	0	0	0	2	16:45	13	0	0	0	0	13
5:00	2	0	0	0	0	2	17:00	23	0	0	0	0	23
5:15	2	0	0	0	0	2	17:15	21	0	0	0	0	21
5:30	1	0	0	0	0	1	17:30	13	0	0	0	0	13
5:45	3	0	0	0	0	3	17:45	17	0	0	0	0	17
6:00	3	0	0	0	0	3	18:00	19	0	0	0	0	19
6:15	0	0	0	0	0	0	18:15	20	0	0	0	0	20
6:30	6	0	0	0	0	6	18:30	16	0	0	0	0	16
6:45	6	0	0	0	0	6	18:45	13	1	0	0	0	14
7:00	7	0	0	0	0	7	19:00	23	0	0	0	0	23
7:15	5	0	0	0	0	5	19:15	16	0	0	0	0	16
7:30	6	0	0	0	0	6	19:30	19	0	0	0	0	19
7:45	14	0	0	0	0	14	19:45	34	0	0	0	0	34
8:00	16	0	0	0	0	16	20:00	15	0	0	0	0	15
8:15	10	0	0	0	0	10	20:15	20	0	0	0	0	20
8:30	20	0	0	0	0	20	20:30	17	0	0	0	0	17
8:45	14	0	0	0	0	14	20:45	21	0	0	0	0	21
9:00	8	0	0	0	0	8	21:00	16	0	0	0	0	16
9:15	5	0	0	0	0	5	21:15	13	0	0	0	0	13
9:30	8	0	0	0	0	8	21:30	7	0	0	0	0	7
9:45	12	1	0	0	0	13	21:45	7	0	0	0	0	7
10:00	12	0	0	0	0	12	22:00	11	0	0	0	0	11
10:15	10	2	0	0	0	12	22:15	3	0	0	0	0	3
10:30	10	2	0	0	0	12	22:30	12	0	0	0	0	12
10:45	8	0	0	0	0	8	22:45	5	0	0	0	0	5
11:00	13	0	0	0	0	13	23:00	7	0	0	0	0	7
11:15	13	1	0	0	0	14	23:15	6	0	0	0	0	6
11:30	13	1	0	0	0	14	23:30	8	0	0	0	0	8
11:45	12	0	0	0	0	12	23:45	10	0	0	0	0	10
TOTAL	285	7	0	0	0	292	TOTAL	748	4	2	0	0	754

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	60

AM PEAK HOUR	7:00 PM
AM PEAK VOLUME	92

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	1,033	11	2	0	0	1,046
% OF TOTAL	98.8%	1.1%	0.2%	0.0%	0.0%	100.0%
AM PEAK	60	0	0	0	0	60
PM PEAK	83	0	0	0	0	83

A13123

Study Site 3 - Vista Springs Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS78 Dwy north of Box Springs

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	7	0	0	0	0	7	12:00	14	0	0	0	0	14
0:15	8	0	0	0	0	8	12:15	18	0	0	0	0	18
0:30	1	0	0	0	0	1	12:30	9	0	0	0	0	9
0:45	0	0	0	0	0	0	12:45	17	0	0	0	0	17
1:00	0	0	0	0	0	0	13:00	14	1	0	0	0	15
1:15	2	0	0	0	0	2	13:15	8	0	0	0	0	8
1:30	4	0	0	0	0	4	13:30	8	1	1	0	0	10
1:45	0	0	0	0	0	0	13:45	13	0	0	0	0	13
2:00	6	0	0	0	0	6	14:00	12	0	0	0	0	12
2:15	1	0	0	0	0	1	14:15	9	0	0	0	0	9
2:30	1	0	0	0	0	1	14:30	11	0	1	0	0	12
2:45	2	0	0	0	0	2	14:45	20	0	0	0	0	20
3:00	0	0	0	0	0	0	15:00	6	0	0	0	0	6
3:15	1	0	0	0	0	1	15:15	20	0	0	0	0	20
3:30	1	0	0	0	0	1	15:30	9	0	0	0	0	9
3:45	0	0	0	0	0	0	15:45	13	0	0	0	0	13
4:00	4	0	0	0	0	4	16:00	16	0	0	0	0	16
4:15	11	0	0	0	0	11	16:15	18	0	0	0	0	18
4:30	14	0	0	0	0	14	16:30	16	0	0	0	0	16
4:45	3	0	0	0	0	3	16:45	19	0	0	0	0	19
5:00	4	0	0	0	0	4	17:00	14	0	0	0	0	14
5:15	5	0	0	0	0	5	17:15	16	0	0	0	0	16
5:30	5	0	0	0	0	5	17:30	18	0	0	0	0	18
5:45	14	0	0	0	0	14	17:45	12	0	0	0	0	12
6:00	8	0	0	0	0	8	18:00	5	0	0	0	0	5
6:15	11	0	0	0	0	11	18:15	9	0	0	0	0	9
6:30	11	0	0	0	0	11	18:30	18	0	0	0	0	18
6:45	9	0	0	0	0	9	18:45	9	0	0	0	0	9
7:00	29	0	0	0	0	29	19:00	6	0	0	0	0	6
7:15	17	0	0	0	0	17	19:15	16	0	0	0	0	16
7:30	12	0	0	0	0	12	19:30	2	0	0	0	0	2
7:45	30	0	0	0	0	30	19:45	9	0	0	0	0	9
8:00	16	0	0	0	0	16	20:00	4	0	0	0	0	4
8:15	9	0	0	0	0	9	20:15	10	0	0	0	0	10
8:30	11	0	0	0	0	11	20:30	10	0	0	0	0	10
8:45	15	0	0	0	0	15	20:45	4	0	0	0	0	4
9:00	7	0	0	0	0	7	21:00	8	0	0	0	0	8
9:15	11	0	0	0	0	11	21:15	7	0	0	0	0	7
9:30	12	0	0	0	0	12	21:30	3	0	0	0	0	3
9:45	14	0	0	0	0	14	21:45	2	0	0	0	0	2
10:00	17	0	0	0	0	17	22:00	2	0	0	0	0	2
10:15	9	0	0	0	0	9	22:15	1	0	0	0	0	1
10:30	14	2	0	0	0	16	22:30	3	0	0	0	0	3
10:45	8	1	0	0	0	9	22:45	4	0	0	0	0	4
11:00	7	0	0	0	0	7	23:00	1	0	0	0	0	1
11:15	8	0	0	0	0	8	23:15	2	0	0	0	0	2
11:30	9	0	0	0	0	9	23:30	0	0	0	0	0	0
11:45	10	1	0	0	0	11	23:45	1	0	0	0	0	1
TOTAL	398	4	0	0	0	402	TOTAL	466	2	2	0	0	470

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	88

AM PEAK HOUR	4:00 PM
AM PEAK VOLUME	69

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	864	6	2	0	0	872
% OF TOTAL	99.1%	0.7%	0.2%	0.0%	0.0%	100.0%
AM PEAK	88	0	0	0	0	88
PM PEAK	69	0	0	0	0	69

A021323

Study Site 4 - Vesada Aparment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS73 Southern Dwy east of Country Village.

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	0	0	0	0	0	0
0:15	0	0	0	0	0	0	12:15	0	0	0	0	0	0
0:30	0	0	0	0	0	0	12:30	0	0	0	0	0	0
0:45	0	0	0	0	0	0	12:45	0	0	0	0	0	0
1:00	0	0	0	0	0	0	13:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0	13:15	0	0	0	0	0	0
1:30	0	0	0	0	0	0	13:30	0	0	0	0	0	0
1:45	0	0	0	0	0	0	13:45	0	0	0	0	0	0
2:00	0	0	0	0	0	0	14:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0	14:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0	14:30	0	0	0	0	0	0
2:45	0	0	0	0	0	0	14:45	0	0	0	0	0	0
3:00	0	0	0	0	0	0	15:00	0	0	0	0	0	0
3:15	0	0	0	0	0	0	15:15	0	0	0	0	0	0
3:30	0	0	0	0	0	0	15:30	0	0	0	0	0	0
3:45	0	0	0	0	0	0	15:45	0	0	0	0	0	0
4:00	0	0	0	0	0	0	16:00	0	0	0	0	0	0
4:15	0	0	0	0	0	0	16:15	0	0	0	0	0	0
4:30	0	0	0	0	0	0	16:30	0	0	0	0	0	0
4:45	0	0	0	0	0	0	16:45	0	0	0	0	0	0
5:00	0	0	0	0	0	0	17:00	0	0	0	0	0	0
5:15	0	0	0	0	0	0	17:15	0	0	0	0	0	0
5:30	0	0	0	0	0	0	17:30	0	0	0	0	0	0
5:45	0	0	0	0	0	0	17:45	0	0	0	0	0	0
6:00	0	0	0	0	0	0	18:00	0	0	0	0	0	0
6:15	0	0	0	0	0	0	18:15	0	0	0	0	0	0
6:30	0	0	0	0	0	0	18:30	0	0	0	0	0	0
6:45	0	0	0	0	0	0	18:45	0	0	0	0	0	0
7:00	0	0	0	0	0	0	19:00	0	0	0	0	0	0
7:15	0	0	0	0	0	0	19:15	0	0	0	0	0	0
7:30	0	0	0	0	0	0	19:30	0	0	0	0	0	0
7:45	0	0	0	0	0	0	19:45	0	0	0	0	0	0
8:00	0	0	0	0	0	0	20:00	0	0	0	0	0	0
8:15	0	0	0	0	0	0	20:15	0	0	0	0	0	0
8:30	0	0	0	0	0	0	20:30	0	0	0	0	0	0
8:45	0	0	0	0	0	0	20:45	0	0	0	0	0	0
9:00	0	0	0	0	0	0	21:00	0	0	0	0	0	0
9:15	0	0	0	0	0	0	21:15	0	0	0	0	0	0
9:30	0	0	0	0	0	0	21:30	0	0	0	0	0	0
9:45	0	0	0	0	0	0	21:45	0	0	0	0	0	0
10:00	0	0	0	0	0	0	22:00	0	0	0	0	0	0
10:15	0	0	0	0	0	0	22:15	0	0	0	0	0	0
10:30	0	0	0	0	0	0	22:30	0	0	0	0	0	0
10:45	0	0	0	0	0	0	22:45	0	0	0	0	0	0
11:00	0	0	0	0	0	0	23:00	0	0	0	0	0	0
11:15	0	0	0	0	0	0	23:15	0	0	0	0	0	0
11:30	0	0	0	0	0	0	23:30	0	0	0	0	0	0
11:45	0	0	0	0	0	0	23:45	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	TOTAL	0	0	0	0	0	0

AM PEAK HOUR	11:45 AM
AM PEAK VOLUME	0

AM PEAK HOUR	11:45 PM
AM PEAK VOLUME	0

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	0	0	0	0	0	0
% OF TOTAL	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
AM PEAK	0	0	0	0	0	0
PM PEAK	0	0	0	0	0	0

A13123

Study Site 4 - Vesada Aparment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS73 Southern Dwy east of Country Village.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	1	0	0	0	0	1
0:15	0	0	0	0	0	0	12:15	3	0	0	0	0	3
0:30	1	0	0	0	0	1	12:30	2	0	0	0	0	2
0:45	1	0	0	0	0	1	12:45	3	0	0	0	0	3
1:00	0	0	0	0	0	0	13:00	0	0	0	0	0	0
1:15	1	0	0	0	0	1	13:15	0	0	0	0	0	0
1:30	0	0	0	0	0	0	13:30	6	0	0	0	0	6
1:45	0	0	0	0	0	0	13:45	0	0	0	0	0	0
2:00	0	0	0	0	0	0	14:00	2	0	0	0	0	2
2:15	0	0	0	0	0	0	14:15	5	0	0	0	0	5
2:30	0	0	0	0	0	0	14:30	4	1	0	0	0	5
2:45	0	0	0	0	0	0	14:45	1	0	0	0	0	1
3:00	0	0	0	0	0	0	15:00	2	0	0	0	0	2
3:15	4	0	0	0	0	4	15:15	1	0	0	0	0	1
3:30	5	0	0	0	0	5	15:30	1	0	0	0	0	1
3:45	1	0	0	0	0	1	15:45	0	0	0	0	0	0
4:00	3	0	0	0	0	3	16:00	1	0	0	0	0	1
4:15	0	0	0	0	0	0	16:15	5	0	0	0	0	5
4:30	1	0	0	0	0	1	16:30	1	0	0	0	0	1
4:45	2	0	0	0	0	2	16:45	0	0	0	0	0	0
5:00	0	0	0	0	0	0	17:00	1	0	0	0	0	1
5:15	3	0	0	0	0	3	17:15	2	0	0	0	0	2
5:30	1	0	0	0	0	1	17:30	0	0	0	0	0	0
5:45	2	0	0	0	0	2	17:45	2	0	0	0	0	2
6:00	3	0	0	0	0	3	18:00	1	0	0	0	0	1
6:15	1	0	0	0	0	1	18:15	1	0	0	0	0	1
6:30	3	0	0	0	0	3	18:30	1	0	0	0	0	1
6:45	1	0	0	0	0	1	18:45	1	0	0	0	0	1
7:00	3	0	0	0	0	3	19:00	3	0	0	0	0	3
7:15	1	0	0	0	0	1	19:15	0	0	0	0	0	0
7:30	2	0	0	0	0	2	19:30	3	0	0	0	0	3
7:45	3	0	0	0	0	3	19:45	1	0	0	0	0	1
8:00	3	0	0	0	0	3	20:00	1	0	0	0	0	1
8:15	1	0	0	0	0	1	20:15	0	0	0	0	0	0
8:30	0	0	0	0	0	0	20:30	2	0	0	0	0	2
8:45	0	0	0	0	0	0	20:45	2	0	0	0	0	2
9:00	2	0	0	0	0	2	21:00	2	0	0	0	0	2
9:15	3	0	0	0	0	3	21:15	3	0	0	0	0	3
9:30	1	0	0	0	0	1	21:30	4	0	0	0	0	4
9:45	4	0	0	0	0	4	21:45	0	0	0	0	0	0
10:00	3	0	0	0	0	3	22:00	3	0	0	0	0	3
10:15	0	0	0	0	0	0	22:15	2	0	0	0	0	2
10:30	2	0	0	0	0	2	22:30	2	0	0	0	0	2
10:45	1	0	0	0	0	1	22:45	1	0	0	0	0	1
11:00	2	0	0	0	0	2	23:00	1	0	0	0	0	1
11:15	1	0	0	0	0	1	23:15	1	0	0	0	0	1
11:30	0	0	0	0	0	0	23:30	0	0	0	0	0	0
11:45	3	0	0	0	0	3	23:45	0	0	0	0	0	0
TOTAL	69	0	0	0	0	69	TOTAL	78	1	0	0	0	79

AM PEAK HOUR	3:15 AM
AM PEAK VOLUME	13

AM PEAK HOUR	2:15 PM
AM PEAK VOLUME	13

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	147	1	0	0	0	148
% OF TOTAL	99.3%	0.7%	0.0%	0.0%	0.0%	100.0%
AM PEAK	9	0	0	0	0	9
PM PEAK	7	0	0	0	0	7

A021323

Study Site 4 - Vesada Aparment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS74 Northern Dwy east of Country Village.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	5	0	0	0	0	5	12:00	33	0	0	0	0	33
0:15	10	0	0	0	0	10	12:15	33	1	0	0	0	34
0:30	5	0	0	0	0	5	12:30	36	1	0	0	0	37
0:45	4	0	0	0	0	4	12:45	37	0	1	0	0	38
1:00	7	0	0	0	0	7	13:00	34	0	0	0	0	34
1:15	6	0	0	0	0	6	13:15	36	0	0	0	0	36
1:30	1	0	0	0	0	1	13:30	32	0	0	0	0	32
1:45	5	0	0	0	0	5	13:45	34	2	0	0	0	36
2:00	6	0	0	0	0	6	14:00	33	0	0	0	0	33
2:15	3	0	0	0	0	3	14:15	26	2	0	0	0	28
2:30	1	0	0	0	0	1	14:30	34	0	0	0	0	34
2:45	5	0	0	0	0	5	14:45	39	0	0	0	0	39
3:00	2	0	0	0	0	2	15:00	49	0	0	0	0	49
3:15	2	0	0	0	0	2	15:15	39	0	0	0	0	39
3:30	7	0	0	0	0	7	15:30	26	0	0	0	0	26
3:45	8	0	0	0	0	8	15:45	65	0	0	0	0	65
4:00	3	0	0	0	0	3	16:00	49	0	0	0	0	49
4:15	6	0	0	0	0	6	16:15	59	1	0	0	0	60
4:30	4	0	0	0	0	4	16:30	74	0	0	0	0	74
4:45	7	0	0	0	0	7	16:45	52	0	0	0	0	52
5:00	6	0	0	0	0	6	17:00	47	0	0	0	0	47
5:15	6	0	0	0	0	6	17:15	51	0	0	0	0	51
5:30	3	0	0	0	0	3	17:30	50	0	0	0	0	50
5:45	7	0	0	0	0	7	17:45	55	0	0	0	0	55
6:00	5	0	0	0	0	5	18:00	60	0	0	0	0	60
6:15	15	0	0	0	0	15	18:15	52	0	0	0	0	52
6:30	13	0	0	0	0	13	18:30	44	0	0	0	0	44
6:45	11	0	0	0	0	11	18:45	51	2	0	0	0	53
7:00	19	0	0	0	0	19	19:00	42	0	0	0	0	42
7:15	16	0	0	0	0	16	19:15	26	0	0	0	0	26
7:30	14	0	0	0	0	14	19:30	46	0	0	0	0	46
7:45	34	0	0	0	0	34	19:45	42	0	0	0	0	42
8:00	30	0	0	0	0	30	20:00	44	0	0	0	0	44
8:15	39	0	0	0	0	39	20:15	35	0	0	0	0	35
8:30	28	0	0	0	0	28	20:30	29	0	0	0	0	29
8:45	27	0	0	0	0	27	20:45	33	0	0	0	0	33
9:00	22	0	0	0	0	22	21:00	31	0	0	0	0	31
9:15	21	0	0	0	0	21	21:15	27	0	0	0	0	27
9:30	20	2	0	0	0	22	21:30	27	0	0	0	0	27
9:45	24	2	0	0	0	26	21:45	27	0	0	0	0	27
10:00	19	1	0	0	0	20	22:00	22	0	0	0	0	22
10:15	17	1	0	0	0	18	22:15	24	0	0	0	0	24
10:30	21	0	0	0	0	21	22:30	21	0	0	0	0	21
10:45	12	0	0	0	0	12	22:45	22	0	0	0	0	22
11:00	31	0	1	0	0	32	23:00	12	0	0	0	0	12
11:15	28	0	0	0	0	28	23:15	11	0	0	0	0	11
11:30	21	1	0	0	0	22	23:30	9	0	0	0	0	9
11:45	23	2	0	0	0	25	23:45	7	0	0	0	0	7
TOTAL	629	9	1	0	0	639	TOTAL	1,767	9	1	0	0	1,777

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	131

AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	248

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	2,396	18	2	0	0	2,416
% OF TOTAL	99.2%	0.7%	0.1%	0.0%	0.0%	100.0%
AM PEAK	131	0	0	0	0	131
PM PEAK	234	1	0	0	0	235

A13123

Study Site 4 - Vesada Aparment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS74 Northern Dwy east of Country Village.

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	27	2	0	0	0	29
0:15	4	0	0	0	0	4	12:15	33	0	0	0	0	33
0:30	2	0	0	0	0	2	12:30	34	2	0	0	0	36
0:45	3	0	0	0	0	3	12:45	28	1	0	0	0	29
1:00	2	0	0	0	0	2	13:00	29	0	1	0	0	30
1:15	3	0	0	0	0	3	13:15	44	0	0	0	0	44
1:30	5	0	0	0	0	5	13:30	38	1	0	0	0	39
1:45	3	0	0	0	0	3	13:45	29	1	0	0	0	30
2:00	2	0	0	0	0	2	14:00	24	2	0	0	0	26
2:15	5	0	0	0	0	5	14:15	22	0	0	0	0	22
2:30	1	0	0	0	0	1	14:30	25	1	0	0	0	26
2:45	2	0	0	0	0	2	14:45	35	0	0	0	0	35
3:00	5	0	0	0	0	5	15:00	31	0	0	0	0	31
3:15	4	0	0	0	0	4	15:15	21	0	0	0	0	21
3:30	16	0	0	0	0	16	15:30	29	0	0	0	0	29
3:45	6	0	0	0	0	6	15:45	29	0	0	0	0	29
4:00	17	0	0	0	0	17	16:00	26	0	0	0	0	26
4:15	6	0	0	0	0	6	16:15	29	0	0	0	0	29
4:30	17	0	0	0	0	17	16:30	29	1	0	0	0	30
4:45	20	2	0	0	0	22	16:45	31	0	0	0	0	31
5:00	19	1	0	0	0	20	17:00	30	0	0	0	0	30
5:15	14	0	0	0	0	14	17:15	34	0	0	0	0	34
5:30	14	0	0	0	0	14	17:30	38	0	0	0	0	38
5:45	17	0	0	0	0	17	17:45	36	0	0	0	0	36
6:00	18	0	0	0	0	18	18:00	37	0	0	0	0	37
6:15	38	0	0	0	0	38	18:15	41	0	0	0	0	41
6:30	34	0	0	0	0	34	18:30	31	0	0	0	0	31
6:45	46	0	0	0	0	46	18:45	21	0	0	0	0	21
7:00	46	0	0	0	0	46	19:00	31	0	0	0	0	31
7:15	82	0	0	0	0	82	19:15	24	0	0	0	0	24
7:30	56	0	0	0	0	56	19:30	40	1	0	0	0	41
7:45	52	0	0	0	0	52	19:45	32	0	0	0	0	32
8:00	48	0	0	0	0	48	20:00	30	0	0	0	0	30
8:15	59	1	0	0	0	60	20:15	17	0	0	0	0	17
8:30	26	0	0	0	0	26	20:30	17	0	0	0	0	17
8:45	32	1	0	0	0	33	20:45	19	0	0	0	0	19
9:00	27	0	0	0	0	27	21:00	15	0	0	0	0	15
9:15	26	0	0	0	0	26	21:15	14	0	0	0	0	14
9:30	31	1	0	0	0	32	21:30	12	0	0	0	0	12
9:45	36	0	0	0	0	36	21:45	19	0	0	0	0	19
10:00	28	0	0	0	0	28	22:00	13	0	0	0	0	13
10:15	32	1	0	0	0	33	22:15	15	0	0	0	0	15
10:30	32	0	0	0	0	32	22:30	11	0	0	0	0	11
10:45	23	0	0	0	0	23	22:45	10	0	0	0	0	10
11:00	29	0	0	0	0	29	23:00	5	0	0	0	0	5
11:15	25	0	0	0	0	25	23:15	7	0	0	0	0	7
11:30	32	0	1	0	0	33	23:30	10	0	0	0	0	10
11:45	33	2	0	0	0	35	23:45	3	0	0	0	0	3
TOTAL	1,080	9	1	0	0	1,090	TOTAL	1,205	12	1	0	0	1,218

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	238

AM PEAK HOUR	5:30 PM
AM PEAK VOLUME	152

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	2,285	21	2	0	0	2,308
% OF TOTAL	99.0%	0.9%	0.1%	0.0%	0.0%	100.0%
AM PEAK	238	0	0	0	0	238
PM PEAK	138	0	0	0	0	138

A021323

Study Site 5 - Morning Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS84 Northern Dwy east of Milky Way.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	4	0	0	0	0	4	12:00	9	0	0	0	0	9
0:15	1	0	0	0	0	1	12:15	3	0	0	0	0	3
0:30	1	0	0	0	0	1	12:30	4	0	0	0	0	4
0:45	0	0	0	0	0	0	12:45	9	0	0	0	0	9
1:00	1	0	0	0	0	1	13:00	4	0	0	0	0	4
1:15	0	0	0	0	0	0	13:15	5	1	0	0	0	6
1:30	1	0	0	0	0	1	13:30	9	0	0	0	0	9
1:45	0	0	0	0	0	0	13:45	8	0	0	0	0	8
2:00	0	0	0	0	0	0	14:00	8	0	0	0	0	8
2:15	0	0	0	0	0	0	14:15	7	1	0	0	0	8
2:30	0	0	0	0	0	0	14:30	12	0	0	0	0	12
2:45	0	0	0	0	0	0	14:45	13	0	0	0	0	13
3:00	1	0	0	0	0	1	15:00	7	0	0	0	0	7
3:15	1	0	0	0	0	1	15:15	7	0	0	0	0	7
3:30	0	0	0	0	0	0	15:30	9	0	0	0	0	9
3:45	0	0	0	0	0	0	15:45	18	0	0	0	0	18
4:00	1	0	0	0	0	1	16:00	6	0	0	0	0	6
4:15	1	0	0	0	0	1	16:15	18	0	0	0	0	18
4:30	0	0	0	0	0	0	16:30	11	0	0	0	0	11
4:45	0	0	0	0	0	0	16:45	15	0	0	0	0	15
5:00	0	0	0	0	0	0	17:00	8	0	0	0	0	8
5:15	2	0	0	0	0	2	17:15	12	0	0	0	0	12
5:30	0	0	0	0	0	0	17:30	6	0	0	0	0	6
5:45	1	0	0	0	0	1	17:45	15	0	0	0	0	15
6:00	0	0	0	0	0	0	18:00	6	0	0	0	0	6
6:15	1	0	0	0	0	1	18:15	8	0	0	0	0	8
6:30	2	0	0	0	0	2	18:30	6	0	0	0	0	6
6:45	2	0	0	0	0	2	18:45	8	0	0	0	0	8
7:00	1	0	0	0	0	1	19:00	6	0	0	0	0	6
7:15	3	0	0	0	0	3	19:15	10	0	0	0	0	10
7:30	5	0	0	0	0	5	19:30	8	0	0	0	0	8
7:45	5	0	0	1	0	6	19:45	6	0	0	0	0	6
8:00	8	0	0	0	0	8	20:00	9	0	0	0	0	9
8:15	4	1	0	0	0	5	20:15	12	0	0	0	0	12
8:30	4	0	0	0	0	4	20:30	10	0	0	0	0	10
8:45	7	0	0	0	0	7	20:45	8	0	0	0	0	8
9:00	3	0	0	0	0	3	21:00	8	0	0	0	0	8
9:15	1	0	0	0	0	1	21:15	8	0	0	0	0	8
9:30	3	0	0	0	0	3	21:30	2	0	0	0	0	2
9:45	4	0	0	0	0	4	21:45	7	0	0	0	0	7
10:00	2	0	0	0	0	2	22:00	4	0	0	0	0	4
10:15	4	0	0	0	0	4	22:15	2	0	0	0	0	2
10:30	3	0	0	0	0	3	22:30	4	0	0	0	0	4
10:45	4	0	0	0	0	4	22:45	4	0	0	0	0	4
11:00	2	0	0	0	0	2	23:00	4	0	0	0	0	4
11:15	8	0	0	0	0	8	23:15	1	0	0	0	0	1
11:30	5	0	0	0	0	5	23:30	2	0	0	0	0	2
11:45	5	0	0	0	0	5	23:45	1	0	0	0	0	1
TOTAL	101	1	0	1	0	103	TOTAL	367	2	0	0	0	369

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	24

AM PEAK HOUR	3:45 PM
AM PEAK VOLUME	53

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	468	3	0	1	0	472
% OF TOTAL	99.2%	0.6%	0.0%	0.2%	0.0%	100.0%
AM PEAK	23	1	0	0	0	24
PM PEAK	52	0	0	0	0	52

A13123

Study Site 5 - Morning Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS84 Northern Dwy east of Milky Way.

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	6	0	0	0	0	6
0:15	0	0	0	0	0	0	12:15	11	1	0	0	0	12
0:30	0	0	0	0	0	0	12:30	3	0	0	0	0	3
0:45	2	0	0	0	0	2	12:45	10	1	0	0	0	11
1:00	0	0	0	0	0	0	13:00	7	0	0	0	0	7
1:15	3	0	0	0	0	3	13:15	9	0	0	0	0	9
1:30	1	0	0	0	0	1	13:30	4	2	0	0	0	6
1:45	0	0	0	0	0	0	13:45	11	0	0	0	0	11
2:00	0	0	0	0	0	0	14:00	7	0	0	0	0	7
2:15	1	0	0	0	0	1	14:15	8	0	0	0	0	8
2:30	0	0	0	0	0	0	14:30	13	0	0	0	0	13
2:45	0	0	0	0	0	0	14:45	8	1	0	0	0	9
3:00	1	0	0	0	0	1	15:00	7	0	0	0	0	7
3:15	2	0	0	0	0	2	15:15	6	0	0	0	0	6
3:30	3	0	0	0	0	3	15:30	12	0	0	0	0	12
3:45	1	0	0	0	0	1	15:45	5	0	0	0	0	5
4:00	0	0	0	0	0	0	16:00	19	0	0	0	0	19
4:15	3	0	0	0	0	3	16:15	6	0	0	0	0	6
4:30	3	0	0	0	0	3	16:30	4	0	0	0	0	4
4:45	2	0	0	0	0	2	16:45	9	0	0	0	0	9
5:00	2	0	0	0	0	2	17:00	4	0	0	0	0	4
5:15	3	0	0	0	0	3	17:15	5	1	0	0	0	6
5:30	10	0	0	0	0	10	17:30	11	0	0	0	0	11
5:45	9	0	0	0	0	9	17:45	15	0	0	0	0	15
6:00	3	0	0	0	0	3	18:00	10	0	0	0	0	10
6:15	12	0	0	0	0	12	18:15	5	0	0	0	0	5
6:30	12	0	0	0	0	12	18:30	10	0	0	0	0	10
6:45	5	0	0	0	0	5	18:45	7	0	0	0	0	7
7:00	10	0	0	0	0	10	19:00	3	0	0	0	0	3
7:15	19	0	0	0	0	19	19:15	2	0	0	0	0	2
7:30	13	0	0	0	0	13	19:30	5	0	0	0	0	5
7:45	17	0	0	0	0	17	19:45	3	0	0	0	0	3
8:00	13	0	0	0	0	13	20:00	7	0	0	0	0	7
8:15	15	0	0	0	0	15	20:15	4	0	0	0	0	4
8:30	14	0	0	0	0	14	20:30	4	0	0	0	0	4
8:45	8	0	0	0	0	8	20:45	2	0	0	0	0	2
9:00	9	0	0	0	0	9	21:00	5	0	0	0	0	5
9:15	7	0	0	0	0	7	21:15	3	0	0	0	0	3
9:30	4	1	0	0	0	5	21:30	2	0	0	0	0	2
9:45	10	1	0	0	0	11	21:45	4	0	0	0	0	4
10:00	7	0	0	0	0	7	22:00	0	0	0	0	0	0
10:15	4	0	0	0	0	4	22:15	2	0	0	0	0	2
10:30	10	1	0	0	0	11	22:30	0	0	0	0	0	0
10:45	3	0	0	0	0	3	22:45	1	0	0	0	0	1
11:00	5	1	0	0	0	6	23:00	1	0	0	0	0	1
11:15	9	0	0	0	0	9	23:15	1	0	0	0	0	1
11:30	5	0	0	0	0	5	23:30	1	0	0	0	0	1
11:45	12	0	0	0	0	12	23:45	0	0	0	0	0	0
TOTAL	274	4	0	0	0	278	TOTAL	282	6	0	0	0	288

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	62

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	42

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	556	10	0	0	0	566
% OF TOTAL	98.2%	1.8%	0.0%	0.0%	0.0%	100.0%
AM PEAK	62	0	0	0	0	62
PM PEAK	38	0	0	0	0	38

A021323

Study Site 5 - Morning Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS85 Middle Dwy east of Milky Way.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	3	0	0	0	0	3	12:00	10	0	0	0	0	10
0:15	3	0	0	0	0	3	12:15	10	0	0	0	0	10
0:30	0	0	0	0	0	0	12:30	14	0	0	0	0	14
0:45	0	0	0	0	0	0	12:45	12	0	0	0	0	12
1:00	0	0	0	0	0	0	13:00	12	1	0	0	0	13
1:15	2	0	0	0	0	2	13:15	12	1	0	0	0	13
1:30	6	0	0	0	0	6	13:30	11	0	0	0	0	11
1:45	0	0	0	0	0	0	13:45	8	0	0	0	0	8
2:00	2	0	0	0	0	2	14:00	11	1	0	0	0	12
2:15	1	0	0	0	0	1	14:15	6	0	0	0	0	6
2:30	0	0	0	0	0	0	14:30	10	0	0	0	0	10
2:45	1	0	0	0	0	1	14:45	13	0	0	0	0	13
3:00	0	0	0	0	0	0	15:00	15	0	0	0	0	15
3:15	0	0	0	0	0	0	15:15	10	0	0	0	0	10
3:30	0	0	0	0	0	0	15:30	10	0	0	0	0	10
3:45	0	0	0	0	0	0	15:45	18	0	0	0	0	18
4:00	0	0	0	0	0	0	16:00	18	0	0	0	0	18
4:15	1	0	0	0	0	1	16:15	19	0	0	0	0	19
4:30	0	0	0	0	0	0	16:30	20	0	0	0	0	20
4:45	1	0	0	0	0	1	16:45	18	1	0	0	0	19
5:00	1	0	0	0	0	1	17:00	20	0	0	0	0	20
5:15	0	0	0	0	0	0	17:15	19	0	0	0	0	19
5:30	1	0	0	0	0	1	17:30	19	0	0	0	0	19
5:45	0	0	0	0	0	0	17:45	17	0	0	0	0	17
6:00	2	0	0	0	0	2	18:00	11	0	0	0	0	11
6:15	2	0	0	0	0	2	18:15	30	0	0	0	0	30
6:30	4	0	0	0	0	4	18:30	15	0	0	0	0	15
6:45	2	0	0	0	0	2	18:45	18	0	0	0	0	18
7:00	3	0	0	0	0	3	19:00	23	3	0	0	0	26
7:15	3	0	0	0	0	3	19:15	10	0	0	0	0	10
7:30	9	0	0	0	0	9	19:30	19	0	0	0	0	19
7:45	9	0	0	0	0	9	19:45	10	0	0	0	0	10
8:00	5	0	0	0	0	5	20:00	11	0	0	0	0	11
8:15	13	0	0	0	0	13	20:15	6	0	0	0	0	6
8:30	4	0	0	0	0	4	20:30	9	0	0	0	0	9
8:45	9	0	0	0	0	9	20:45	6	0	0	0	0	6
9:00	2	0	0	0	0	2	21:00	7	0	0	0	0	7
9:15	3	0	0	0	0	3	21:15	4	0	0	0	0	4
9:30	9	0	0	0	0	9	21:30	8	0	0	0	0	8
9:45	7	0	0	0	0	7	21:45	2	0	0	0	0	2
10:00	5	0	0	0	0	5	22:00	4	0	0	0	0	4
10:15	3	0	0	0	0	3	22:15	1	0	0	0	0	1
10:30	6	0	0	0	0	6	22:30	1	0	0	0	0	1
10:45	8	0	0	0	0	8	22:45	6	0	0	0	0	6
11:00	6	0	0	0	0	6	23:00	7	0	0	0	0	7
11:15	13	0	0	0	0	13	23:15	1	0	0	0	0	1
11:30	11	1	0	0	0	12	23:30	4	0	0	0	0	4
11:45	7	0	0	0	0	7	23:45	0	0	0	0	0	0
TOTAL	167	1	0	0	0	168	TOTAL	545	7	0	0	0	552

AM PEAK HOUR	10:45 AM
AM PEAK VOLUME	39

AM PEAK HOUR	6:15 PM
AM PEAK VOLUME	89

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	712	8	0	0	0	720
% OF TOTAL	98.9%	1.1%	0.0%	0.0%	0.0%	100.0%
AM PEAK	31	0	0	0	0	31
PM PEAK	75	1	0	0	0	76

A13123

Study Site 5 - Morning Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS85 Middle Dwy east of Milky Way.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	7	0	0	0	0	7
0:15	3	0	0	0	0	3	12:15	5	0	0	0	0	5
0:30	0	0	0	0	0	0	12:30	15	0	0	0	0	15
0:45	1	0	0	0	0	1	12:45	14	0	0	0	0	14
1:00	0	0	0	0	0	0	13:00	6	1	0	0	0	7
1:15	1	0	0	0	0	1	13:15	9	2	0	0	0	11
1:30	1	0	0	0	0	1	13:30	8	0	0	0	0	8
1:45	0	0	0	0	0	0	13:45	6	1	0	0	0	7
2:00	0	0	0	0	0	0	14:00	9	0	0	0	0	9
2:15	0	0	0	0	0	0	14:15	10	1	0	0	0	11
2:30	3	0	0	0	0	3	14:30	8	0	0	0	0	8
2:45	1	0	0	0	0	1	14:45	12	2	0	0	0	14
3:00	0	0	0	0	0	0	15:00	8	0	0	0	0	8
3:15	0	0	0	0	0	0	15:15	5	0	0	0	0	5
3:30	5	0	0	0	0	5	15:30	8	0	0	0	0	8
3:45	0	0	0	0	0	0	15:45	11	0	0	0	0	11
4:00	0	0	0	0	0	0	16:00	16	1	0	0	0	17
4:15	0	0	0	0	0	0	16:15	11	0	0	0	0	11
4:30	5	2	0	0	0	7	16:30	7	0	0	0	0	7
4:45	3	0	0	0	0	3	16:45	9	0	0	0	0	9
5:00	1	0	0	0	0	1	17:00	11	0	0	0	0	11
5:15	9	0	0	0	0	9	17:15	12	0	0	0	0	12
5:30	8	2	0	0	0	10	17:30	12	0	0	0	0	12
5:45	7	2	0	0	0	9	17:45	12	0	0	0	0	12
6:00	6	0	0	0	0	6	18:00	9	0	0	0	0	9
6:15	12	0	0	0	0	12	18:15	5	0	0	0	0	5
6:30	7	0	0	0	0	7	18:30	11	0	0	0	0	11
6:45	8	0	0	0	0	8	18:45	8	0	0	0	0	8
7:00	6	0	0	0	0	6	19:00	5	0	0	0	0	5
7:15	8	0	0	0	0	8	19:15	8	0	0	0	0	8
7:30	27	3	0	0	0	30	19:30	8	0	0	0	0	8
7:45	17	0	0	0	0	17	19:45	7	0	0	0	0	7
8:00	25	0	0	0	0	25	20:00	5	0	0	0	0	5
8:15	13	0	0	0	0	13	20:15	6	0	0	0	0	6
8:30	19	0	0	0	0	19	20:30	4	0	0	0	0	4
8:45	12	0	0	0	0	12	20:45	3	0	0	0	0	3
9:00	3	0	0	0	0	3	21:00	6	0	0	0	0	6
9:15	6	0	0	0	0	6	21:15	2	0	0	0	0	2
9:30	9	0	0	0	0	9	21:30	3	0	0	0	0	3
9:45	11	0	0	0	0	11	21:45	3	0	0	0	0	3
10:00	5	0	0	0	0	5	22:00	2	0	0	0	0	2
10:15	8	0	0	0	0	8	22:15	1	0	0	0	0	1
10:30	7	0	0	0	0	7	22:30	5	0	0	0	0	5
10:45	8	0	0	0	0	8	22:45	2	0	0	0	0	2
11:00	8	0	0	0	0	8	23:00	4	0	0	0	0	4
11:15	8	0	0	0	0	8	23:15	3	0	0	0	0	3
11:30	5	0	0	0	0	5	23:30	0	0	0	0	0	0
11:45	9	0	0	0	0	9	23:45	1	0	0	0	0	1
TOTAL	295	9	0	0	0	304	TOTAL	342	8	0	0	0	350

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	85

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	47

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	637	17	0	0	0	654
% OF TOTAL	97.4%	2.6%	0.0%	0.0%	0.0%	100.0%
AM PEAK	82	3	0	0	0	85
PM PEAK	47	0	0	0	0	47

A021323

Study Site 5 - Morning Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS86 Southern Dwy east of Milky Way.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	4	0	0	0	0	4
0:15	0	0	0	0	0	0	12:15	5	0	0	0	0	5
0:30	2	0	0	0	0	2	12:30	7	1	0	0	0	8
0:45	0	0	0	0	0	0	12:45	7	1	0	0	0	8
1:00	1	0	0	0	0	1	13:00	4	0	0	0	0	4
1:15	2	0	0	0	0	2	13:15	4	0	0	0	0	4
1:30	1	0	0	0	0	1	13:30	9	2	0	0	0	11
1:45	1	0	0	0	0	1	13:45	13	1	0	0	0	14
2:00	0	0	0	0	0	0	14:00	11	0	0	0	0	11
2:15	0	0	0	0	0	0	14:15	7	1	0	0	0	8
2:30	0	0	0	0	0	0	14:30	11	0	0	0	0	11
2:45	0	0	0	0	0	0	14:45	11	2	0	0	0	13
3:00	1	0	0	0	0	1	15:00	7	0	0	0	0	7
3:15	1	0	0	0	0	1	15:15	12	1	0	0	0	13
3:30	0	0	0	0	0	0	15:30	8	0	0	0	0	8
3:45	0	0	0	0	0	0	15:45	9	0	0	0	0	9
4:00	1	0	0	0	0	1	16:00	5	0	0	0	0	5
4:15	0	0	0	0	0	0	16:15	7	0	0	0	0	7
4:30	0	0	0	0	0	0	16:30	16	0	0	0	0	16
4:45	0	0	0	0	0	0	16:45	14	0	0	0	0	14
5:00	2	0	0	0	0	2	17:00	10	0	0	0	0	10
5:15	0	0	0	0	0	0	17:15	9	1	0	0	0	10
5:30	2	0	0	0	0	2	17:30	10	1	0	0	0	11
5:45	0	0	0	0	0	0	17:45	9	0	0	0	0	9
6:00	2	0	0	0	0	2	18:00	11	0	0	0	0	11
6:15	2	0	0	0	0	2	18:15	16	0	0	0	0	16
6:30	2	0	0	0	0	2	18:30	11	0	0	0	0	11
6:45	1	0	0	0	0	1	18:45	10	0	0	0	0	10
7:00	5	0	0	0	0	5	19:00	9	0	0	0	0	9
7:15	4	0	0	0	0	4	19:15	16	0	0	0	0	16
7:30	1	3	0	0	0	4	19:30	11	0	0	0	0	11
7:45	5	0	0	0	0	5	19:45	8	0	0	0	0	8
8:00	7	0	0	0	0	7	20:00	12	0	0	0	0	12
8:15	2	0	0	0	0	2	20:15	16	0	0	0	0	16
8:30	9	0	0	0	0	9	20:30	4	0	0	0	0	4
8:45	5	0	0	0	0	5	20:45	4	0	0	0	0	4
9:00	5	0	0	0	0	5	21:00	9	0	0	0	0	9
9:15	4	0	0	0	0	4	21:15	8	0	0	0	0	8
9:30	6	0	0	0	0	6	21:30	7	0	0	0	0	7
9:45	3	1	0	0	0	4	21:45	4	0	0	0	0	4
10:00	3	0	0	0	0	3	22:00	5	0	0	0	0	5
10:15	4	0	0	0	0	4	22:15	6	0	0	0	0	6
10:30	4	0	0	0	0	4	22:30	7	0	0	0	0	7
10:45	2	1	0	0	0	3	22:45	4	0	0	0	0	4
11:00	5	0	0	0	0	5	23:00	1	0	0	0	0	1
11:15	2	0	0	0	0	2	23:15	3	0	0	0	0	3
11:30	9	0	0	0	0	9	23:30	4	0	0	0	0	4
11:45	2	0	0	0	0	2	23:45	3	0	0	0	0	3
TOTAL	109	5	0	0	0	114	TOTAL	398	11	0	0	0	409

AM PEAK HOUR	8:30 AM
AM PEAK VOLUME	23

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	50

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	507	16	0	0	0	523
% OF TOTAL	96.9%	3.1%	0.0%	0.0%	0.0%	100.0%
AM PEAK	23	0	0	0	0	23
PM PEAK	49	1	0	0	0	50

A13123

Study Site 5 - Morning Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS86 Southern Dwy east of Milky Way.

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	4	0	0	0	0	4
0:15	0	0	0	0	0	0	12:15	6	0	0	0	0	6
0:30	1	0	0	0	0	1	12:30	7	0	0	0	0	7
0:45	0	0	0	0	0	0	12:45	4	0	0	0	0	4
1:00	2	0	0	0	0	2	13:00	4	0	0	0	0	4
1:15	0	0	0	0	0	0	13:15	5	0	0	0	0	5
1:30	3	0	0	0	0	3	13:30	11	0	0	0	0	11
1:45	0	0	0	0	0	0	13:45	4	1	0	0	0	5
2:00	0	0	0	0	0	0	14:00	14	0	0	0	0	14
2:15	0	0	0	0	0	0	14:15	5	1	0	0	0	6
2:30	0	0	0	0	0	0	14:30	15	0	0	0	0	15
2:45	0	0	0	0	0	0	14:45	6	0	0	0	0	6
3:00	0	0	0	0	0	0	15:00	5	0	0	0	0	5
3:15	0	0	0	0	0	0	15:15	6	0	0	0	0	6
3:30	1	0	0	0	0	1	15:30	1	0	0	0	0	1
3:45	0	0	0	0	0	0	15:45	5	0	0	0	0	5
4:00	2	0	0	0	0	2	16:00	6	0	0	0	0	6
4:15	2	0	0	0	0	2	16:15	6	0	0	0	0	6
4:30	9	0	0	0	0	9	16:30	9	0	0	0	0	9
4:45	3	0	0	0	0	3	16:45	13	0	0	0	0	13
5:00	6	0	0	0	0	6	17:00	10	0	0	0	0	10
5:15	9	0	0	0	0	9	17:15	9	0	0	0	0	9
5:30	8	0	0	0	0	8	17:30	4	0	0	0	0	4
5:45	5	0	0	0	0	5	17:45	7	0	0	0	0	7
6:00	8	0	0	0	0	8	18:00	8	0	0	0	0	8
6:15	7	0	0	0	0	7	18:15	4	0	0	0	0	4
6:30	8	0	0	0	0	8	18:30	4	0	0	0	0	4
6:45	3	0	0	0	0	3	18:45	5	0	0	0	0	5
7:00	4	0	0	0	0	4	19:00	5	0	0	0	0	5
7:15	5	0	0	0	0	5	19:15	7	0	0	0	0	7
7:30	12	0	0	0	0	12	19:30	4	0	0	0	0	4
7:45	9	0	0	0	0	9	19:45	3	0	0	0	0	3
8:00	7	0	0	0	0	7	20:00	4	0	0	0	0	4
8:15	7	0	0	1	0	8	20:15	3	0	0	0	0	3
8:30	15	0	0	0	0	15	20:30	4	0	0	0	0	4
8:45	4	0	0	0	0	4	20:45	4	0	0	0	0	4
9:00	3	0	0	0	0	3	21:00	2	0	0	0	0	2
9:15	6	0	0	0	0	6	21:15	7	0	0	0	0	7
9:30	8	0	0	0	0	8	21:30	2	0	0	0	0	2
9:45	6	0	0	0	0	6	21:45	4	0	0	0	0	4
10:00	7	0	0	0	0	7	22:00	0	0	0	0	0	0
10:15	4	0	0	0	0	4	22:15	4	0	0	0	0	4
10:30	5	0	0	0	0	5	22:30	1	0	0	0	0	1
10:45	2	0	0	0	0	2	22:45	1	0	0	0	0	1
11:00	10	0	0	0	0	10	23:00	1	0	0	0	0	1
11:15	4	0	0	0	0	4	23:15	2	0	0	0	0	2
11:30	5	0	0	0	0	5	23:30	0	0	0	0	0	0
11:45	7	0	0	0	0	7	23:45	2	0	0	0	0	2
TOTAL	208	0	0	1	0	209	**TOTAL**	247	2	0	0	0	249

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	39

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	41

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	455	2	0	1	0	458
% OF TOTAL	99.3%	0.4%	0.0%	0.2%	0.0%	100.0%
AM PEAK	38	0	0	1	0	39
PM PEAK	41	0	0	0	0	41

A021323

Study Site 6 - Stonegate Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS71 Northern dwy west of Doolittle

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	12	0	0	0	0	12
0:15	2	0	0	0	0	2	12:15	9	0	0	0	0	9
0:30	2	0	0	0	0	2	12:30	11	0	0	0	0	11
0:45	3	0	0	0	0	3	12:45	12	0	0	0	0	12
1:00	1	0	0	0	0	1	13:00	5	0	0	0	0	5
1:15	5	0	0	0	0	5	13:15	7	0	0	0	0	7
1:30	2	0	0	0	0	2	13:30	11	0	0	0	0	11
1:45	3	0	0	0	0	3	13:45	10	0	0	0	0	10
2:00	1	0	0	0	0	1	14:00	16	0	0	0	0	16
2:15	1	0	0	0	0	1	14:15	14	0	0	0	0	14
2:30	0	0	0	0	0	0	14:30	23	0	0	0	0	23
2:45	0	0	0	0	0	0	14:45	10	0	0	0	0	10
3:00	3	0	0	0	0	3	15:00	17	0	0	0	0	17
3:15	3	0	0	0	0	3	15:15	18	0	0	0	0	18
3:30	1	0	0	0	0	1	15:30	14	0	0	0	0	14
3:45	1	1	0	0	0	2	15:45	16	0	0	0	0	16
4:00	1	0	0	0	0	1	16:00	17	0	0	0	0	17
4:15	0	0	0	0	0	0	16:15	16	0	0	0	0	16
4:30	1	0	0	0	0	1	16:30	17	0	0	0	0	17
4:45	6	0	0	0	0	6	16:45	12	0	0	0	0	12
5:00	3	0	0	0	0	3	17:00	16	0	0	0	0	16
5:15	6	0	0	0	0	6	17:15	22	0	0	0	0	22
5:30	0	0	0	0	0	0	17:30	17	0	0	0	0	17
5:45	1	0	0	0	0	1	17:45	17	0	0	0	0	17
6:00	2	0	0	0	0	2	18:00	20	0	0	0	0	20
6:15	1	0	0	0	0	1	18:15	10	0	0	0	0	10
6:30	2	0	0	0	0	2	18:30	15	0	0	0	0	15
6:45	3	0	0	0	0	3	18:45	15	0	0	0	0	15
7:00	3	0	0	0	0	3	19:00	6	0	0	0	0	6
7:15	4	0	0	0	0	4	19:15	6	1	0	0	0	7
7:30	4	0	0	0	0	4	19:30	16	0	0	0	0	16
7:45	9	0	0	0	0	9	19:45	10	0	0	0	0	10
8:00	13	0	0	0	0	13	20:00	8	0	0	0	0	8
8:15	7	0	0	0	0	7	20:15	13	0	0	0	0	13
8:30	12	1	0	0	0	13	20:30	15	0	0	0	0	15
8:45	13	0	0	0	0	13	20:45	11	0	0	0	0	11
9:00	5	0	0	0	0	5	21:00	14	0	0	0	0	14
9:15	3	0	0	0	0	3	21:15	9	0	0	0	0	9
9:30	4	0	0	0	0	4	21:30	12	0	0	0	0	12
9:45	7	1	0	0	0	8	21:45	12	0	0	0	0	12
10:00	2	0	0	0	0	2	22:00	8	0	0	0	0	8
10:15	5	0	0	0	0	5	22:15	4	0	0	0	0	4
10:30	6	0	0	0	0	6	22:30	5	0	0	0	0	5
10:45	7	0	0	0	0	7	22:45	3	0	0	0	0	3
11:00	8	1	0	0	0	9	23:00	7	0	0	0	0	7
11:15	1	0	0	0	0	1	23:15	5	0	0	0	0	5
11:30	5	0	0	0	0	5	23:30	5	0	0	0	0	5
11:45	11	0	0	0	0	11	23:45	2	0	0	0	0	2
TOTAL	183	4	0	0	0	187	TOTAL	570	1	0	0	0	571

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	46

AM PEAK HOUR	5:15 PM
AM PEAK VOLUME	76

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	753	5	0	0	0	758
% OF TOTAL	99.3%	0.7%	0.0%	0.0%	0.0%	100.0%
AM PEAK	45	1	0	0	0	46
PM PEAK	72	0	0	0	0	72

A13123

Study Site 6 - Stonegate Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS71 Northern dwy west of Doolittle

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	9	0	0	0	0	9
0:15	0	0	0	0	0	0	12:15	13	0	0	0	0	13
0:30	0	0	0	0	0	0	12:30	13	1	0	0	0	14
0:45	2	0	0	0	0	2	12:45	17	0	0	0	0	17
1:00	0	0	0	0	0	0	13:00	6	0	0	0	0	6
1:15	2	0	0	0	0	2	13:15	12	0	0	0	0	12
1:30	1	0	0	0	0	1	13:30	14	1	0	0	0	15
1:45	1	0	0	0	0	1	13:45	20	0	0	0	0	20
2:00	0	0	0	0	0	0	14:00	12	0	0	0	0	12
2:15	3	0	0	0	0	3	14:15	8	0	0	0	0	8
2:30	1	0	0	0	0	1	14:30	13	0	0	0	0	13
2:45	0	0	0	0	0	0	14:45	6	1	0	0	0	7
3:00	0	0	0	0	0	0	15:00	13	0	0	0	0	13
3:15	6	0	0	0	0	6	15:15	12	0	0	0	0	12
3:30	5	0	0	0	0	5	15:30	13	0	0	0	0	13
3:45	6	0	0	0	0	6	15:45	11	0	0	0	0	11
4:00	5	0	0	0	0	5	16:00	12	0	0	0	0	12
4:15	4	0	0	0	0	4	16:15	9	0	0	0	0	9
4:30	6	0	0	0	0	6	16:30	6	0	0	0	0	6
4:45	4	0	0	0	0	4	16:45	12	0	0	0	0	12
5:00	6	0	0	0	0	6	17:00	8	0	0	0	0	8
5:15	7	0	0	0	0	7	17:15	13	0	0	0	0	13
5:30	11	0	0	0	0	11	17:30	14	0	0	0	0	14
5:45	12	0	0	0	0	12	17:45	8	0	0	0	0	8
6:00	1	0	0	0	0	1	18:00	11	0	0	0	0	11
6:15	7	0	0	0	0	7	18:15	9	0	0	0	0	9
6:30	12	0	0	0	0	12	18:30	5	0	0	0	0	5
6:45	17	0	0	0	0	17	18:45	7	0	0	0	0	7
7:00	8	0	0	0	0	8	19:00	8	0	0	0	0	8
7:15	16	0	0	0	0	16	19:15	9	0	0	0	0	9
7:30	21	0	0	0	0	21	19:30	6	0	0	0	0	6
7:45	18	0	0	0	0	18	19:45	8	0	0	0	0	8
8:00	13	0	0	0	0	13	20:00	6	0	0	0	0	6
8:15	5	0	0	0	0	5	20:15	11	0	0	0	0	11
8:30	7	0	0	0	0	7	20:30	7	0	0	0	0	7
8:45	8	0	0	0	0	8	20:45	6	0	0	0	0	6
9:00	10	0	1	0	0	11	21:00	4	0	0	0	0	4
9:15	14	0	0	0	0	14	21:15	4	0	0	0	0	4
9:30	7	1	0	0	0	8	21:30	3	1	0	0	0	4
9:45	7	0	0	0	0	7	21:45	5	1	0	0	0	6
10:00	7	1	0	0	0	8	22:00	4	0	0	0	0	4
10:15	5	1	0	0	0	6	22:15	2	0	0	0	0	2
10:30	5	1	0	0	0	6	22:30	3	0	0	0	0	3
10:45	10	2	0	0	0	12	22:45	0	0	0	0	0	0
11:00	5	1	0	0	0	6	23:00	6	0	0	0	0	6
11:15	4	0	0	0	0	4	23:15	0	0	0	0	0	0
11:30	7	1	0	0	0	8	23:30	2	0	0	0	0	2
11:45	13	0	0	0	0	13	23:45	1	0	0	0	0	1
TOTAL	309	8	1	0	0	318	TOTAL	401	5	0	0	0	406

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	68

AM PEAK HOUR	1:15 PM
AM PEAK VOLUME	59

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	710	13	1	0	0	724
% OF TOTAL	98.1%	1.8%	0.1%	0.0%	0.0%	100.0%
AM PEAK	68	0	0	0	0	68
PM PEAK	47	0	0	0	0	47

A021323

Study Site 6 - Stonegate Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS72 Southern dwy west of Doolittle

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	19	1	0	0	0	20
0:15	1	0	0	0	0	1	12:15	16	1	0	0	0	17
0:30	2	0	0	0	0	2	12:30	16	0	0	0	0	16
0:45	2	0	0	0	0	2	12:45	11	0	0	0	0	11
1:00	2	0	0	0	0	2	13:00	12	0	0	0	0	12
1:15	1	0	0	0	0	1	13:15	18	0	0	0	0	18
1:30	0	0	0	0	0	0	13:30	13	1	0	0	0	14
1:45	0	0	0	0	0	0	13:45	5	0	0	0	0	5
2:00	2	0	0	0	0	2	14:00	18	0	0	0	0	18
2:15	1	0	0	0	0	1	14:15	13	0	0	0	0	13
2:30	0	0	0	0	0	0	14:30	15	0	0	0	0	15
2:45	0	0	0	0	0	0	14:45	17	1	0	0	0	18
3:00	0	0	0	0	0	0	15:00	21	0	0	0	0	21
3:15	2	0	0	0	0	2	15:15	19	2	0	0	0	21
3:30	0	0	0	0	0	0	15:30	11	0	0	0	0	11
3:45	1	0	0	0	0	1	15:45	19	1	0	0	0	20
4:00	1	0	0	0	0	1	16:00	24	0	0	0	0	24
4:15	0	0	0	0	0	0	16:15	13	0	0	0	0	13
4:30	0	0	0	0	0	0	16:30	9	0	0	0	0	9
4:45	0	0	0	0	0	0	16:45	18	0	0	0	0	18
5:00	1	0	0	0	0	1	17:00	24	0	0	0	0	24
5:15	1	0	0	0	0	1	17:15	15	0	0	0	0	15
5:30	2	0	0	0	0	2	17:30	21	0	0	0	0	21
5:45	1	0	0	0	0	1	17:45	23	0	0	0	0	23
6:00	0	0	0	0	0	0	18:00	12	0	0	0	0	12
6:15	4	0	0	0	0	4	18:15	13	0	0	0	0	13
6:30	3	0	0	0	0	3	18:30	12	0	0	0	0	12
6:45	3	0	0	0	0	3	18:45	11	0	0	0	0	11
7:00	4	0	0	0	0	4	19:00	13	0	0	0	0	13
7:15	4	2	0	0	0	6	19:15	21	0	0	0	0	21
7:30	6	1	0	0	0	7	19:30	5	0	0	0	0	5
7:45	4	0	0	0	0	4	19:45	10	0	0	0	0	10
8:00	13	0	0	0	0	13	20:00	13	1	0	0	0	14
8:15	11	0	0	0	0	11	20:15	12	0	0	0	0	12
8:30	10	0	1	0	0	11	20:30	17	0	0	0	0	17
8:45	6	0	0	0	0	6	20:45	10	0	0	0	0	10
9:00	10	0	0	0	0	10	21:00	11	0	0	0	0	11
9:15	13	0	0	0	0	13	21:15	8	1	0	0	0	9
9:30	10	1	0	0	0	11	21:30	1	0	0	0	0	1
9:45	7	0	0	0	0	7	21:45	9	0	0	0	0	9
10:00	5	0	1	0	0	6	22:00	4	0	0	0	0	4
10:15	10	2	0	0	0	12	22:15	2	0	0	0	0	2
10:30	21	1	0	0	0	22	22:30	5	0	0	0	0	5
10:45	7	1	0	0	0	8	22:45	5	0	0	0	0	5
11:00	14	0	0	0	0	14	23:00	3	0	0	0	0	3
11:15	10	2	0	0	0	12	23:15	2	0	0	0	0	2
11:30	18	1	0	0	0	19	23:30	4	0	0	0	0	4
11:45	10	0	0	0	0	10	23:45	1	0	0	0	0	1
TOTAL	225	11	2	0	0	238	TOTAL	594	9	0	0	0	603

AM PEAK HOUR	10:30 AM
AM PEAK VOLUME	56

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	83

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	819	20	2	0	0	841
% OF TOTAL	97.4%	2.4%	0.2%	0.0%	0.0%	100.0%
AM PEAK	38	0	1	0	0	39
PM PEAK	83	0	0	0	0	83

A13123

Study Site 6 - Stonegate Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS72 Southern dwy west of Doolittle

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	14	0	0	0	0	14
0:15	1	0	0	0	0	1	12:15	3	0	0	0	0	3
0:30	2	0	0	0	0	2	12:30	5	0	0	0	0	5
0:45	2	0	0	0	0	2	12:45	16	0	0	0	0	16
1:00	0	0	0	0	0	0	13:00	4	0	0	0	0	4
1:15	2	0	0	0	0	2	13:15	8	0	0	0	0	8
1:30	0	0	0	0	0	0	13:30	6	0	0	0	0	6
1:45	1	0	0	0	0	1	13:45	11	1	0	0	0	12
2:00	2	0	0	0	0	2	14:00	5	0	0	0	0	5
2:15	1	0	0	0	0	1	14:15	6	0	0	0	0	6
2:30	0	0	0	0	0	0	14:30	10	0	0	0	0	10
2:45	0	0	0	0	0	0	14:45	6	0	0	0	0	6
3:00	0	0	0	0	0	0	15:00	6	0	0	0	0	6
3:15	0	0	0	0	0	0	15:15	3	0	0	0	0	3
3:30	3	0	0	0	0	3	15:30	10	0	0	0	0	10
3:45	3	0	0	0	0	3	15:45	12	0	0	0	0	12
4:00	6	1	0	0	0	7	16:00	12	0	0	0	0	12
4:15	2	0	0	0	0	2	16:15	8	0	0	0	0	8
4:30	2	0	0	0	0	2	16:30	8	0	0	0	0	8
4:45	2	0	0	0	0	2	16:45	12	0	0	0	0	12
5:00	0	0	0	0	0	0	17:00	7	0	0	0	0	7
5:15	5	0	0	0	0	5	17:15	8	0	0	0	0	8
5:30	7	0	0	0	0	7	17:30	8	0	0	0	0	8
5:45	5	0	0	0	0	5	17:45	6	0	0	0	0	6
6:00	5	0	0	0	0	5	18:00	8	0	0	0	0	8
6:15	4	0	0	0	0	4	18:15	9	0	0	0	0	9
6:30	12	0	0	0	0	12	18:30	6	0	0	0	0	6
6:45	4	0	0	0	0	4	18:45	6	0	0	0	0	6
7:00	5	0	0	0	0	5	19:00	4	0	0	0	0	4
7:15	6	0	0	0	0	6	19:15	9	0	0	0	0	9
7:30	11	0	0	0	0	11	19:30	8	0	0	0	0	8
7:45	18	0	0	0	0	18	19:45	4	0	0	0	0	4
8:00	8	0	0	0	0	8	20:00	3	0	0	0	0	3
8:15	11	0	0	0	0	11	20:15	5	0	0	0	0	5
8:30	11	0	0	0	0	11	20:30	5	0	0	0	0	5
8:45	1	0	0	0	0	1	20:45	2	0	0	0	0	2
9:00	4	0	0	0	0	4	21:00	3	0	0	0	0	3
9:15	9	0	0	0	0	9	21:15	2	0	0	0	0	2
9:30	8	0	0	0	0	8	21:30	5	0	0	0	0	5
9:45	8	0	0	0	0	8	21:45	4	0	0	0	0	4
10:00	3	0	0	0	0	3	22:00	3	0	0	0	0	3
10:15	10	0	0	0	0	10	22:15	3	0	0	0	0	3
10:30	9	0	0	0	0	9	22:30	2	0	0	0	0	2
10:45	9	0	0	0	0	9	22:45	4	0	0	0	0	4
11:00	7	0	0	0	0	7	23:00	2	0	0	0	0	2
11:15	10	0	0	0	0	10	23:15	2	0	0	0	0	2
11:30	8	0	0	0	0	8	23:30	3	0	0	0	0	3
11:45	8	0	0	0	0	8	23:45	0	0	0	0	0	0
TOTAL	235	1	0	0	0	236	TOTAL	296	1	0	0	0	297

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	48

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	42

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	531	2	0	0	0	533
% OF TOTAL	99.6%	0.4%	0.0%	0.0%	0.0%	100.0%
AM PEAK	48	0	0	0	0	48
PM PEAK	40	0	0	0	0	40

A021323

Study Site 7 - River's Edge Apartment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS82 Dwy east of Elm.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	0	0	0	0	0	0
0:15	0	0	0	0	0	0	12:15	0	0	0	0	0	0
0:30	0	0	0	0	0	0	12:30	0	0	0	0	0	0
0:45	0	0	0	0	0	0	12:45	0	0	0	0	0	0
1:00	0	0	0	0	0	0	13:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0	13:15	0	0	0	0	0	0
1:30	0	0	0	0	0	0	13:30	0	0	0	0	0	0
1:45	0	0	0	0	0	0	13:45	0	0	0	0	0	0
2:00	0	0	0	0	0	0	14:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0	14:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0	14:30	0	0	0	0	0	0
2:45	0	0	0	0	0	0	14:45	0	0	0	0	0	0
3:00	0	0	0	0	0	0	15:00	0	0	0	0	0	0
3:15	0	0	0	0	0	0	15:15	0	0	0	0	0	0
3:30	0	0	0	0	0	0	15:30	0	0	0	0	0	0
3:45	0	0	0	0	0	0	15:45	0	0	0	0	0	0
4:00	0	0	0	0	0	0	16:00	0	0	0	0	0	0
4:15	0	0	0	0	0	0	16:15	0	0	0	0	0	0
4:30	0	0	0	0	0	0	16:30	0	0	0	0	0	0
4:45	0	0	0	0	0	0	16:45	0	0	0	0	0	0
5:00	0	0	0	0	0	0	17:00	0	0	0	0	0	0
5:15	0	0	0	0	0	0	17:15	0	0	0	0	0	0
5:30	0	0	0	0	0	0	17:30	0	0	0	0	0	0
5:45	0	0	0	0	0	0	17:45	0	0	0	0	0	0
6:00	0	0	0	0	0	0	18:00	0	0	0	0	0	0
6:15	0	0	0	0	0	0	18:15	0	0	0	0	0	0
6:30	0	0	0	0	0	0	18:30	0	0	0	0	0	0
6:45	0	0	0	0	0	0	18:45	0	0	0	0	0	0
7:00	0	0	0	0	0	0	19:00	0	0	0	0	0	0
7:15	0	0	0	0	0	0	19:15	0	0	0	0	0	0
7:30	0	0	0	0	0	0	19:30	0	0	0	0	0	0
7:45	0	0	0	0	0	0	19:45	0	0	0	0	0	0
8:00	0	0	0	0	0	0	20:00	0	0	0	0	0	0
8:15	0	0	0	0	0	0	20:15	0	0	0	0	0	0
8:30	1	0	0	0	0	1	20:30	0	0	0	0	0	0
8:45	0	0	0	0	0	0	20:45	0	0	0	0	0	0
9:00	0	0	0	0	0	0	21:00	0	0	0	0	0	0
9:15	0	0	0	0	0	0	21:15	0	0	0	0	0	0
9:30	0	0	0	0	0	0	21:30	0	0	0	0	0	0
9:45	0	0	0	0	0	0	21:45	0	0	0	0	0	0
10:00	0	0	0	0	0	0	22:00	0	0	0	0	0	0
10:15	0	0	0	0	0	0	22:15	0	0	0	0	0	0
10:30	0	0	0	0	0	0	22:30	0	0	0	0	0	0
10:45	0	0	0	0	0	0	22:45	0	0	0	0	0	0
11:00	0	0	0	0	0	0	23:00	0	0	0	0	0	0
11:15	1	0	0	0	0	1	23:15	0	0	0	0	0	0
11:30	0	0	0	0	0	0	23:30	0	0	0	0	0	0
11:45	0	0	0	0	0	0	23:45	0	0	0	0	0	0
TOTAL	2	0	0	0	0	2	TOTAL	0	0	0	0	0	0

AM PEAK HOUR	11:15 AM
AM PEAK VOLUME	1

AM PEAK HOUR	11:45 PM
AM PEAK VOLUME	0

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	2	0	0	0	0	2
% OF TOTAL	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
AM PEAK	1	0	0	0	0	1
PM PEAK	0	0	0	0	0	0

A13123

Study Site 7 - River's Edge Apartment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS82 Dwy east of Elm.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	0	0	0	0	0	0
0:15	0	0	0	0	0	0	12:15	2	1	0	0	0	3
0:30	0	0	0	0	0	0	12:30	2	0	0	0	0	2
0:45	0	0	0	0	0	0	12:45	1	0	0	0	0	1
1:00	0	0	0	0	0	0	13:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0	13:15	1	0	0	0	0	1
1:30	0	0	0	0	0	0	13:30	1	0	0	0	0	1
1:45	0	0	0	0	0	0	13:45	4	0	0	0	0	4
2:00	0	0	0	0	0	0	14:00	1	0	0	0	0	1
2:15	1	0	0	0	0	1	14:15	4	0	0	0	0	4
2:30	0	0	0	0	0	0	14:30	0	0	0	0	0	0
2:45	1	0	0	0	0	1	14:45	1	1	0	0	0	2
3:00	0	0	0	0	0	0	15:00	3	0	0	0	0	3
3:15	0	0	0	0	0	0	15:15	3	0	0	1	0	4
3:30	0	0	0	0	0	0	15:30	2	0	0	0	0	2
3:45	0	0	0	0	0	0	15:45	2	0	0	0	0	2
4:00	0	0	0	0	0	0	16:00	3	0	0	0	0	3
4:15	0	0	0	0	0	0	16:15	3	0	0	0	0	3
4:30	0	0	0	0	0	0	16:30	1	1	0	0	0	2
4:45	0	0	0	0	0	0	16:45	2	0	0	0	0	2
5:00	0	0	0	0	0	0	17:00	0	0	0	0	0	0
5:15	0	0	0	0	0	0	17:15	0	0	0	0	0	0
5:30	0	0	0	0	0	0	17:30	2	0	0	0	0	2
5:45	2	0	0	0	0	2	17:45	0	0	0	0	0	0
6:00	1	0	0	0	0	1	18:00	3	0	0	0	0	3
6:15	0	0	0	0	0	0	18:15	0	0	0	0	0	0
6:30	0	0	0	0	0	0	18:30	1	0	0	0	0	1
6:45	0	0	0	0	0	0	18:45	2	0	0	0	0	2
7:00	0	0	0	0	0	0	19:00	3	0	0	0	0	3
7:15	1	0	0	0	0	1	19:15	1	0	0	0	0	1
7:30	2	0	0	0	0	2	19:30	1	0	0	0	0	1
7:45	7	0	0	0	0	7	19:45	1	0	0	0	0	1
8:00	5	0	0	0	0	5	20:00	0	0	0	0	0	0
8:15	1	0	0	0	0	1	20:15	1	0	0	0	0	1
8:30	4	0	0	0	0	4	20:30	2	0	0	0	0	2
8:45	1	0	0	0	0	1	20:45	2	0	0	0	0	2
9:00	4	0	0	0	0	4	21:00	1	0	0	0	0	1
9:15	1	0	0	0	0	1	21:15	1	0	0	0	0	1
9:30	2	0	0	0	0	2	21:30	0	0	0	0	0	0
9:45	0	0	0	0	0	0	21:45	4	0	0	0	0	4
10:00	0	0	0	0	0	0	22:00	1	0	0	0	0	1
10:15	1	0	0	0	0	1	22:15	0	0	0	0	0	0
10:30	1	0	0	0	0	1	22:30	1	0	0	0	0	1
10:45	0	0	0	0	0	0	22:45	0	0	0	0	0	0
11:00	0	0	0	0	0	0	23:00	0	0	0	0	0	0
11:15	1	1	0	0	0	2	23:15	0	0	0	0	0	0
11:30	2	0	0	0	0	2	23:30	2	0	0	0	0	2
11:45	0	1	0	0	0	1	23:45	0	0	0	0	0	0
TOTAL	38	2	0	0	0	40	TOTAL	65	3	0	1	0	69

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	17

AM PEAK HOUR	3:15 PM
AM PEAK VOLUME	11

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	103	5	0	1	0	109
% OF TOTAL	94.5%	4.6%	0.0%	0.9%	0.0%	100.0%
AM PEAK	17	0	0	0	0	17
PM PEAK	9	1	0	0	0	10

A021323

Study Site 7 - River's Edge Apartment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS83 Dwy south of Lakeshore.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	3	0	0	0	0	3	12:00	23	3	0	0	0	26
0:15	2	0	0	0	0	2	12:15	17	2	0	0	0	19
0:30	4	0	0	0	0	4	12:30	22	0	0	0	0	22
0:45	3	0	0	0	0	3	12:45	15	0	0	0	0	15
1:00	2	0	0	0	0	2	13:00	17	0	0	0	0	17
1:15	2	0	0	0	0	2	13:15	17	2	0	0	0	19
1:30	0	0	0	0	0	0	13:30	15	0	0	0	0	15
1:45	3	0	0	0	0	3	13:45	36	0	0	0	0	36
2:00	2	0	0	0	0	2	14:00	29	0	0	0	0	29
2:15	2	0	0	0	0	2	14:15	25	2	0	0	0	27
2:30	3	0	0	0	0	3	14:30	13	2	0	0	0	15
2:45	5	0	0	0	0	5	14:45	32	1	0	1	0	34
3:00	2	0	0	0	0	2	15:00	27	0	0	0	0	27
3:15	0	0	0	0	0	0	15:15	19	0	0	0	0	19
3:30	1	0	0	0	0	1	15:30	25	1	0	0	0	26
3:45	1	0	0	0	0	1	15:45	43	0	0	0	0	43
4:00	2	0	0	0	0	2	16:00	36	0	0	0	0	36
4:15	1	0	0	0	0	1	16:15	23	1	0	0	0	24
4:30	2	0	0	0	0	2	16:30	41	0	0	0	0	41
4:45	2	1	0	0	0	3	16:45	35	0	0	0	0	35
5:00	3	0	0	0	0	3	17:00	42	2	0	0	0	44
5:15	3	0	0	0	0	3	17:15	35	0	0	0	0	35
5:30	2	0	0	0	0	2	17:30	32	0	0	0	0	32
5:45	7	0	0	0	0	7	17:45	27	0	0	0	0	27
6:00	6	0	0	0	0	6	18:00	45	0	0	0	0	45
6:15	6	0	0	0	0	6	18:15	40	0	0	0	0	40
6:30	3	0	0	0	0	3	18:30	35	1	0	0	0	36
6:45	1	0	0	0	0	1	18:45	30	0	0	0	0	30
7:00	8	1	0	0	0	9	19:00	32	0	0	0	0	32
7:15	4	1	0	0	0	5	19:15	29	0	0	0	0	29
7:30	21	0	0	0	0	21	19:30	23	0	0	0	0	23
7:45	28	0	0	0	0	28	19:45	27	0	0	0	0	27
8:00	17	0	0	0	0	17	20:00	37	1	0	0	0	38
8:15	28	0	0	0	0	28	20:15	18	0	0	0	0	18
8:30	11	0	0	0	0	11	20:30	20	0	0	0	0	20
8:45	14	1	0	0	0	15	20:45	20	0	0	0	0	20
9:00	13	0	0	0	0	13	21:00	31	0	0	0	0	31
9:15	15	1	0	0	0	16	21:15	14	0	0	0	0	14
9:30	12	2	0	0	0	14	21:30	17	0	0	0	0	17
9:45	14	1	0	0	0	15	21:45	15	0	0	0	0	15
10:00	15	3	0	0	0	18	22:00	14	0	0	0	0	14
10:15	15	1	0	0	0	16	22:15	9	0	0	0	0	9
10:30	10	2	0	0	0	12	22:30	11	0	0	0	0	11
10:45	10	1	0	0	0	11	22:45	10	0	0	0	0	10
11:00	12	2	0	0	0	14	23:00	6	0	0	0	0	6
11:15	12	0	0	0	0	12	23:15	10	0	0	0	0	10
11:30	22	0	0	0	0	22	23:30	5	0	0	0	0	5
11:45	26	0	0	0	0	26	23:45	7	0	0	0	0	7
TOTAL	380	17	0	0	0	397	TOTAL	1,151	18	0	1	0	1,170

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	94

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	155

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	1,531	35	0	1	0	1,567
% OF TOTAL	97.7%	2.2%	0.0%	0.1%	0.0%	100.0%
AM PEAK	94	0	0	0	0	94
PM PEAK	153	2	0	0	0	155

A13123

Study Site 7 - River's Edge Apartment Homes

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS83 Dwy south of Lakeshore.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	7	0	0	0	0	7	12:00	21	0	0	0	0	21
0:15	1	0	0	0	0	1	12:15	15	0	0	0	0	15
0:30	1	0	0	0	0	1	12:30	20	1	0	0	0	21
0:45	0	0	0	0	0	0	12:45	14	1	0	0	0	15
1:00	1	0	0	0	0	1	13:00	15	0	0	0	0	15
1:15	3	0	0	0	0	3	13:15	16	0	0	0	0	16
1:30	2	0	0	0	0	2	13:30	22	1	0	0	0	23
1:45	2	0	0	0	0	2	13:45	24	1	0	0	0	25
2:00	2	0	0	0	0	2	14:00	23	0	0	0	0	23
2:15	0	0	0	0	0	0	14:15	15	0	0	0	0	15
2:30	0	0	0	0	0	0	14:30	25	1	0	0	0	26
2:45	1	0	0	0	0	1	14:45	26	1	0	0	0	27
3:00	2	0	0	0	0	2	15:00	18	1	0	0	0	19
3:15	5	0	0	0	0	5	15:15	31	0	0	0	0	31
3:30	3	0	0	0	0	3	15:30	23	0	0	0	0	23
3:45	6	0	0	0	0	6	15:45	31	1	0	0	0	32
4:00	3	0	0	0	0	3	16:00	15	0	0	0	0	15
4:15	9	0	0	0	0	9	16:15	23	0	0	0	0	23
4:30	9	0	0	0	0	9	16:30	25	0	0	0	0	25
4:45	17	0	0	0	0	17	16:45	27	0	0	0	0	27
5:00	7	0	0	0	0	7	17:00	32	0	0	0	0	32
5:15	13	0	0	0	0	13	17:15	25	0	0	0	0	25
5:30	15	1	0	0	0	16	17:30	18	0	0	0	0	18
5:45	13	0	0	0	0	13	17:45	20	0	0	0	0	20
6:00	12	1	0	0	0	13	18:00	18	0	0	0	0	18
6:15	19	0	0	0	0	19	18:15	24	0	0	0	0	24
6:30	23	0	0	0	0	23	18:30	25	1	0	0	0	26
6:45	16	1	0	0	0	17	18:45	16	0	0	0	0	16
7:00	13	2	0	0	0	15	19:00	9	0	0	0	0	9
7:15	35	0	0	0	0	35	19:15	11	0	0	0	0	11
7:30	55	0	0	0	0	55	19:30	11	0	0	0	0	11
7:45	40	0	0	0	0	40	19:45	15	0	0	0	0	15
8:00	35	0	0	0	0	35	20:00	9	0	0	0	0	9
8:15	20	0	0	0	0	20	20:15	13	0	0	0	0	13
8:30	17	0	0	0	0	17	20:30	15	1	0	0	0	16
8:45	18	0	0	0	0	18	20:45	13	0	0	0	0	13
9:00	21	0	0	0	0	21	21:00	12	0	0	0	0	12
9:15	28	0	0	0	0	28	21:15	7	0	0	0	0	7
9:30	24	1	0	0	0	25	21:30	6	1	0	0	0	7
9:45	13	0	0	0	0	13	21:45	7	0	0	0	0	7
10:00	21	2	0	0	0	23	22:00	7	0	0	0	0	7
10:15	26	3	0	0	0	29	22:15	6	0	0	0	0	6
10:30	16	2	0	0	0	18	22:30	5	0	0	0	0	5
10:45	16	3	0	0	0	19	22:45	7	0	0	0	0	7
11:00	15	0	0	0	0	15	23:00	6	0	0	0	0	6
11:15	14	1	0	0	0	15	23:15	3	0	0	0	0	3
11:30	21	0	0	0	0	21	23:30	4	0	0	0	0	4
11:45	16	1	0	0	0	17	23:45	2	0	0	0	0	2
TOTAL	656	18	0	0	0	674	TOTAL	775	11	0	0	0	786

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	165

AM PEAK HOUR	4:30 PM
AM PEAK VOLUME	109

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	1,431	29	0	0	0	1,460
% OF TOTAL	98.0%	2.0%	0.0%	0.0%	0.0%	100.0%
AM PEAK	165	0	0	0	0	165
PM PEAK	109	0	0	0	0	109

A021323

Study Site 8 - Mayberry Colony Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS90 Western Dwy south of Mayberry.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	3	0	0	0	0	3
0:15	1	0	0	0	0	1	12:15	12	0	0	0	0	12
0:30	2	0	0	0	0	2	12:30	6	0	0	0	0	6
0:45	0	0	0	0	0	0	12:45	3	0	0	0	0	3
1:00	1	0	0	0	0	1	13:00	1	0	0	0	0	1
1:15	3	0	0	0	0	3	13:15	10	0	0	1	0	11
1:30	0	0	0	0	0	0	13:30	9	0	0	0	0	9
1:45	1	0	0	0	0	1	13:45	6	0	0	0	0	6
2:00	0	0	0	0	0	0	14:00	10	0	0	0	0	10
2:15	3	0	0	0	0	3	14:15	8	0	0	0	0	8
2:30	2	0	0	0	0	2	14:30	12	0	0	0	0	12
2:45	0	0	0	0	0	0	14:45	18	0	0	0	0	18
3:00	4	0	0	0	0	4	15:00	13	0	0	0	0	13
3:15	1	0	0	0	0	1	15:15	7	0	0	0	0	7
3:30	3	0	0	0	0	3	15:30	17	1	0	0	0	18
3:45	1	0	0	0	0	1	15:45	17	0	0	0	0	17
4:00	0	0	0	0	0	0	16:00	6	0	0	0	0	6
4:15	0	0	0	0	0	0	16:15	8	0	0	0	0	8
4:30	0	0	0	0	0	0	16:30	9	0	0	0	0	9
4:45	2	0	0	0	0	2	16:45	15	0	0	0	0	15
5:00	0	0	0	0	0	0	17:00	9	0	0	0	0	9
5:15	2	0	0	0	0	2	17:15	10	0	0	0	0	10
5:30	0	0	0	0	0	0	17:30	14	0	0	0	0	14
5:45	0	0	0	0	0	0	17:45	11	0	0	0	0	11
6:00	3	0	0	0	0	3	18:00	8	1	0	0	0	9
6:15	5	0	0	0	0	5	18:15	12	0	0	0	0	12
6:30	6	0	0	0	0	6	18:30	9	0	0	0	0	9
6:45	0	0	0	0	0	0	18:45	8	1	0	0	0	9
7:00	2	0	0	0	0	2	19:00	4	0	0	0	0	4
7:15	5	0	0	0	0	5	19:15	9	0	0	0	0	9
7:30	12	0	0	0	0	12	19:30	8	0	0	0	0	8
7:45	3	0	0	0	0	3	19:45	7	0	0	0	0	7
8:00	4	0	0	0	0	4	20:00	8	0	0	0	0	8
8:15	7	0	0	0	0	7	20:15	2	0	0	0	0	2
8:30	11	0	0	0	0	11	20:30	9	0	0	0	0	9
8:45	1	0	0	0	0	1	20:45	5	0	0	0	0	5
9:00	5	0	0	0	0	5	21:00	7	0	0	0	0	7
9:15	3	0	0	0	0	3	21:15	3	0	0	0	0	3
9:30	2	0	0	0	0	2	21:30	1	0	0	0	0	1
9:45	4	0	0	0	0	4	21:45	2	0	0	0	0	2
10:00	5	0	0	0	0	5	22:00	2	0	0	0	0	2
10:15	2	2	0	0	0	4	22:15	2	0	0	0	0	2
10:30	5	0	0	0	0	5	22:30	3	0	0	0	0	3
10:45	3	0	0	0	0	3	22:45	4	0	0	0	0	4
11:00	5	0	0	0	0	5	23:00	3	0	0	0	0	3
11:15	6	0	0	0	0	6	23:15	5	0	0	0	0	5
11:30	6	0	0	0	0	6	23:30	4	0	0	0	0	4
11:45	3	0	0	0	0	3	23:45	1	0	0	0	0	1
TOTAL	135	2	0	0	0	137	TOTAL	360	3	0	1	0	364

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	26

AM PEAK HOUR	2:45 PM
AM PEAK VOLUME	56

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	495	5	0	1	0	501
% OF TOTAL	98.8%	1.0%	0.0%	0.2%	0.0%	100.0%
AM PEAK	26	0	0	0	0	26
PM PEAK	44	0	0	0	0	44

A13123

Study Site 8 - Mayberry Colony Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS90 Western Dwy south of Mayberry.

AM	OUT					
TIME	1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0
0:15	1	0	0	0	0	1
0:30	0	0	0	0	0	0
0:45	1	0	0	0	0	1
1:00	0	0	0	0	0	0
1:15	1	0	0	0	0	1
1:30	0	0	0	0	0	0
1:45	2	0	0	0	0	2
2:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0
2:45	3	0	0	0	0	3
3:00	2	0	0	0	0	2
3:15	5	0	0	0	0	5
3:30	5	0	0	0	0	5
3:45	4	0	0	0	0	4
4:00	0	0	0	0	0	0
4:15	5	0	0	0	0	5
4:30	7	0	0	0	0	7
4:45	3	0	0	0	0	3
5:00	8	0	0	0	0	8
5:15	0	0	0	0	0	0
5:30	2	0	0	0	0	2
5:45	6	0	0	0	0	6
6:00	4	0	0	0	0	4
6:15	3	0	0	0	0	3
6:30	9	0	0	0	0	9
6:45	8	0	0	0	0	8
7:00	7	0	0	0	0	7
7:15	21	0	0	0	0	21
7:30	4	0	0	0	0	4
7:45	7	0	0	0	0	7
8:00	21	0	0	0	0	21
8:15	10	0	0	0	0	10
8:30	8	0	0	1	0	9
8:45	7	0	0	0	0	7
9:00	9	0	0	0	0	9
9:15	5	0	0	0	0	5
9:30	3	0	0	0	0	3
9:45	2	0	0	0	0	2
10:00	9	1	0	0	0	10
10:15	4	3	0	0	0	7
10:30	2	1	0	0	0	3
10:45	9	0	0	0	0	9
11:00	11	0	0	0	0	11
11:15	2	0	0	0	0	2
11:30	5	0	0	0	0	5
11:45	8	0	0	0	0	8
TOTAL	233	5	0	1	0	239

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	53

PM	OUT					
Time	1	2	3	4	5	TOTAL
12:00	11	0	0	0	0	11
12:15	11	0	0	0	0	11
12:30	9	0	0	0	0	9
12:45	8	0	0	0	0	8
13:00	6	0	0	0	0	6
13:15	6	0	0	0	0	6
13:30	3	0	0	0	0	3
13:45	7	0	0	0	0	7
14:00	12	0	0	0	0	12
14:15	14	0	0	0	0	14
14:30	10	0	0	0	0	10
14:45	11	0	0	0	0	11
15:00	10	0	0	0	0	10
15:15	9	0	0	0	0	9
15:30	8	0	0	0	0	8
15:45	7	0	0	0	0	7
16:00	11	0	0	0	0	11
16:15	10	0	0	0	0	10
16:30	10	0	0	0	0	10
16:45	8	0	0	0	0	8
17:00	16	0	0	0	0	16
17:15	13	1	0	0	0	14
17:30	12	0	0	0	0	12
17:45	13	0	0	0	0	13
18:00	11	0	0	0	0	11
18:15	5	0	0	0	0	5
18:30	7	0	0	0	0	7
18:45	12	0	0	0	0	12
19:00	8	0	0	0	0	8
19:15	5	0	0	0	0	5
19:30	7	0	0	0	0	7
19:45	6	0	0	0	0	6
20:00	5	0	0	0	0	5
20:15	7	0	0	0	0	7
20:30	6	0	0	0	0	6
20:45	3	0	0	0	0	3
21:00	1	0	0	0	0	1
21:15	5	0	0	0	0	5
21:30	3	0	0	0	0	3
21:45	5	0	0	0	0	5
22:00	1	0	0	0	0	1
22:15	1	0	0	0	0	1
22:30	0	0	0	0	0	0
22:45	2	0	0	0	0	2
23:00	2	0	0	0	0	2
23:15	4	0	0	0	0	4
23:30	5	0	0	0	0	5
23:45	2	0	0	0	0	2
TOTAL	348	1	0	0	0	349

AM PEAK HOUR	5:00 PM
AM PEAK VOLUME	55

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	581	6	0	1	0	588
% OF TOTAL	98.8%	1.0%	0.0%	0.2%	0.0%	100.0%
AM PEAK	53	0	0	0	0	53
PM PEAK	54	1	0	0	0	55

A021323

Study Site 8 - Mayberry Colony Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS91 Eastern Dwy south of Mayberry.

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	3	0	0	0	0	3	12:00	8	0	0	0	0	8
0:15	3	0	0	0	0	3	12:15	8	0	0	0	0	8
0:30	1	0	0	0	0	1	12:30	3	0	0	0	0	3
0:45	1	0	0	0	0	1	12:45	5	0	0	0	0	5
1:00	0	0	0	0	0	0	13:00	7	0	0	0	0	7
1:15	4	0	0	0	0	4	13:15	4	0	0	0	0	4
1:30	0	0	0	0	0	0	13:30	7	0	0	0	0	7
1:45	1	0	0	0	0	1	13:45	2	0	0	0	0	2
2:00	1	0	0	0	0	1	14:00	9	0	0	0	0	9
2:15	1	0	0	0	0	1	14:15	14	0	0	0	0	14
2:30	0	0	0	0	0	0	14:30	14	0	0	0	0	14
2:45	1	0	0	0	0	1	14:45	8	0	0	0	0	8
3:00	0	0	0	0	0	0	15:00	2	0	0	0	0	2
3:15	0	0	0	0	0	0	15:15	1	0	0	0	0	1
3:30	3	0	0	0	0	3	15:30	3	0	0	0	0	3
3:45	0	0	0	0	0	0	15:45	3	0	0	0	0	3
4:00	0	0	0	0	0	0	16:00	9	0	0	0	0	9
4:15	1	0	0	0	0	1	16:15	9	0	0	0	0	9
4:30	1	0	0	0	0	1	16:30	7	0	0	0	0	7
4:45	0	0	0	0	0	0	16:45	13	0	0	0	0	13
5:00	0	0	0	0	0	0	17:00	8	1	0	0	0	9
5:15	0	0	0	0	0	0	17:15	12	0	0	0	0	12
5:30	3	0	0	0	0	3	17:30	7	0	0	0	0	7
5:45	3	0	0	0	0	3	17:45	11	0	0	0	0	11
6:00	0	0	0	0	0	0	18:00	14	0	0	0	0	14
6:15	0	0	0	0	0	0	18:15	6	0	0	0	0	6
6:30	2	0	0	0	0	2	18:30	3	0	0	0	0	3
6:45	0	0	0	0	0	0	18:45	13	0	0	0	0	13
7:00	12	0	0	0	0	12	19:00	14	0	0	0	0	14
7:15	7	0	0	0	0	7	19:15	10	0	0	0	0	10
7:30	4	0	0	0	0	4	19:30	2	0	0	0	0	2
7:45	8	0	0	0	0	8	19:45	8	0	0	0	0	8
8:00	3	0	0	0	0	3	20:00	3	0	0	0	0	3
8:15	6	0	0	0	0	6	20:15	4	0	0	0	0	4
8:30	6	0	0	1	0	7	20:30	4	0	0	0	0	4
8:45	7	0	0	0	0	7	20:45	7	0	0	0	0	7
9:00	5	0	0	0	0	5	21:00	2	0	0	0	0	2
9:15	3	0	0	0	0	3	21:15	3	0	0	0	0	3
9:30	5	0	0	0	0	5	21:30	3	0	0	0	0	3
9:45	3	2	0	0	0	5	21:45	3	0	0	0	0	3
10:00	2	0	0	0	0	2	22:00	2	0	0	0	0	2
10:15	3	2	0	0	0	5	22:15	2	0	0	0	0	2
10:30	5	0	0	0	0	5	22:30	6	0	0	0	0	6
10:45	4	0	0	0	0	4	22:45	2	0	0	0	0	2
11:00	2	0	0	0	0	2	23:00	1	0	0	0	0	1
11:15	3	0	0	0	0	3	23:15	1	0	0	0	0	1
11:30	7	0	0	0	0	7	23:30	3	0	0	0	0	3
11:45	3	0	0	0	0	3	23:45	2	0	0	0	0	2
TOTAL	127	4	0	1	0	132	TOTAL	292	1	0	0	0	293

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	31

AM PEAK HOUR	2:00 PM
AM PEAK VOLUME	45

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	419	5	0	1	0	425
% OF TOTAL	98.6%	1.2%	0.0%	0.2%	0.0%	100.0%
AM PEAK	31	0	0	0	0	31
PM PEAK	40	1	0	0	0	41

A13123

Study Site 8 - Mayberry Colony Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS91 Eastern Dwy south of Mayberry.

AM	OUT					
TIME	1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0
0:15	0	0	0	0	0	0
0:30	1	0	0	0	0	1
0:45	0	0	0	0	0	0
1:00	0	0	0	0	0	0
1:15	0	0	0	0	0	0
1:30	1	0	0	0	0	1
1:45	0	0	0	0	0	0
2:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0
2:30	2	0	0	0	0	2
2:45	1	0	0	0	0	1
3:00	1	0	0	0	0	1
3:15	0	0	0	0	0	0
3:30	0	0	0	0	0	0
3:45	0	0	0	0	0	0
4:00	1	0	0	0	0	1
4:15	1	0	0	0	0	1
4:30	1	0	0	0	0	1
4:45	3	0	0	0	0	3
5:00	1	0	0	0	0	1
5:15	3	0	0	0	0	3
5:30	3	0	0	0	0	3
5:45	7	0	0	0	0	7
6:00	2	0	0	0	0	2
6:15	2	0	0	0	0	2
6:30	3	0	0	0	0	3
6:45	9	0	0	0	0	9
7:00	11	0	0	0	0	11
7:15	9	0	0	0	0	9
7:30	10	0	0	0	0	10
7:45	6	0	0	0	0	6
8:00	1	0	0	0	0	1
8:15	3	0	0	0	0	3
8:30	11	0	0	0	0	11
8:45	13	0	0	0	0	13
9:00	2	0	0	0	0	2
9:15	2	0	0	0	0	2
9:30	4	0	0	0	0	4
9:45	4	0	0	0	0	4
10:00	1	0	0	0	0	1
10:15	7	1	0	0	0	8
10:30	5	0	0	0	0	5
10:45	5	0	0	0	0	5
11:00	1	0	0	0	0	1
11:15	3	0	0	0	0	3
11:30	4	0	0	0	0	4
11:45	3	0	0	0	0	3
TOTAL	147	1	0	0	0	148

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	39

PM	OUT					
Time	1	2	3	4	5	TOTAL
12:00	7	0	0	0	0	7
12:15	5	0	0	0	0	5
12:30	3	0	0	0	0	3
12:45	3	0	0	0	0	3
13:00	4	0	0	0	0	4
13:15	9	0	0	0	0	9
13:30	4	0	0	1	0	5
13:45	5	0	0	0	0	5
14:00	11	0	0	0	0	11
14:15	8	0	0	0	0	8
14:30	2	0	0	0	0	2
14:45	4	0	0	0	0	4
15:00	7	0	0	0	0	7
15:15	5	0	0	0	0	5
15:30	7	1	0	0	0	8
15:45	11	0	0	0	0	11
16:00	5	0	0	0	0	5
16:15	10	0	0	0	0	10
16:30	7	0	0	0	0	7
16:45	3	0	0	0	0	3
17:00	2	0	0	0	0	2
17:15	4	0	0	0	0	4
17:30	5	0	0	0	0	5
17:45	7	0	0	0	0	7
18:00	3	0	0	0	0	3
18:15	4	0	0	0	0	4
18:30	3	0	0	0	0	3
18:45	5	0	0	0	0	5
19:00	2	0	0	0	0	2
19:15	4	0	0	0	0	4
19:30	0	0	0	0	0	0
19:45	0	0	0	0	0	0
20:00	2	0	0	0	0	2
20:15	2	0	0	0	0	2
20:30	2	0	0	0	0	2
20:45	1	0	0	0	0	1
21:00	1	0	0	0	0	1
21:15	1	0	0	0	0	1
21:30	0	0	0	0	0	0
21:45	0	0	0	0	0	0
22:00	2	0	0	0	0	2
22:15	2	0	0	0	0	2
22:30	1	0	0	0	0	1
22:45	4	0	0	0	0	4
23:00	2	0	0	0	0	2
23:15	0	0	0	0	0	0
23:30	2	0	0	0	0	2
23:45	0	0	0	0	0	0
TOTAL	181	1	0	1	0	183

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	34

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	328	2	0	1	0	331
% OF TOTAL	99.1%	0.6%	0.0%	0.3%	0.0%	100.0%
AM PEAK	36	0	0	0	0	36
PM PEAK	25	0	0	0	0	25

A021323

Study Site 9 - Summit Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS92 DWY west of Hathaway.

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	9	0	0	0	0	9
0:15	1	0	0	0	0	1	12:15	6	0	1	0	0	7
0:30	2	0	0	0	0	2	12:30	7	0	0	0	0	7
0:45	2	0	0	0	0	2	12:45	5	0	0	0	0	5
1:00	2	0	0	0	0	2	13:00	4	0	0	0	0	4
1:15	1	0	0	0	0	1	13:15	3	0	0	0	0	3
1:30	0	0	0	0	0	0	13:30	8	0	0	0	0	8
1:45	0	0	0	0	0	0	13:45	7	1	0	0	0	8
2:00	1	0	0	0	0	1	14:00	10	1	0	0	0	11
2:15	0	0	0	0	0	0	14:15	5	0	0	0	0	5
2:30	0	0	0	0	0	0	14:30	11	0	0	0	0	11
2:45	0	0	0	0	0	0	14:45	4	0	0	0	0	4
3:00	1	0	0	0	0	1	15:00	5	0	0	0	0	5
3:15	1	0	0	0	0	1	15:15	6	0	0	0	0	6
3:30	0	0	0	0	0	0	15:30	13	0	0	0	0	13
3:45	1	0	0	0	0	1	15:45	12	0	0	0	0	12
4:00	0	0	0	0	0	0	16:00	13	0	0	0	0	13
4:15	1	0	0	0	0	1	16:15	7	0	0	0	0	7
4:30	3	0	0	0	0	3	16:30	9	0	0	0	0	9
4:45	2	0	0	0	0	2	16:45	3	0	0	0	0	3
5:00	0	0	0	0	0	0	17:00	7	0	0	0	0	7
5:15	1	0	0	0	0	1	17:15	8	0	0	0	0	8
5:30	1	0	0	0	0	1	17:30	7	0	0	0	0	7
5:45	1	0	0	0	0	1	17:45	7	0	0	0	0	7
6:00	0	0	0	0	0	0	18:00	8	0	0	0	0	8
6:15	1	0	1	0	0	2	18:15	5	0	0	0	0	5
6:30	1	0	0	0	0	1	18:30	9	0	0	0	0	9
6:45	2	0	0	0	0	2	18:45	7	0	0	0	0	7
7:00	3	0	0	0	0	3	19:00	4	1	0	0	0	5
7:15	2	0	0	0	0	2	19:15	7	0	0	0	0	7
7:30	2	0	0	0	0	2	19:30	9	0	0	0	0	9
7:45	4	0	0	0	0	4	19:45	6	0	0	0	0	6
8:00	5	0	0	0	0	5	20:00	10	0	0	0	0	10
8:15	7	0	0	0	0	7	20:15	7	0	0	0	0	7
8:30	3	0	0	0	0	3	20:30	6	0	0	0	0	6
8:45	7	0	0	0	0	7	20:45	4	0	0	0	0	4
9:00	2	0	0	0	0	2	21:00	8	0	0	0	0	8
9:15	4	0	0	0	0	4	21:15	5	0	0	0	0	5
9:30	4	0	0	0	0	4	21:30	5	0	0	0	0	5
9:45	3	1	0	0	0	4	21:45	5	0	0	0	0	5
10:00	7	0	0	0	0	7	22:00	4	0	0	0	0	4
10:15	2	0	0	0	0	2	22:15	12	0	0	0	0	12
10:30	2	0	0	0	0	2	22:30	4	0	0	0	0	4
10:45	3	0	0	0	0	3	22:45	5	0	0	0	0	5
11:00	1	0	0	0	0	1	23:00	4	0	0	0	0	4
11:15	7	0	0	0	0	7	23:15	1	0	0	0	0	1
11:30	4	1	0	0	0	5	23:30	1	0	0	0	0	1
11:45	3	0	0	0	0	3	23:45	0	0	0	0	0	0
TOTAL	101	2	1	0	0	104	TOTAL	312	3	1	0	0	316

AM PEAK HOUR	8:00 AM	AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	22	AM PEAK VOLUME	45

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	413	5	2	0	0	420
% OF TOTAL	98.3%	1.2%	0.5%	0.0%	0.0%	100.0%
AM PEAK	22	0	0	0	0	22
PM PEAK	32	0	0	0	0	32

A13123

Study Site 9 - Summit Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS92 DWY west of Hathaway.

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	3	0	1	0	0	4
0:15	0	0	0	0	0	0	12:15	9	0	0	0	0	9
0:30	1	0	0	0	0	1	12:30	9	0	0	0	0	9
0:45	0	0	0	0	0	0	12:45	3	0	0	0	0	3
1:00	0	0	0	0	0	0	13:00	6	0	0	0	0	6
1:15	0	0	0	0	0	0	13:15	3	1	0	0	0	4
1:30	0	0	0	0	0	0	13:30	9	0	0	0	0	9
1:45	0	0	0	0	0	0	13:45	3	0	0	0	0	3
2:00	0	0	0	0	0	0	14:00	8	1	0	0	0	9
2:15	1	0	0	0	0	1	14:15	7	0	0	0	0	7
2:30	1	0	0	0	0	1	14:30	9	0	0	0	0	9
2:45	0	0	0	0	0	0	14:45	1	0	0	0	0	1
3:00	0	0	0	0	0	0	15:00	6	0	0	0	0	6
3:15	1	0	0	0	0	1	15:15	8	0	0	0	0	8
3:30	3	0	0	0	0	3	15:30	10	0	0	0	0	10
3:45	0	0	0	0	0	0	15:45	9	1	0	0	0	10
4:00	2	0	0	0	0	2	16:00	8	0	0	0	0	8
4:15	0	0	0	0	0	0	16:15	4	0	0	0	0	4
4:30	1	0	0	0	0	1	16:30	6	0	0	0	0	6
4:45	0	0	0	0	0	0	16:45	2	0	0	0	0	2
5:00	2	0	0	0	0	2	17:00	4	1	0	0	0	5
5:15	1	0	0	0	0	1	17:15	8	0	0	0	0	8
5:30	2	0	0	0	0	2	17:30	9	0	0	0	0	9
5:45	10	0	0	0	0	10	17:45	6	0	0	0	0	6
6:00	2	0	0	0	0	2	18:00	3	0	0	0	0	3
6:15	7	0	0	0	0	7	18:15	5	0	0	0	0	5
6:30	0	0	0	0	0	0	18:30	4	0	0	0	0	4
6:45	4	0	1	0	0	5	18:45	3	0	0	0	0	3
7:00	3	0	0	0	0	3	19:00	5	0	0	0	0	5
7:15	4	0	0	0	0	4	19:15	4	1	0	0	0	5
7:30	3	0	0	0	0	3	19:30	4	0	0	0	0	4
7:45	8	0	0	0	0	8	19:45	2	0	0	0	0	2
8:00	9	0	0	0	0	9	20:00	5	0	0	0	0	5
8:15	9	0	0	0	0	9	20:15	3	0	0	0	0	3
8:30	3	0	0	0	0	3	20:30	2	0	0	0	0	2
8:45	8	0	0	0	0	8	20:45	2	0	0	0	0	2
9:00	8	0	0	0	0	8	21:00	4	0	0	0	0	4
9:15	4	0	0	0	0	4	21:15	1	0	0	0	0	1
9:30	7	0	0	0	0	7	21:30	5	0	0	0	0	5
9:45	1	0	0	0	0	1	21:45	5	0	0	0	0	5
10:00	4	0	0	0	0	4	22:00	3	0	0	0	0	3
10:15	3	0	0	0	0	3	22:15	1	0	0	0	0	1
10:30	2	0	0	0	0	2	22:30	1	0	0	0	0	1
10:45	2	0	0	0	0	2	22:45	4	0	0	0	0	4
11:00	5	0	0	0	0	5	23:00	0	0	0	0	0	0
11:15	4	0	0	0	0	4	23:15	1	0	0	0	0	1
11:30	3	0	0	0	0	3	23:30	0	0	0	0	0	0
11:45	6	0	0	0	0	6	23:45	2	0	0	0	0	2
TOTAL	134	0	1	0	0	135	TOTAL	219	5	1	0	0	225

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	29

AM PEAK HOUR	3:15 PM
AM PEAK VOLUME	36

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	353	5	2	0	0	360
% OF TOTAL	98.1%	1.4%	0.6%	0.0%	0.0%	100.0%
AM PEAK	29	0	0	0	0	29
PM PEAK	27	1	0	0	0	28

A021323

Study Site 9 - Summit Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS93 DWY north of George.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	12	0	1	0	0	13
0:15	2	0	0	0	0	2	12:15	10	1	0	0	0	11
0:30	0	0	0	0	0	0	12:30	9	0	0	0	0	9
0:45	0	0	0	0	0	0	12:45	12	0	0	0	0	12
1:00	1	0	0	0	0	1	13:00	21	0	0	0	0	21
1:15	1	0	0	0	0	1	13:15	10	1	0	0	0	11
1:30	0	0	0	0	0	0	13:30	8	0	0	0	0	8
1:45	0	0	0	0	0	0	13:45	13	0	0	0	0	13
2:00	3	0	0	0	0	3	14:00	13	0	0	0	0	13
2:15	1	1	0	0	0	2	14:15	8	0	0	0	0	8
2:30	1	0	0	0	0	1	14:30	18	0	0	0	0	18
2:45	0	0	0	0	0	0	14:45	9	0	0	0	0	9
3:00	2	0	0	0	0	2	15:00	9	0	0	0	0	9
3:15	1	0	0	0	0	1	15:15	24	0	0	0	0	24
3:30	0	0	0	0	0	0	15:30	19	1	0	0	0	20
3:45	0	0	0	0	0	0	15:45	19	0	0	0	0	19
4:00	1	0	0	0	0	1	16:00	13	0	0	0	0	13
4:15	0	0	0	0	0	0	16:15	8	0	0	0	0	8
4:30	0	0	0	0	0	0	16:30	22	0	0	0	0	22
4:45	0	0	0	0	0	0	16:45	13	0	0	0	0	13
5:00	3	0	0	0	0	3	17:00	15	1	0	0	0	16
5:15	4	0	0	0	0	4	17:15	12	0	0	0	0	12
5:30	0	0	0	0	0	0	17:30	15	0	0	0	0	15
5:45	1	0	0	0	0	1	17:45	18	0	0	0	0	18
6:00	3	0	0	0	0	3	18:00	23	0	0	0	0	23
6:15	3	0	0	0	0	3	18:15	12	0	0	0	0	12
6:30	2	0	0	0	0	2	18:30	10	0	0	0	0	10
6:45	2	0	0	0	0	2	18:45	12	0	0	0	0	12
7:00	1	0	0	0	0	1	19:00	16	0	0	0	0	16
7:15	6	0	0	0	0	6	19:15	13	0	0	0	0	13
7:30	15	0	0	0	0	15	19:30	7	0	0	0	0	7
7:45	7	0	0	0	0	7	19:45	7	0	0	0	0	7
8:00	11	0	0	0	0	11	20:00	14	0	0	0	0	14
8:15	13	0	0	0	0	13	20:15	7	0	0	0	0	7
8:30	16	0	0	0	0	16	20:30	8	0	0	0	0	8
8:45	15	0	0	0	0	15	20:45	10	0	0	0	0	10
9:00	10	0	0	0	0	10	21:00	10	0	0	0	0	10
9:15	8	0	0	0	0	8	21:15	6	0	0	0	0	6
9:30	12	0	0	0	0	12	21:30	2	0	0	0	0	2
9:45	5	0	0	0	0	5	21:45	6	0	0	0	0	6
10:00	4	0	0	0	0	4	22:00	7	0	0	0	0	7
10:15	5	0	0	0	0	5	22:15	5	0	0	0	0	5
10:30	2	0	0	0	0	2	22:30	2	0	0	0	0	2
10:45	17	0	0	0	0	17	22:45	5	0	0	0	0	5
11:00	5	0	0	0	0	5	23:00	9	0	0	0	0	9
11:15	11	1	0	0	0	12	23:15	1	0	0	0	0	1
11:30	12	0	0	0	0	12	23:30	1	0	0	0	0	1
11:45	5	0	0	0	0	5	23:45	4	0	0	0	0	4
TOTAL	213	2	0	0	0	215	TOTAL	527	4	1	0	0	532

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	55

AM PEAK HOUR	3:15 PM
AM PEAK VOLUME	76

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	740	6	1	0	0	747
% OF TOTAL	99.1%	0.8%	0.1%	0.0%	0.0%	100.0%
AM PEAK	55	0	0	0	0	55
PM PEAK	62	1	0	0	0	63

A13123

Study Site 9 - Summit Ridge Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS93 DWY north of George.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	9	0	0	0	0	9
0:15	1	0	0	0	0	1	12:15	12	0	0	0	0	12
0:30	0	0	0	0	0	0	12:30	12	1	1	0	0	14
0:45	3	0	0	0	0	3	12:45	20	0	0	0	0	20
1:00	0	0	0	0	0	0	13:00	16	0	0	0	0	16
1:15	0	0	0	0	0	0	13:15	14	0	0	0	0	14
1:30	0	0	0	0	0	0	13:30	17	0	0	0	0	17
1:45	0	0	0	0	0	0	13:45	9	1	0	0	0	10
2:00	1	0	0	0	0	1	14:00	18	0	0	0	0	18
2:15	1	0	0	0	0	1	14:15	11	0	0	0	0	11
2:30	1	1	0	0	0	2	14:30	10	0	0	0	0	10
2:45	1	0	0	0	0	1	14:45	14	0	0	0	0	14
3:00	0	0	0	0	0	0	15:00	19	0	0	0	0	19
3:15	0	0	0	0	0	0	15:15	15	0	0	0	0	15
3:30	0	0	0	0	0	0	15:30	11	0	0	0	0	11
3:45	0	0	0	0	0	0	15:45	9	0	0	0	0	9
4:00	0	0	0	0	0	0	16:00	17	0	0	0	0	17
4:15	1	0	0	0	0	1	16:15	9	0	0	0	0	9
4:30	3	0	0	0	0	3	16:30	8	0	0	0	0	8
4:45	1	0	0	0	0	1	16:45	13	0	0	0	0	13
5:00	5	0	0	0	0	5	17:00	5	0	0	0	0	5
5:15	1	0	0	0	0	1	17:15	20	0	0	0	0	20
5:30	6	0	0	0	0	6	17:30	13	0	0	0	0	13
5:45	2	0	0	0	0	2	17:45	13	0	0	0	0	13
6:00	4	0	0	0	0	4	18:00	12	0	0	0	0	12
6:15	6	0	0	0	0	6	18:15	10	0	0	0	0	10
6:30	6	0	0	0	0	6	18:30	11	0	0	0	0	11
6:45	7	0	0	0	0	7	18:45	12	0	0	0	0	12
7:00	9	0	0	0	0	9	19:00	10	0	0	0	0	10
7:15	18	0	0	0	0	18	19:15	5	0	0	0	0	5
7:30	20	0	0	0	0	20	19:30	8	0	0	0	0	8
7:45	31	0	0	0	0	31	19:45	11	0	0	0	0	11
8:00	25	0	0	0	0	25	20:00	7	0	0	0	0	7
8:15	16	0	0	0	0	16	20:15	10	0	0	0	0	10
8:30	15	0	0	0	0	15	20:30	9	0	0	0	0	9
8:45	14	0	0	0	0	14	20:45	7	0	0	0	0	7
9:00	10	0	0	0	0	10	21:00	5	0	0	0	0	5
9:15	15	0	0	0	0	15	21:15	4	0	0	0	0	4
9:30	11	0	0	0	0	11	21:30	6	0	0	0	0	6
9:45	9	0	0	0	0	9	21:45	2	0	0	0	0	2
10:00	9	1	0	0	0	10	22:00	5	0	0	0	0	5
10:15	10	0	0	0	0	10	22:15	4	0	0	0	0	4
10:30	7	0	0	0	0	7	22:30	4	0	0	0	0	4
10:45	12	0	0	0	0	12	22:45	3	0	0	0	0	3
11:00	11	0	0	0	0	11	23:00	6	0	0	0	0	6
11:15	8	1	0	0	0	9	23:15	0	0	0	0	0	0
11:30	9	0	0	0	0	9	23:30	0	0	0	0	0	0
11:45	19	1	0	0	0	20	23:45	3	0	0	0	0	3
TOTAL	329	4	0	0	0	333	TOTAL	468	2	1	0	0	471

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	94

AM PEAK HOUR	12:45 PM
AM PEAK VOLUME	67

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	797	6	1	0	0	804
% OF TOTAL	99.1%	0.7%	0.1%	0.0%	0.0%	100.0%
AM PEAK	94	0	0	0	0	94
PM PEAK	51	0	0	0	0	51

A021323

Study Site 10 - Riverdale Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS87 Dwy north of Thornton.

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	3	0	0	0	0	3
0:15	0	0	0	0	0	0	12:15	2	1	0	0	0	3
0:30	3	0	0	0	0	3	12:30	3	1	0	0	0	4
0:45	2	0	0	0	0	2	12:45	2	0	0	0	0	2
1:00	1	0	0	0	0	1	13:00	3	0	0	0	0	3
1:15	0	0	0	0	0	0	13:15	4	0	0	0	0	4
1:30	0	0	0	0	0	0	13:30	3	0	0	0	0	3
1:45	0	0	0	0	0	0	13:45	3	0	0	0	0	3
2:00	0	0	0	0	0	0	14:00	5	0	0	0	0	5
2:15	0	0	0	0	0	0	14:15	8	0	0	0	0	8
2:30	0	0	0	0	0	0	14:30	6	0	0	0	0	6
2:45	2	0	0	0	0	2	14:45	2	0	0	0	0	2
3:00	1	0	0	0	0	1	15:00	5	0	0	0	0	5
3:15	0	0	0	0	0	0	15:15	5	0	0	0	0	5
3:30	0	0	0	0	0	0	15:30	9	0	0	0	0	9
3:45	0	0	0	0	0	0	15:45	3	0	0	0	0	3
4:00	0	0	0	0	0	0	16:00	9	0	0	0	0	9
4:15	0	0	0	0	0	0	16:15	9	0	0	0	0	9
4:30	0	0	0	0	0	0	16:30	5	0	0	0	0	5
4:45	2	0	0	0	0	2	16:45	7	0	0	0	0	7
5:00	0	0	0	0	0	0	17:00	6	0	0	0	0	6
5:15	0	0	0	0	0	0	17:15	2	0	0	0	0	2
5:30	1	0	0	0	0	1	17:30	9	0	0	0	0	9
5:45	0	0	0	0	0	0	17:45	9	0	0	0	0	9
6:00	0	0	0	0	0	0	18:00	12	0	0	0	0	12
6:15	0	0	0	0	0	0	18:15	5	0	0	0	0	5
6:30	1	0	0	0	0	1	18:30	9	0	0	0	0	9
6:45	3	0	0	0	0	3	18:45	5	0	0	0	0	5
7:00	1	0	0	0	0	1	19:00	5	0	0	0	0	5
7:15	10	0	0	0	0	10	19:15	3	0	0	0	0	3
7:30	2	0	0	0	0	2	19:30	8	0	0	0	0	8
7:45	1	0	0	0	0	1	19:45	3	0	0	0	0	3
8:00	3	0	0	0	0	3	20:00	7	0	0	0	0	7
8:15	4	0	0	0	0	4	20:15	5	0	0	0	0	5
8:30	5	0	0	0	0	5	20:30	8	0	0	0	0	8
8:45	2	1	0	0	0	3	20:45	2	0	0	0	0	2
9:00	10	0	0	0	0	10	21:00	1	0	0	0	0	1
9:15	1	0	0	0	0	1	21:15	3	0	0	0	0	3
9:30	3	0	0	0	0	3	21:30	2	0	0	0	0	2
9:45	7	0	0	0	0	7	21:45	2	0	0	0	0	2
10:00	2	0	0	0	0	2	22:00	7	0	0	0	0	7
10:15	0	0	0	0	0	0	22:15	3	0	0	0	0	3
10:30	1	0	0	0	0	1	22:30	1	0	0	0	0	1
10:45	4	1	0	0	0	5	22:45	3	0	0	0	0	3
11:00	5	0	0	0	0	5	23:00	1	0	0	0	0	1
11:15	3	0	0	0	0	3	23:15	5	0	0	0	0	5
11:30	4	1	0	0	0	5	23:30	1	0	0	0	0	1
11:45	5	0	0	0	0	5	23:45	1	0	0	0	0	1
TOTAL	89	3	0	0	0	92	TOTAL	224	2	0	0	0	226

AM PEAK HOUR	8:15 AM
AM PEAK VOLUME	22

AM PEAK HOUR	5:45 PM
AM PEAK VOLUME	35

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	313	5	0	0	0	318
% OF TOTAL	98.4%	1.6%	0.0%	0.0%	0.0%	100.0%
AM PEAK	16	0	0	0	0	16
PM PEAK	30	0	0	0	0	30

A13123

Study Site 10 - Riverdale Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS87 Dwy north of Thornton.

AM	OUT					
TIME	1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0
0:15	0	0	0	0	0	0
0:30	2	0	0	0	0	2
0:45	1	0	0	0	0	1
1:00	1	0	0	0	0	1
1:15	0	0	0	0	0	0
1:30	1	0	0	0	0	1
1:45	1	0	0	0	0	1
2:00	0	0	0	0	0	0
2:15	0	0	0	0	0	0
2:30	0	0	0	0	0	0
2:45	1	0	0	0	0	1
3:00	0	0	0	0	0	0
3:15	0	0	0	0	0	0
3:30	1	0	0	0	0	1
3:45	0	0	0	0	0	0
4:00	1	0	0	0	0	1
4:15	1	0	0	0	0	1
4:30	0	0	0	0	0	0
4:45	0	0	0	0	0	0
5:00	1	0	0	0	0	1
5:15	0	0	0	0	0	0
5:30	1	0	0	0	0	1
5:45	1	0	0	0	0	1
6:00	1	0	0	0	0	1
6:15	3	0	0	0	0	3
6:30	6	0	0	0	0	6
6:45	3	0	0	0	0	3
7:00	13	0	0	0	0	13
7:15	14	0	0	0	0	14
7:30	3	0	0	0	0	3
7:45	7	0	0	0	0	7
8:00	6	0	0	0	0	6
8:15	3	0	0	0	0	3
8:30	11	0	0	0	0	11
8:45	5	1	0	0	0	6
9:00	6	0	0	0	0	6
9:15	1	0	0	0	0	1
9:30	4	0	0	0	0	4
9:45	6	0	0	0	0	6
10:00	4	0	0	0	0	4
10:15	0	0	0	0	0	0
10:30	2	0	0	0	0	2
10:45	1	0	0	0	0	1
11:00	3	0	0	0	0	3
11:15	4	0	0	0	0	4
11:30	5	0	0	0	0	5
11:45	4	1	0	0	0	5
TOTAL	128	2	0	0	0	130

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	37

PM	OUT					
Time	1	2	3	4	5	TOTAL
12:00	3	0	0	0	0	3
12:15	6	0	0	0	0	6
12:30	0	1	0	0	0	1
12:45	5	0	0	0	0	5
13:00	3	0	0	0	0	3
13:15	5	0	0	0	0	5
13:30	1	0	0	0	0	1
13:45	5	0	0	0	0	5
14:00	5	0	0	0	0	5
14:15	6	0	0	0	0	6
14:30	7	0	0	0	0	7
14:45	4	0	0	0	0	4
15:00	6	0	0	0	0	6
15:15	2	0	0	0	0	2
15:30	11	0	0	0	0	11
15:45	3	0	0	0	0	3
16:00	5	0	0	0	0	5
16:15	12	0	0	0	0	12
16:30	5	0	0	0	0	5
16:45	7	0	0	0	0	7
17:00	5	0	0	0	0	5
17:15	6	0	0	0	0	6
17:30	1	0	0	0	0	1
17:45	4	0	0	0	0	4
18:00	7	0	0	0	0	7
18:15	7	0	0	0	0	7
18:30	7	0	0	0	0	7
18:45	4	0	0	0	0	4
19:00	5	0	0	0	0	5
19:15	2	0	0	0	0	2
19:30	4	0	0	0	0	4
19:45	4	0	0	0	0	4
20:00	5	0	0	0	0	5
20:15	4	0	0	0	0	4
20:30	4	0	0	0	0	4
20:45	1	0	0	0	0	1
21:00	2	0	0	0	0	2
21:15	0	0	0	0	0	0
21:30	2	0	0	0	0	2
21:45	0	0	0	0	0	0
22:00	5	0	0	0	0	5
22:15	3	0	0	0	0	3
22:30	1	0	0	0	0	1
22:45	3	0	0	0	0	3
23:00	1	0	0	0	0	1
23:15	5	0	0	0	0	5
23:30	1	0	0	0	0	1
23:45	0	0	0	0	0	0
TOTAL	194	1	0	0	0	195

AM PEAK HOUR	3:30 PM
AM PEAK VOLUME	31

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	322	3	0	0	0	325
% OF TOTAL	99.1%	0.9%	0.0%	0.0%	0.0%	100.0%
AM PEAK	37	0	0	0	0	37
PM PEAK	29	0	0	0	0	29

A021323

Study Site 10 - Riverdale Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS88 Southern Dwy east of Cawston.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	6	0	0	0	0	6
0:15	2	0	0	0	0	2	12:15	12	0	0	0	0	12
0:30	3	0	0	0	0	3	12:30	9	0	0	0	0	9
0:45	1	0	0	0	0	1	12:45	3	0	0	0	0	3
1:00	1	0	0	0	0	1	13:00	4	0	0	0	0	4
1:15	2	0	0	0	0	2	13:15	13	0	0	0	0	13
1:30	0	0	0	0	0	0	13:30	11	0	0	0	0	11
1:45	3	0	0	0	0	3	13:45	3	0	0	0	0	3
2:00	0	0	0	0	0	0	14:00	4	0	0	0	0	4
2:15	1	0	0	0	0	1	14:15	11	0	0	0	0	11
2:30	0	0	0	0	0	0	14:30	8	0	0	0	0	8
2:45	1	0	0	0	0	1	14:45	11	0	0	0	0	11
3:00	0	0	0	0	0	0	15:00	14	0	0	0	0	14
3:15	1	0	0	0	0	1	15:15	6	0	0	0	0	6
3:30	0	0	0	0	0	0	15:30	9	0	0	0	0	9
3:45	0	0	0	0	0	0	15:45	12	0	0	0	0	12
4:00	0	0	0	0	0	0	16:00	7	0	0	0	0	7
4:15	0	0	0	0	0	0	16:15	13	0	0	0	0	13
4:30	1	0	0	0	0	1	16:30	6	0	0	0	0	6
4:45	0	0	0	0	0	0	16:45	16	0	0	0	0	16
5:00	5	0	0	0	0	5	17:00	16	0	0	0	0	16
5:15	2	0	0	0	0	2	17:15	7	0	0	0	0	7
5:30	3	0	0	0	0	3	17:30	13	0	0	0	0	13
5:45	2	0	0	0	0	2	17:45	10	0	0	0	0	10
6:00	1	0	0	0	0	1	18:00	6	0	0	0	0	6
6:15	0	0	0	0	0	0	18:15	10	0	0	0	0	10
6:30	3	0	0	0	0	3	18:30	10	0	0	0	0	10
6:45	4	0	0	0	0	4	18:45	10	0	0	0	0	10
7:00	12	0	0	0	0	12	19:00	10	0	0	0	0	10
7:15	11	0	0	0	0	11	19:15	7	0	0	0	0	7
7:30	10	0	0	0	0	10	19:30	8	0	0	0	0	8
7:45	5	0	0	0	0	5	19:45	4	0	0	0	0	4
8:00	6	0	0	0	0	6	20:00	4	0	0	0	0	4
8:15	2	0	0	0	0	2	20:15	3	0	0	0	0	3
8:30	9	0	0	0	0	9	20:30	4	0	0	0	0	4
8:45	9	0	0	0	0	9	20:45	2	0	0	0	0	2
9:00	3	0	0	0	0	3	21:00	4	0	0	0	0	4
9:15	3	0	0	0	0	3	21:15	6	0	0	0	0	6
9:30	4	0	0	0	0	4	21:30	6	0	0	0	0	6
9:45	2	0	0	0	0	2	21:45	2	0	0	0	0	2
10:00	3	0	0	0	0	3	22:00	4	0	0	0	0	4
10:15	2	0	0	0	0	2	22:15	5	0	0	0	0	5
10:30	5	1	0	0	0	6	22:30	5	0	0	0	0	5
10:45	4	0	0	0	0	4	22:45	3	0	0	0	0	3
11:00	6	0	0	0	0	6	23:00	0	0	0	0	0	0
11:15	5	0	0	0	0	5	23:15	1	0	0	0	0	1
11:30	6	0	0	0	0	6	23:30	1	0	0	0	0	1
11:45	1	1	0	0	0	2	23:45	1	0	0	0	0	1
TOTAL	145	2	0	0	0	147	TOTAL	340	0	0	0	0	340

AM PEAK HOUR	7:00 AM
AM PEAK VOLUME	38

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	52

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	485	2	0	0	0	487
% OF TOTAL	99.6%	0.4%	0.0%	0.0%	0.0%	100.0%
AM PEAK	38	0	0	0	0	38
PM PEAK	52	0	0	0	0	52

A13123

Study Site 10 - Riverdale Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS88 Southern Dwy east of Cawston.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	1	0	0	0	0	1	12:00	4	0	0	0	0	4
0:15	1	0	0	0	0	1	12:15	8	0	0	0	0	8
0:30	2	0	0	0	0	2	12:30	7	2	0	0	0	9
0:45	2	0	0	0	0	2	12:45	7	0	0	0	0	7
1:00	0	0	0	0	0	0	13:00	8	0	0	0	0	8
1:15	1	0	0	0	0	1	13:15	9	0	0	0	0	9
1:30	0	0	0	0	0	0	13:30	13	0	0	0	0	13
1:45	0	0	0	0	0	0	13:45	7	0	0	0	0	7
2:00	0	0	0	0	0	0	14:00	14	0	0	0	0	14
2:15	0	0	0	0	0	0	14:15	13	0	0	0	0	13
2:30	0	0	0	0	0	0	14:30	4	0	0	0	0	4
2:45	0	0	0	0	0	0	14:45	6	0	0	0	0	6
3:00	0	0	0	0	0	0	15:00	6	0	0	0	0	6
3:15	0	0	0	0	0	0	15:15	8	0	0	0	0	8
3:30	0	0	0	0	0	0	15:30	9	0	0	0	0	9
3:45	3	0	0	0	0	3	15:45	11	0	0	0	0	11
4:00	1	0	0	0	0	1	16:00	8	0	0	0	0	8
4:15	1	0	0	0	0	1	16:15	6	0	0	0	0	6
4:30	0	0	0	0	0	0	16:30	4	0	0	0	0	4
4:45	0	0	0	0	0	0	16:45	7	0	0	0	0	7
5:00	2	0	0	0	0	2	17:00	12	0	0	0	0	12
5:15	1	0	0	0	0	1	17:15	6	0	0	0	0	6
5:30	2	0	0	0	0	2	17:30	11	0	0	0	0	11
5:45	1	0	0	0	0	1	17:45	6	0	0	0	0	6
6:00	6	0	0	0	0	6	18:00	3	0	0	0	0	3
6:15	3	0	0	0	0	3	18:15	3	0	0	0	0	3
6:30	3	0	0	0	0	3	18:30	8	0	0	0	0	8
6:45	14	0	0	0	0	14	18:45	8	0	0	0	0	8
7:00	20	0	0	0	0	20	19:00	4	0	0	0	0	4
7:15	18	0	0	0	0	18	19:15	4	0	0	0	0	4
7:30	26	0	0	0	0	26	19:30	4	0	0	0	0	4
7:45	11	0	0	0	0	11	19:45	3	0	0	0	0	3
8:00	6	0	0	0	0	6	20:00	5	0	0	0	0	5
8:15	5	0	0	0	0	5	20:15	5	0	0	0	0	5
8:30	8	0	0	0	0	8	20:30	5	0	0	0	0	5
8:45	8	0	0	0	0	8	20:45	3	0	0	0	0	3
9:00	5	0	0	0	0	5	21:00	5	0	0	0	0	5
9:15	2	0	0	0	0	2	21:15	5	0	0	0	0	5
9:30	5	0	0	0	0	5	21:30	4	0	0	0	0	4
9:45	6	0	0	0	0	6	21:45	2	0	0	0	0	2
10:00	5	0	0	0	0	5	22:00	1	0	0	0	0	1
10:15	0	0	0	0	0	0	22:15	2	0	0	0	0	2
10:30	3	0	0	0	0	3	22:30	4	0	0	0	0	4
10:45	7	1	0	0	0	8	22:45	1	0	0	0	0	1
11:00	8	1	0	0	0	9	23:00	0	0	0	0	0	0
11:15	5	0	0	0	0	5	23:15	7	0	0	0	0	7
11:30	4	0	0	0	0	4	23:30	1	0	0	0	0	1
11:45	5	1	0	0	0	6	23:45	1	0	0	0	0	1
TOTAL	201	3	0	0	0	204	TOTAL	282	2	0	0	0	284

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	78

AM PEAK HOUR	1:30 PM
AM PEAK VOLUME	47

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	483	5	0	0	0	488
% OF TOTAL	99.0%	1.0%	0.0%	0.0%	0.0%	100.0%
AM PEAK	75	0	0	0	0	75
PM PEAK	36	0	0	0	0	36

A021323

Study Site 10 - Riverdale Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS89 Northern Dwy east of Cawston.

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	4	0	0	0	0	4
0:15	0	0	0	0	0	0	12:15	3	0	0	0	0	3
0:30	0	0	0	0	0	0	12:30	3	0	0	0	0	3
0:45	1	0	0	0	0	1	12:45	1	0	0	0	0	1
1:00	0	0	0	0	0	0	13:00	5	0	0	0	0	5
1:15	0	0	0	0	0	0	13:15	1	0	0	0	0	1
1:30	1	0	0	0	0	1	13:30	4	0	0	0	0	4
1:45	0	0	0	0	0	0	13:45	4	0	0	0	0	4
2:00	1	0	0	0	0	1	14:00	7	1	0	0	0	8
2:15	0	0	0	0	0	0	14:15	5	0	0	0	0	5
2:30	0	0	0	0	0	0	14:30	4	0	0	0	0	4
2:45	0	0	0	0	0	0	14:45	4	0	0	0	0	4
3:00	0	0	0	0	0	0	15:00	4	0	0	0	0	4
3:15	0	0	0	0	0	0	15:15	5	0	1	0	0	6
3:30	0	0	0	0	0	0	15:30	3	0	0	0	0	3
3:45	0	0	0	0	0	0	15:45	2	0	0	0	0	2
4:00	2	0	0	0	0	2	16:00	7	0	0	0	0	7
4:15	5	0	0	0	0	5	16:15	6	0	0	0	0	6
4:30	0	0	0	0	0	0	16:30	8	0	0	0	0	8
4:45	0	0	0	0	0	0	16:45	10	0	0	0	0	10
5:00	0	0	0	0	0	0	17:00	8	0	0	0	0	8
5:15	0	0	0	0	0	0	17:15	4	0	0	0	0	4
5:30	0	0	0	0	0	0	17:30	3	0	0	0	0	3
5:45	1	0	0	0	0	1	17:45	4	0	0	0	0	4
6:00	1	0	0	0	0	1	18:00	5	0	0	0	0	5
6:15	2	0	0	0	0	2	18:15	6	0	0	0	0	6
6:30	1	0	0	0	0	1	18:30	8	0	0	0	0	8
6:45	0	0	0	0	0	0	18:45	4	0	0	0	0	4
7:00	2	0	0	0	0	2	19:00	5	0	0	0	0	5
7:15	1	0	0	0	0	1	19:15	4	0	0	0	0	4
7:30	5	0	0	0	0	5	19:30	4	0	0	0	0	4
7:45	2	0	0	0	0	2	19:45	5	0	0	0	0	5
8:00	0	0	0	0	0	0	20:00	3	0	0	0	0	3
8:15	1	0	0	0	0	1	20:15	7	0	0	0	0	7
8:30	3	0	0	0	0	3	20:30	4	0	0	0	0	4
8:45	5	0	0	0	0	5	20:45	12	0	0	0	0	12
9:00	5	1	0	0	0	6	21:00	4	0	0	0	0	4
9:15	3	0	0	0	0	3	21:15	5	0	0	0	0	5
9:30	1	0	0	0	0	1	21:30	4	0	0	0	0	4
9:45	5	0	0	0	0	5	21:45	6	0	0	0	0	6
10:00	3	0	0	0	0	3	22:00	2	0	0	0	0	2
10:15	2	0	0	0	0	2	22:15	4	0	0	0	0	4
10:30	2	0	0	0	0	2	22:30	3	0	0	0	0	3
10:45	4	0	0	0	0	4	22:45	3	0	0	0	0	3
11:00	5	0	0	0	0	5	23:00	6	0	0	0	0	6
11:15	1	0	0	0	0	1	23:15	7	0	0	0	0	7
11:30	3	0	0	0	0	3	23:30	6	0	0	0	0	6
11:45	3	1	0	0	0	4	23:45	5	0	0	0	0	5
TOTAL	73	2	0	0	0	75	TOTAL	231	1	1	0	0	233

AM PEAK HOUR	8:30 AM
AM PEAK VOLUME	17

AM PEAK HOUR	4:15 PM
AM PEAK VOLUME	32

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	304	3	1	0	0	308
% OF TOTAL	98.7%	1.0%	0.3%	0.0%	0.0%	100.0%
AM PEAK	10	0	0	0	0	10
PM PEAK	32	0	0	0	0	32

A13123

Study Site 10 - Riverdale Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS89 Northern Dwy east of Cawston.

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	0	0	0	0	0	0	12:00	6	0	0	0	0	6
0:15	0	0	0	0	0	0	12:15	9	0	0	0	0	9
0:30	3	0	0	0	0	3	12:30	6	0	0	0	0	6
0:45	1	0	0	0	0	1	12:45	4	0	0	0	0	4
1:00	0	0	0	0	0	0	13:00	5	0	0	0	0	5
1:15	0	0	0	0	0	0	13:15	4	0	0	0	0	4
1:30	0	0	0	0	0	0	13:30	5	0	0	0	0	5
1:45	0	0	0	0	0	0	13:45	4	0	0	0	0	4
2:00	0	0	0	0	0	0	14:00	3	0	0	0	0	3
2:15	0	0	0	0	0	0	14:15	8	0	0	0	0	8
2:30	0	0	0	0	0	0	14:30	6	0	0	0	0	6
2:45	2	0	0	0	0	2	14:45	5	0	0	0	0	5
3:00	1	0	0	0	0	1	15:00	6	0	0	0	0	6
3:15	0	0	0	0	0	0	15:15	9	0	0	0	0	9
3:30	3	0	0	0	0	3	15:30	5	0	1	0	0	6
3:45	0	0	0	0	0	0	15:45	7	0	0	0	0	7
4:00	0	0	0	0	0	0	16:00	2	0	0	0	0	2
4:15	4	0	0	0	0	4	16:15	6	0	0	0	0	6
4:30	0	0	0	0	0	0	16:30	6	0	0	0	0	6
4:45	1	0	0	0	0	1	16:45	5	0	0	0	0	5
5:00	0	0	0	0	0	0	17:00	6	0	0	0	0	6
5:15	0	0	0	0	0	0	17:15	3	0	0	0	0	3
5:30	2	0	0	0	0	2	17:30	4	0	0	0	0	4
5:45	2	0	0	0	0	2	17:45	3	0	0	0	0	3
6:00	5	0	0	0	0	5	18:00	6	0	0	0	0	6
6:15	3	0	0	0	0	3	18:15	5	0	0	0	0	5
6:30	2	0	0	0	0	2	18:30	3	0	0	0	0	3
6:45	5	0	0	0	0	5	18:45	3	0	0	0	0	3
7:00	7	0	0	0	0	7	19:00	6	0	0	0	0	6
7:15	7	0	0	0	0	7	19:15	2	0	0	0	0	2
7:30	5	0	0	0	0	5	19:30	2	0	0	0	0	2
7:45	2	0	0	0	0	2	19:45	3	0	0	0	0	3
8:00	4	0	0	0	0	4	20:00	3	0	0	0	0	3
8:15	3	0	0	0	0	3	20:15	1	0	0	0	0	1
8:30	6	0	0	0	0	6	20:30	1	0	0	0	0	1
8:45	4	0	0	0	0	4	20:45	2	0	0	0	0	2
9:00	2	0	0	0	0	2	21:00	1	0	0	0	0	1
9:15	2	0	0	0	0	2	21:15	5	0	0	0	0	5
9:30	3	0	0	0	0	3	21:30	2	0	0	0	0	2
9:45	8	0	0	0	0	8	21:45	2	0	0	0	0	2
10:00	1	0	0	0	0	1	22:00	1	0	0	0	0	1
10:15	3	0	0	0	0	3	22:15	1	0	0	0	0	1
10:30	2	0	0	0	0	2	22:30	3	0	0	0	0	3
10:45	3	0	0	0	0	3	22:45	2	0	0	0	0	2
11:00	2	0	0	0	0	2	23:00	1	0	0	0	0	1
11:15	2	0	0	0	0	2	23:15	0	0	0	0	0	0
11:30	3	0	0	0	0	3	23:30	1	0	0	0	0	1
11:45	1	1	0	0	0	2	23:45	0	0	0	0	0	0
TOTAL	104	1	0	0	0	105	TOTAL	183	0	1	0	0	184

AM PEAK HOUR	6:45 AM
AM PEAK VOLUME	24

AM PEAK HOUR	3:00 PM
AM PEAK VOLUME	28

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	
TOTAL: AM+PM	287	1	1	0	0	289
% OF TOTAL	99.3%	0.3%	0.3%	0.0%	0.0%	100.0%
AM PEAK	21	0	0	0	0	21
PM PEAK	23	0	0	0	0	23

A021323

Study Site 11 - Parkridge Meadows Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS70 Dwy east of E Parkridge.

AM	IN						PM	IN					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	9	0	0	0	0	9
0:15	2	0	0	0	0	2	12:15	10	0	0	0	0	10
0:30	8	0	0	0	0	8	12:30	16	0	0	0	0	16
0:45	2	0	0	0	0	2	12:45	13	1	0	0	0	14
1:00	2	0	0	0	0	2	13:00	20	2	0	0	0	22
1:15	2	0	0	0	0	2	13:15	10	2	0	0	0	12
1:30	1	0	0	0	0	1	13:30	18	1	0	0	0	19
1:45	1	0	0	0	0	1	13:45	18	0	0	0	0	18
2:00	1	0	0	0	0	1	14:00	19	2	0	0	0	21
2:15	1	0	0	0	0	1	14:15	21	1	0	0	0	22
2:30	1	0	0	0	0	1	14:30	37	1	0	0	0	38
2:45	1	0	0	0	0	1	14:45	32	0	0	0	0	32
3:00	4	0	0	0	0	4	15:00	15	0	0	0	0	15
3:15	5	0	0	0	0	5	15:15	22	2	0	0	0	24
3:30	1	0	0	0	0	1	15:30	20	0	0	0	0	20
3:45	4	0	0	0	0	4	15:45	17	0	0	0	0	17
4:00	7	0	0	0	0	7	16:00	26	3	0	0	0	29
4:15	0	0	0	0	0	0	16:15	21	0	0	0	0	21
4:30	2	0	0	0	0	2	16:30	26	0	0	0	0	26
4:45	4	0	0	0	0	4	16:45	25	0	0	0	0	25
5:00	3	0	0	0	0	3	17:00	23	0	0	0	0	23
5:15	5	0	0	0	0	5	17:15	25	0	0	0	0	25
5:30	1	0	0	0	0	1	17:30	19	0	0	0	0	19
5:45	5	0	0	0	0	5	17:45	30	0	0	0	0	30
6:00	4	0	0	0	0	4	18:00	13	0	0	0	0	13
6:15	6	0	0	0	0	6	18:15	28	1	0	0	0	29
6:30	3	2	0	0	0	5	18:30	14	1	0	0	0	15
6:45	8	1	0	0	0	9	18:45	26	0	0	0	0	26
7:00	6	2	0	0	0	8	19:00	18	0	0	0	0	18
7:15	7	3	0	0	0	10	19:15	9	0	0	0	0	9
7:30	20	0	1	0	0	21	19:30	18	0	0	0	0	18
7:45	11	0	0	0	0	11	19:45	20	0	0	0	0	20
8:00	11	0	1	0	0	12	20:00	14	0	0	0	0	14
8:15	15	1	0	0	0	16	20:15	7	0	0	0	0	7
8:30	11	1	0	0	0	12	20:30	18	0	0	0	0	18
8:45	8	2	0	0	0	10	20:45	14	0	0	0	0	14
9:00	11	0	0	0	0	11	21:00	9	0	0	0	0	9
9:15	5	0	0	0	0	5	21:15	15	0	0	0	0	15
9:30	9	2	0	0	0	11	21:30	11	0	0	0	0	11
9:45	8	0	0	0	0	8	21:45	12	0	0	0	0	12
10:00	13	0	0	0	0	13	22:00	11	0	0	0	0	11
10:15	3	1	0	0	0	4	22:15	6	0	0	0	0	6
10:30	9	1	0	0	0	10	22:30	12	0	0	0	0	12
10:45	15	0	0	0	0	15	22:45	5	0	0	0	0	5
11:00	10	0	0	0	0	10	23:00	7	0	0	0	0	7
11:15	7	1	0	0	0	8	23:15	3	0	0	0	0	3
11:30	11	0	0	0	0	11	23:30	6	0	0	0	0	6
11:45	8	0	0	0	0	8	23:45	2	0	0	0	0	2
TOTAL	284	17	2	0	0	303	TOTAL	790	17	0	0	0	807

AM PEAK HOUR	7:30 AM
AM PEAK VOLUME	60

AM PEAK HOUR	2:00 PM
AM PEAK VOLUME	113

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	1,074	34	2	0	0	1,110
% OF TOTAL	96.8%	3.1%	0.2%	0.0%	0.0%	100.0%
AM PEAK	57	1	2	0	0	60
PM PEAK	98	3	0	0	0	101

A13123

Study Site 11 - Parkridge Meadows Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS70 Dwy east of E Parkridge.

AM	OUT						PM	OUT					
TIME	1	2	3	4	5	TOTAL	Time	1	2	3	4	5	TOTAL
0:00	2	0	0	0	0	2	12:00	8	0	0	0	0	8
0:15	3	0	0	0	0	3	12:15	12	1	0	0	0	13
0:30	4	0	0	0	0	4	12:30	12	0	0	0	0	12
0:45	3	0	0	0	0	3	12:45	10	0	0	0	0	10
1:00	2	0	0	0	0	2	13:00	16	2	0	0	0	18
1:15	1	0	0	0	0	1	13:15	15	2	0	0	0	17
1:30	1	0	0	0	0	1	13:30	14	0	0	0	0	14
1:45	0	0	0	0	0	0	13:45	18	0	0	0	0	18
2:00	0	0	0	0	0	0	14:00	16	3	0	0	0	19
2:15	0	0	0	0	0	0	14:15	20	2	0	0	0	22
2:30	1	0	0	0	0	1	14:30	17	0	0	0	0	17
2:45	0	0	0	0	0	0	14:45	14	0	0	0	0	14
3:00	1	0	0	0	0	1	15:00	16	1	0	0	0	17
3:15	0	0	0	0	0	0	15:15	29	2	0	0	0	31
3:30	1	0	0	0	0	1	15:30	24	0	0	0	0	24
3:45	2	0	0	0	0	2	15:45	21	0	0	0	0	21
4:00	10	0	0	0	0	10	16:00	15	3	0	0	0	18
4:15	14	0	0	0	0	14	16:15	17	0	0	0	0	17
4:30	16	0	0	0	0	16	16:30	12	0	0	0	0	12
4:45	11	0	0	0	0	11	16:45	9	0	0	0	0	9
5:00	6	0	0	0	0	6	17:00	18	0	0	0	0	18
5:15	19	0	0	0	0	19	17:15	15	0	0	0	0	15
5:30	13	0	0	0	0	13	17:30	15	0	0	0	0	15
5:45	16	0	0	0	0	16	17:45	12	0	0	0	0	12
6:00	10	0	0	0	0	10	18:00	11	0	0	0	0	11
6:15	11	0	0	0	0	11	18:15	12	0	0	0	0	12
6:30	18	0	0	0	0	18	18:30	15	3	0	0	0	18
6:45	28	3	0	0	0	31	18:45	12	0	0	0	0	12
7:00	12	1	0	0	0	13	19:00	14	1	0	0	0	15
7:15	35	4	0	0	0	39	19:15	11	0	0	0	0	11
7:30	26	0	0	0	0	26	19:30	13	0	0	0	0	13
7:45	26	0	1	0	0	27	19:45	7	0	0	0	0	7
8:00	23	0	0	0	0	23	20:00	16	0	0	0	0	16
8:15	10	0	1	0	0	11	20:15	10	0	0	0	0	10
8:30	14	1	0	0	0	15	20:30	19	0	0	0	0	19
8:45	20	3	0	0	0	23	20:45	7	0	0	0	0	7
9:00	15	0	0	0	0	15	21:00	7	0	0	0	0	7
9:15	16	0	0	0	0	16	21:15	4	0	0	0	0	4
9:30	9	1	0	0	0	10	21:30	6	0	0	0	0	6
9:45	16	1	0	0	0	17	21:45	6	0	0	0	0	6
10:00	10	0	0	0	0	10	22:00	1	0	0	0	0	1
10:15	17	0	0	0	0	17	22:15	4	0	0	0	0	4
10:30	8	1	0	0	0	9	22:30	7	0	0	0	0	7
10:45	17	0	0	0	0	17	22:45	3	0	0	0	0	3
11:00	10	0	0	0	0	10	23:00	8	0	0	0	0	8
11:15	5	0	0	0	0	5	23:15	0	0	0	0	0	0
11:30	12	1	0	0	0	13	23:30	3	0	0	0	0	3
11:45	17	0	0	0	0	17	23:45	1	0	0	0	0	1
TOTAL	511	16	2	0	0	529	TOTAL	572	20	0	0	0	592

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	115

AM PEAK HOUR	3:15 PM
AM PEAK VOLUME	94

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

TOTAL: AM+PM	1,083	36	2	0	0	1,121
% OF TOTAL	96.6%	3.2%	0.2%	0.0%	0.0%	100.0%
AM PEAK	110	4	1	0	0	115
PM PEAK	60	0	0	0	0	60

A021323

Study Site 12 - Hunt Club Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS81 Dwy west of Goetz.

AM TIME	IN 1	2	3	4	5	TOTAL	PM Time	IN 1	2	3	4	5	TOTAL
0:00	11	0	0	0	0	11	12:00	29	1	0	0	0	30
0:15	7	0	0	0	0	7	12:15	34	0	0	0	0	34
0:30	9	0	0	0	0	9	12:30	28	0	0	0	0	28
0:45	6	0	0	0	0	6	12:45	32	1	0	0	0	33
1:00	3	0	0	0	0	3	13:00	20	2	0	0	0	22
1:15	6	0	0	0	0	6	13:15	40	2	0	0	0	42
1:30	3	0	0	0	0	3	13:30	37	0	0	0	0	37
1:45	7	0	0	0	0	7	13:45	29	0	0	0	0	29
2:00	2	0	0	0	0	2	14:00	28	0	0	0	0	28
2:15	5	0	0	0	0	5	14:15	48	1	0	0	0	49
2:30	5	0	0	0	0	5	14:30	45	0	0	0	0	45
2:45	8	0	0	0	0	8	14:45	33	1	0	0	0	34
3:00	5	0	0	0	0	5	15:00	33	1	0	0	0	34
3:15	2	0	0	0	0	2	15:15	51	0	0	0	0	51
3:30	2	0	0	0	0	2	15:30	48	0	1	0	0	49
3:45	8	0	0	0	0	8	15:45	62	0	0	0	0	62
4:00	0	0	0	0	0	0	16:00	56	1	0	0	0	57
4:15	3	0	0	0	0	3	16:15	42	0	0	0	0	42
4:30	1	0	0	0	0	1	16:30	49	0	0	0	0	49
4:45	10	0	0	0	0	10	16:45	39	0	0	0	0	39
5:00	5	0	0	0	0	5	17:00	59	0	0	0	0	59
5:15	8	0	0	0	0	8	17:15	43	0	0	0	0	43
5:30	6	0	0	0	0	6	17:30	40	0	0	0	0	40
5:45	5	0	0	0	0	5	17:45	50	1	0	0	0	51
6:00	6	0	0	0	0	6	18:00	38	1	0	0	0	39
6:15	3	0	0	0	0	3	18:15	33	0	0	0	0	33
6:30	8	0	0	0	0	8	18:30	44	0	0	0	0	44
6:45	9	0	0	0	0	9	18:45	35	1	0	0	0	36
7:00	9	0	0	0	0	9	19:00	33	0	0	0	0	33
7:15	14	0	0	0	0	14	19:15	29	0	0	0	0	29
7:30	15	0	0	0	0	15	19:30	27	0	0	0	0	27
7:45	34	0	0	0	0	34	19:45	20	1	0	0	0	21
8:00	44	1	0	0	0	45	20:00	29	0	0	0	0	29
8:15	47	2	1	0	0	50	20:15	25	0	0	0	0	25
8:30	23	0	0	0	0	23	20:30	33	0	0	0	0	33
8:45	37	0	0	0	0	37	20:45	29	0	0	0	0	29
9:00	14	0	0	0	0	14	21:00	29	0	0	0	0	29
9:15	13	0	0	0	0	13	21:15	21	0	0	0	0	21
9:30	16	0	0	0	0	16	21:30	32	0	0	0	0	32
9:45	10	1	0	0	0	11	21:45	10	0	0	0	0	10
10:00	11	1	0	0	0	12	22:00	15	0	0	0	0	15
10:15	16	2	0	0	0	18	22:15	18	0	0	0	0	18
10:30	19	0	0	0	0	19	22:30	21	0	0	0	0	21
10:45	20	0	0	0	0	20	22:45	19	0	0	0	0	19
11:00	14	1	1	0	0	16	23:00	11	0	0	0	0	11
11:15	20	0	0	0	0	20	23:15	21	0	0	0	0	21
11:30	17	0	0	0	0	17	23:30	10	0	0	0	0	10
11:45	19	0	0	0	0	19	23:45	14	0	0	0	0	14
TOTAL	565	8	2	0	0	575	TOTAL	1,571	14	1	0	0	1,586

AM PEAK HOUR	8:00 AM
AM PEAK VOLUME	155

AM PEAK HOUR	3:15 PM
AM PEAK VOLUME	219

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

	1	2	3	4	5	TOTAL
TOTAL: AM+PM	2,136	22	3	0	0	2,161
% OF TOTAL	98.8%	1.0%	0.1%	0.0%	0.0%	100.0%
AM PEAK	151	3	1	0	0	155
PM PEAK	192	1	0	0	0	193

A13123

Study Site 12 - Hunt Club Apartments

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: THREE DAYS **CITY:** WRCOG

JOB #: SC3826 **LOCATION:** CLASS81 Dwy west of Goetz.

AM TIME	OUT 1	2	3	4	5	TOTAL	PM Time	OUT 1	2	3	4	5	TOTAL
0:00	5	0	0	0	0	5	12:00	27	1	0	0	0	28
0:15	4	0	0	0	0	4	12:15	17	0	0	0	0	17
0:30	6	0	0	0	0	6	12:30	42	1	0	0	0	43
0:45	1	0	0	0	0	1	12:45	29	1	0	0	0	30
1:00	2	0	0	0	0	2	13:00	31	2	0	0	0	33
1:15	5	0	0	0	0	5	13:15	24	0	0	0	0	24
1:30	4	0	0	0	0	4	13:30	39	3	0	0	0	42
1:45	1	0	0	0	0	1	13:45	40	1	0	0	0	41
2:00	2	0	0	0	0	2	14:00	53	0	0	0	0	53
2:15	4	0	0	0	0	4	14:15	38	0	0	0	0	38
2:30	2	0	0	0	0	2	14:30	32	0	0	0	0	32
2:45	4	0	0	0	0	4	14:45	25	0	0	0	0	25
3:00	4	0	0	0	0	4	15:00	38	1	0	0	0	39
3:15	8	0	0	0	0	8	15:15	39	1	0	0	0	40
3:30	12	0	0	0	0	12	15:30	38	0	1	0	0	39
3:45	15	0	0	0	0	15	15:45	39	0	0	0	0	39
4:00	13	0	0	0	0	13	16:00	28	0	0	0	0	28
4:15	11	0	0	0	0	11	16:15	32	1	0	0	0	33
4:30	23	0	0	0	0	23	16:30	33	0	0	0	0	33
4:45	17	0	0	0	0	17	16:45	23	0	0	0	0	23
5:00	10	0	0	0	0	10	17:00	28	0	0	0	0	28
5:15	18	0	0	0	0	18	17:15	39	0	0	0	0	39
5:30	21	0	0	0	0	21	17:30	31	0	0	0	0	31
5:45	28	0	0	0	0	28	17:45	27	0	0	0	0	27
6:00	14	0	0	0	0	14	18:00	17	0	0	0	0	17
6:15	25	1	0	0	0	26	18:15	24	0	0	0	0	24
6:30	37	0	0	0	0	37	18:30	19	0	0	0	0	19
6:45	30	0	0	0	0	30	18:45	24	0	0	0	0	24
7:00	47	1	0	0	0	48	19:00	20	1	0	0	0	21
7:15	65	0	0	0	0	65	19:15	17	0	0	0	0	17
7:30	72	0	0	0	0	72	19:30	13	0	0	0	0	13
7:45	87	0	0	0	0	87	19:45	17	0	0	0	0	17
8:00	53	0	0	0	0	53	20:00	10	0	0	0	0	10
8:15	30	1	0	0	0	31	20:15	18	2	0	0	0	20
8:30	16	2	1	0	0	19	20:30	18	0	0	0	0	18
8:45	17	0	0	0	0	17	20:45	16	0	0	0	0	16
9:00	30	0	0	0	0	30	21:00	9	0	0	0	0	9
9:15	14	0	0	0	0	14	21:15	8	0	0	0	0	8
9:30	23	0	0	0	0	23	21:30	16	0	0	0	0	16
9:45	20	0	0	0	0	20	21:45	8	0	0	0	0	8
10:00	25	1	0	0	0	26	22:00	5	0	0	0	0	5
10:15	27	0	0	0	0	27	22:15	4	0	0	0	0	4
10:30	17	1	0	0	0	18	22:30	11	0	0	0	0	11
10:45	31	0	0	0	0	31	22:45	10	0	0	0	0	10
11:00	24	0	0	0	0	24	23:00	7	0	0	0	0	7
11:15	25	1	0	0	0	26	23:15	6	0	0	0	0	6
11:30	22	0	0	0	0	22	23:30	2	0	0	0	0	2
11:45	16	0	1	0	0	17	23:45	1	0	0	0	0	1
TOTAL	987	8	2	0	0	997	TOTAL	1,092	15	1	0	0	1,108

AM PEAK HOUR	7:15 AM
AM PEAK VOLUME	277

AM PEAK HOUR	1:30 PM
AM PEAK VOLUME	174

CLASS 1	CARS
CLASS 2	2-AXLE TRUCKS
CLASS 3	3-AXLE TRUCKS
CLASS 4	4-AXLE TRUCKS
CLASS 5	5-AXLE + TRUCKS

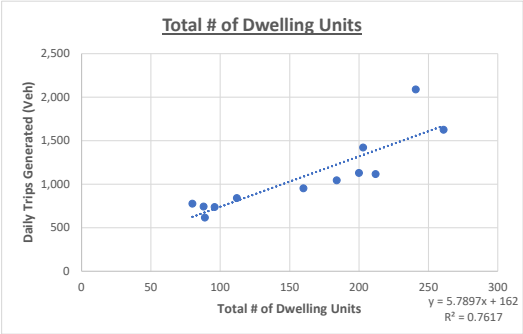
TOTAL: AM+PM	2,079	23	3	0	0	2,105
% OF TOTAL	98.8%	1.1%	0.1%	0.0%	0.0%	100.0%
AM PEAK	277	0	0	0	0	277
PM PEAK	125	0	0	0	0	125

Appendix B: Apartment Characteristics

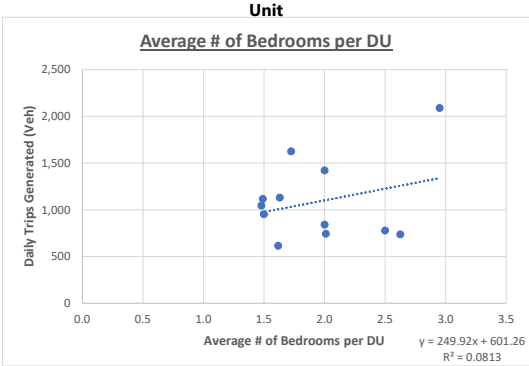
Study Site #	TUMF Zone	Name	Address	Phone #	Apartment Website	# of Apartment Style								Apartment Size (Sq. Ft.)							
						Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Total # of DUs	Total # of Bedrooms	Average # Bedrooms per DU	Studio	One Bedroom	Two Bedrooms	Three Bedrooms	Four Bedrooms	Average Size of Unit per Complex	Sum of Area of All Dus	Average Square Footage per DU (Sq. Ft.)
1	Central Zone	Oakwood Apartments	15170 Perris Blvd, Moreno Valley, CA 92551	+1 951-243-0800	N/A	-	-	80	93	68	241	711	3.0	-	-	832	1,042	1,282	1,052	250,642	1040.01
2	Northwest Zone	Springbrook Park Apartments	1066 Orange St, Riverside, CA 92501	+1 951-682-9774	N/A	-	40	32	40	-	112	224	2.0	-	800	967	1,100	-	956	106,944	954.86
3	Central Zone	Vista Springs Apartments	21550 Box Springs Rd, Moreno Valley, CA 92557	+1 951-276-0334	N/A	-	108	104	-	-	212	316	1.5	-	690	960	-	-	825	174,360	822.45
4	Northwest Zone	Vesada Apartment Homes	3390 Country Village Road, Riverside, CA 92509	+1 951-462-2198	california.weidner.com	18	72	153	18	-	261	450	1.7	629	782	1,021	1,168	-	900	244,863	938.17
5	Southwest Zone	Morning Ridge Apartments	30660 Milky Way Dr, Temecula, CA 92592	+1 951-699-0886	morningridgeapts.com	-	74	126	-	-	200	326	1.6		680	950	-	-	815	170,020	850.10
6	Northwest Zone	Stonegate Apartments	6506 Doolittle Ave, Riverside, CA 92503	(951) 351-9445	stonegateriverside.com	1	79	80	-	-	160	240	1.5	300	705	905	-	-	637	128,395	802.47
7	Southwest Zone	River's Edge Apartment Homes	2088 E Lakeshore Dr, Lake Elsinore, CA 92530	+1 951-678-8553	riversedgeapartmentliving.com	-	96	88	-	-	184	272	1.5	-	762	1,089	-	-	926	168,984	918.39
8	Hemet/San Jacinto Zone	Mayberry Colony Apartments	40389 Mayberry Ave # A1, Hemet, CA 92544	+1 951-929-3380	www.mayberrycolony.com	-	34	55	-	-	89	144	1.6	-	790	962	-	-	876	79,770	896.29
9	Pass Zone	Summit Ridge Apartments	555 N Hathaway St # 1101, Banning, CA 92220	+1 951-849-3001	www.summitridgebanning.com	-	-	40	40	-	80	200	2.5	-	850	1,058	-	-	954	42,320	529.00
10	Hemet/San Jacinto Zone	Riverdale Apartments	1250 S Cawston Ave, Hemet, CA 92545	+1 951-766-5672	www.rentriverdaleapts.com	-	-	36	60	-	96	252	2.6	-	-	984	1,033	-	1,009	97,404	1014.63
11	Northwest Zone	Parkridge Meadows Apartments	219 E Parkridge Ave, Corona, CA 92879	+1 951-736-8681	www.allenproperties.net	-	-	87	1	-	88	177	2.0	-	-	780	-	-	780	67,860	771.14
12	Central Zone	Hunt Club Apartments	1355 S Perris Blvd, Perris, CA 92570	+1 951-657-0228	www.huntclubperris.com	-	-	203	-	-	203	406	2.0	-	-	962	-	-	962	195,286	962.00

Appendix C: Correlation Plots

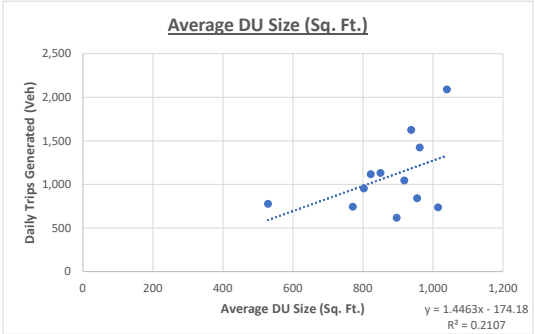
Daily Trip Generation by # of Dwelling Units in Complex



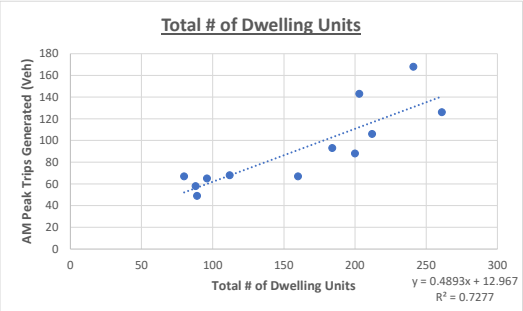
Daily Trip Generation by Average # of Bedrooms Per Dwelling Unit



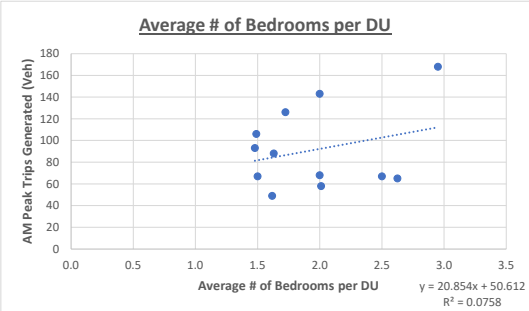
Daily Trip Generation by Average Size of Dwelling Unit



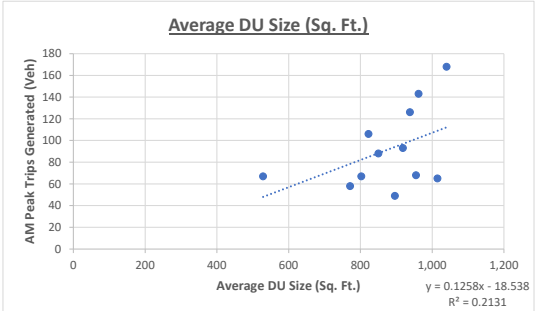
AM Peak Trip Generation by # of Dwelling Units in Complex



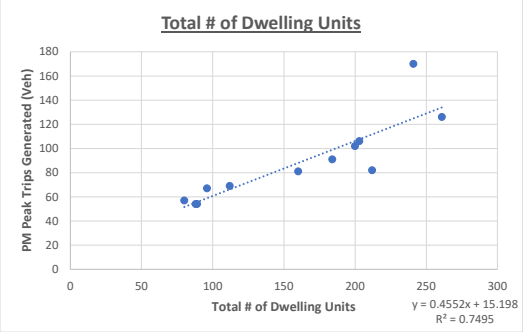
AM Peak Trip Generation by Average # of Bedrooms Per Dwelling Unit



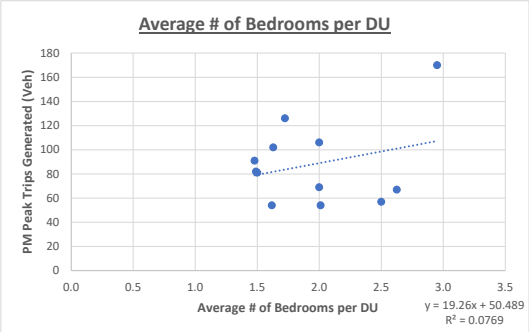
AM Peak Trip Generation by Average Size of Dwelling Unit



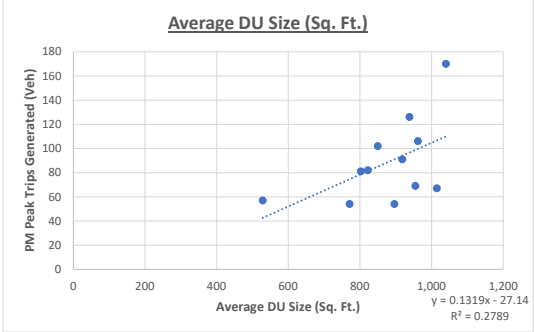
PM Peak Trip Generation by # of Dwelling Units in Complex



PM Peak Trip Generation by Average # of Bedrooms Per Dwelling Unit



PM Peak Trip Generation by Average Size of Dwelling Unit



Appendix L - Non-Residential Fee Calculation

The non-residential fee was calculated by multiplying the estimated Regional System of Highways and Arterials improvements cost attributable to new development (**Section 4.0**) by the proportion of all regional trips that are generated by non-residential land uses (**Section 5.3**), and dividing this number by the projected increase in non-residential land use between 2018 and 2045 (**Table 2.3**, **Section 2.0**) and the proportional share of new employees in each sector.

In preparation for the fee calculation, SCAG 2020 RTP/SCS employment data by sector was first converted to land use as square feet of gross floor area (SF GFA). Non-residential employee to gross floor area conversion factors were derived from four sources. These sources are:

- Cordoba Corporation/Parsons Brinckerhoff Quade and Douglas, Inc. (PBQD), Land Use Density Conversion Factors For The Long-Range Corridor Study San Bernardino and Riverside Counties, August 20, 1990. Table 8.
- Orange County Transportation Authority (OCTA), Orange County Subarea Modeling Guidelines Manual, June 2001. Appendix C.
- Southern California Association of Governments (SCAG), Employment Density Study, October 31, 2001, Table IIB
- County of Riverside, General Plan, As Amended December 15, 2015, Appendix E: Socioeconomic Build-Out Projections Assumptions & Methodology, Table E-5

The employment conversion factors developed for use in the calculation of the non-residential fee are tabulated in **Exhibits L-1** through **L-4**. The relevant sections of these respective publications are included in this Appendix as **Exhibits L-5** through **L-8**.

To account for the difference in trip generation rates between the various employment sectors, the non-residential fee value for each sector was normalized by multiplying by the respective median trip generation rate for the range of associated land use types as published in the Institute of Traffic Engineers Trip Generation Manual, Eleventh Edition, 2021. The respective fee values are presented in **Section 6.2**. The table detailing the calculation of the non-residential fee (and residential fee) is included in **Appendix K** as **Exhibit K-1**.

EXHIBIT L-1 Employment Conversion Factors

Employment Sector	Business by Land Use Category (1)	Employees	Gross Floor Area (TSF)	Conversion Rate (Employees/TSF)	Land Use Category (2)	Minimum Range Conversion Rate (Employees/TSF)	Land Use Category (3)	SF per Employee based on Average Employees per Acre and Average FAR (Riverside County)	Employees/TSF	Land Use Category (4)	SF per Employee	Employees/TSF	TUMF Median Employment Conversion Factors (Employees/TSF)
Industrial	Heavy Manufacturing	6,379	5,117	1.25	R&D/LI/BP	2.50	R&D/Flex Space	867		Light Industrial	1030		
	General Manufacturing	11.603	6.103	1.90	Heavy Industry	2.00	Light Manufacturing	1548		Heavy Industry	1500		
	Light Manufacturing	8,624	3,962	2.18	Warehouse	1.00	Warehouse	1195					
	Manufacturing, Small Module	5.559	3.038	1.83									
	High Tech/Research	954	411	2.32									
	Wholesale, Trade Industry	6,120	4,140	1.48									
	Warehousing	119	279	0.43									
	General Industry	1,023	917	1.12									
	Median			**1.65**	Median	**2.00**	Median	*1195.0*	**0.84**	Median	*1265.0*	**0.79**	**1.25**
Retail	Retail Trade	34,821	20,125	1.73			Regional Retail	268		Commercial Retail	500		
	Personnal, Rental and Repair	3,452	1,590	2.17			Other Retail/Service	629					
	Equipment Rental	1,080	453	2.38									
	General Commercial	12,978	17,023	0.76									
	Median			**1.95**			Median	*448.5*	**2.23**	Median	*500.0*	**2.00**	**2.00**
Service	Financial/Insurance/Real Estate	7,738	1,095	7.07	Office	3.00	Low-Rise Office	481		Commercial Office	300		
	Small Office	3,945	548	7.20	Medical/PO/Bank	3.50	Hotel/Motel	3476		Business Park	600		
	Professional Services	5,470	1,529	3.58	Hospital	2.50							
	Business Services	6,680	1,966	3.40	Restaurant	3.00							
	General Offices	8,900	3,886	2.29									
	Medical Services	9,006	3,201	2.81									
	Restaurant	23.345	4.061	5.75									
	Median			**3.58**	Median	**3.00**	Median	*1978.5*	**0.51**	Median	*450.0*	**2.22**	**2.61**
Government/Public Sector					Government/Civic	3.00	Government Offices	208					
					Library	1.50							
					Median	**2.25**	Median	*208.0*	**4.81**				**3.53**

Notes:
- Business by Land Use Categories Wholesale Trade Commercial and Automotive Repair were excluded as there is inconsistencies between the Land Use Density Conversion Factors For Long Range Corridor Study San Bernardino and Riverside Counties categorization, and the NAICS Major Group categorization.
- OCTA Typical Employment Conversion Factors for Commercial excluded as it potentially covers uses in both Retail and Service categories; Hotel/Motel, Schools, Golf Course, Developed Park, Park and Agricultural were excluded as they are calculated from units other than TSF.
- TUMF Median Employment Conversion Factor is the median of (1) through (4) Conversion Rates

(1) Cordoba Corporation/PBQD, Land Use Density Conversion Factors For Long Range Corridor Study San Bernardino and Riverside Counties, August 20, 1990. Table 8.
(2) OCTA, Orange County Subarea Model Guidelines Manual, June 2001. Appendix C.
(3) SCAG, Employment Density Study, October 31, 2001, Table IIB
(4) County of Riverside, General Plan, As Amended December 15, 2015, Appendix E: Socioeconomic Build-Out Projections Assumptions & Methodology, Table E-5

EXHIBIT L-2 Population and Employment Estimates

Sector	2018	2045	Change	Employee Conversion Factor / TSF	Change in SF of GFA
Population	1,905,440	2,533,876	628,436		
Households					
Single-Family	397,407	564,898	167,491		
Multi-Family	157,166	247,501	90,335		
Totals	554,573	812,399	257,826		
Employees					
Industrial	169,334	245,915	76,581	**1.25**	61,489,565
Retail	73,814	86,929	13,115	**2.00**	6,557,500
Service	308,703	482,958	174,255	**2.61**	66,735,957
Government/Public Sector	18,569	30,640	12,071	**3.53**	3,420,665
Totals	570,420	846,442	276,022		138,203,688

Source: SCAG 2020 RTP/SCS; RivCOM

EXHIBIT L-3 Trip Generation Rate Comparison

Non-Residential

	Employee Growth	SF Growth	ITE Median PM Peak Hour Trips Per Employee	ITE Median PM Peak Hour Trips per TSF	Trip Growth (SFGrowth * ITEMedian)	Calculated PM Peak Hour Trips per Employee	Weighted Median PM Peak Hour Trips Per Employee	Median Share PM Peak Period Pass By Trips (Retail and Service Uses)	Adjusted PM Peak Hour Trips Per Employee
Industrial	76,581	61,489,565	0.7	0.6	36,894	0.5	0.6		0.6
Retail	13,115	6,557,500	3.3	5.0	32,788	2.5	2.9	37%	1.8
Service	174,255	66,735,957	2.2	5.7	380,395	2.2	2.2	44%	1.2
Government/Public Sector	12,071	3,420,665	3.3	3.2	10,946	0.9	2.1		2.1
	276,022	138,203,688			461,022				

EXHIBIT L-4 Representative ITE Weekday PM Peak Hour Trip Generation Rates

RESIDENTIAL

Land Use Category	ITE Reference	PM Peak Hour Trip Ends per DU	PM Peak Hour Trip Ends per Residents
Single Family Residential			
Single Family Detached Housing	210	0.99	0.28
Multi Family			
Single-Family Attached Housing	215	0.61	0.44
Multifamily Housing (Low-Rise) Not Close to Rail Transit	220	0.57	0.27
Multifamily Housing (Mid-Rise) Not Close to Rail Transit	221	0.39	0.23
Multifamily Housing (High-Rise) Not Close to Rail Transit	222	0.40	
Affordable Housing - Income Limits	223	0.50	0.14
Average		*0.49*	*0.27*
Median		*0.50*	*0.25*

NON-RESIDENTIAL

Land Use Category	ITE Reference	PM Peak Hour Trip Ends per TSF*	PM Peak Hour Trip Ends per Employee*	PM Peak Period Pass by Trips**
Industrial				
Intermodal Truck Terminal	30	1.89	0.72	
General Light Industry	110	0.80	0.69	
Industrial Park	130	0.40	0.42	
Manufacturing	140	0.80	0.40	
Warehousing	150	0.23	0.68	
High-Cube Transload and Short-Term Storage	154	0.17		
High-Cube Fulfillment Center Warehouse - Non-Sort	155	0.27		
High-Cube Parcel Hib Warehouse	156	0.71		
Average		*0.66*	*0.58*	
Median		*0.56*	*0.68*	
Retail				
Building Materials and Lumber	812	2.65	3.30	
Free-Standing Discount Superstore	813	4.39	1.75	29%
Variety Store	814	7.42	12.65	34%
Free-Standing Discount Store	815	5.42	2.36	20%
Hardware/Paint Store	816	1.10	3.77	26%
Nursery (Garden Center)	817	8.37	2.55	
Nursery (Wholesale)	818	5.01	0.59	
Shopping Center	820	4.09	1.91	
Shopping Center (150K to 300K)	820			29%
Shopping Center (300K to 900 K)	820			19%
Shopping Plaza with Supermarket	821	9.72		
Shopping Plaza without Supermarket	821	5.40	1.80	
Shopping Plaza	821			40%
Strip Retail Plaza	822	13.24	10.15	
Factory Outlet Center	823	1.94		
Automobile Sales (New)	840	2.65	1.10	
Automobile Sales (Used)	841	4.92	2.27	
Automobile Parts Sales	843	5.88	4.27	43%
Tire Store	848	3.72	3.05	25%
Supermarket	850	9.19	3.37	24%
Convenience Store	851	53.51	34.33	
Convenience Market with Gasoline Pumps	853			
Discount Supermarket	854			
Discount Club	857	4.62	3.49	34%
Sporting Goods Superstore	861	2.58	0.93	
Home Improvement Superstore	862	3.21		42%
Electronics Superstore	863	4.48		40%
Pet Supply Superstore	866	2.19		
Book Superstore	868	14.00		
Department Store	875	2.81		
Apparel Store	876	4.20		
Pharmacy/Drugstore without Drive Through Window	880	8.62		53%
Pharmacy/Drugstore with Drive Through Window	881	11.23	7.79	49%
Marijuana Dispensary	882	24.57		
Furniture Store	890	0.70	1.01	53%
Liquor Store	899	17.00	5.98	
Gasoline/Service Station	944		28.39	57%
Convenience Store/Gas Station (none)	945		21.31	
Convenience Store/Gas Station (9 - 15 vehicle fueling positions)	945	56.38		75%
Average		*9.54*	*6.87*	*38%*
Median		*4.97*	*3.30*	*37%*
Service				
Data Center	160	0.13		
Specialty Trade Contractor	180	2.18	0.80	
Movie Theatre	445	14.06	9.56	
Health/Fitness Club	492	3.92		
Day Care Center	565	11.82	4.66	44%
Hospital	610	0.98	0.33	
Nursing Home	620	0.82	0.45	
Clinic	630	4.22	2.49	
Animal Hospital/Veterinary Clinic	640	3.83	2.26	
Free Standing Emergency Room	650	2.24		
Small Office Building	712	3.15	1.90	
Medical-Dentist Office Building (Stand-Alone)	720	4.79	1.26	
Medical-Dentist Office Building (Within/Near Hospital Campus)	720	3.78	1.03	
Walk-in Bank	911	26.40	6.18	
Drive-in Bank	912	20.92	4.36	35%
Hair Salon	918	1.94		
Copy, Print and Express Ship Store	920	12.30	6.63	
Fast Casual Restaurant	930	18.57		
Fine Dining Restaurant	931	8.28	1.79	44%
High Turnover (Sit-Down) Restaurant	932	16.35	3.66	43%
Fast Food Restaurant with Drive Through	934	50.94	5.45	55%
Fast Food Restaurant with Drive Through No Seating	935			31%
Coffee/Donut Shop with Drive Through	937	43.65		
Coffee/Donut Shop with Drive Through No Seating	938			98%
Quick Lube Vehicle Shop	941	9.42	2.17	
Automobile Care Center	942	3.51	1.43	
Automobile Parts and Service Center	943	2.61	1.80	
Wine Tasting Room	970	6.60		
Brewery Tap Room	971	10.93		
Drinking Place	975	15.53		
Average		*10.85*	*3.06*	*50%*
Median		*5.70*	*2.17*	*44%*
Government/Public Sector				
Recreational Community Center	495	2.53	2.71	
Elementary School	520		4.60	
Middle/Junior High School	522		4.83	
High School	525		3.32	
School District Office	528	2.37	0.84	
Private School (K-8)	530		5.72	
Private School (K-12)	532		2.82	
Private High School	534		2.49	
Charter Elementary School	536		10.64	
Charter School (K-12)	538		10.66	
Junior/Community College	540		1.63	
University/College	550		0.81	
Adult Detention Facility	571	0.94	0.51	
Library	590	8.53	6.81	
Government Office Building	730	3.19	0.91	
State Motor Vehicles Department	731	7.68	4.27	
Post Office	732	15.11	3.29	
Average		*5.76*	*3.93*	
Median		*3.19*	*3.29*	

Notes:

* - Average weekday PM peak hour of generator trip end data derived from ITE Trip Generation Manual (11th Edition), September 2021

** - Average weekday PM peak pass-by trip rates derived from ITE Trip Generation Manual (11th Edition), September 2021

EXHIBIT L-5
Land Use Density Conversion Factors for the Long-Range Corridor Study San Bernardino and Riverside Counties, Table 8
Cordoba Corporation/Parsons Brinckerhoff Quade and Douglas, Inc. (PBQD), August 20, 1990.

TABLE 8
EMPLOYEES PER ACRE
RIVERSIDE COUNTY

BUSINESS BY LAND USE	Employees *	Floor Space Sq. Ft.	Square Feet Per Employee	Average F.A.R	Employees per Acre
Manufacturing/Industrial	40,383	23,968,000	594	0.25	18
Heavy Manufacturing	6,379	5,117,000	802	0.20	11
General Manufacturing	11,603	6,103,000	526	0.20	17
Light Manufacturing	8,624	3,962,000	459	0.25	24
Manufacturing, Small Module	5,559	3,038,000	547	0.25	20
High Tech Activity and Research	954	411,000	431	0.35	35
Wholesale Trade Industrial	6,120	4,140,000	676	0.25	16
Warehousing	119	279,000	2,345	0.25	5
General Industrial	1,023	917,000	896	0.20	10
Commercial	79,067	46,304,000	586	0.30	22
Retail Trade	34,821	20,125,000	578	0.30	23
Restaurants and Bars	23,345	4,061,000	174	0.30	75
Personnal, Rental and Repair Services	3,452	1,590,000	461	0.30	28
Automotive Repair Services	1,870	1,619,000	866	0.30	15
Equipment Rental	1,080	453,000	419	0.30	31
Wholesale, Trade Commercial	1,521	1,434,000	943	0.25	12
General Commercial	12,978	17,023,000	1,312	0.40	13
Office	41,740	12,226,000	293	0.50	74
Finance/Insurance/Real Estate	7,738	1,095,000	142	0.50	154
Finance/Insurance/RE/Small Office	3,945	548,000	139	0.50	157
Professional Services	5,470	1,529,000	280	0.50	78
Business Services	6,680	1,966,000	294	0.50	74
General Office	8,900	3,886,000	437	0.50	50
Medical Services	9,006	3,201,000	355	0.50	61

*** Employment figures do not include government, military and sole proprietorships.**
Source: Urban Decision Systems (1989), Census Zip Business Patterns (1986)
Filename: Trans rv

EXHIBIT L-6
Orange County Subarea Modeling Guidelines Manual, Appendix C
Orange County Transportation Authority (OCTA)
June 2001

TYPICAL EMPLOYMENT CONVERSION FACTORS
(June 2001)

Land Use Category	Conversion Rates Range	Employment Type (Percentate Ranges)		
		Retail	Service	Other
Commercial	2.25 –2.75 employees/TSF[1]	60% - 90%	10% - 40%	0% – 5%
Office/Office Park	3.00 – 4.00 employees/TSF	0% – 5%	20% – 30%	65% - 80%
R&D/Light Industrial/Business Park	2.50 – 3.50 employees/TSF	0% – 5%	0% - 30%	60% - 100%
Heavy Industrial	2.00 – 2.50 employees/TSF	0%	0%	100%
Warehouse	1.00 – 2.00 employees/TSF	0%	0%	100%
Restaurant	3.00 – 5.00 employees/TSF	100%	0%	0%
Medical Office/Post-Offfice/Bank	3.50 – 4.50 employees/TSF	0% - 10%	70% - 100%	0% – 20%
Government Office/Civic Center	3.00 – 4.00 employees/TSF	0% – 5%	50% - 70%	25% – 50%
Hospital	2.50 – 3.00 employees/TSF	0%	70% - 80%	20% – 30%
Library/Museum	1.50 – 2.50 employees/TSF	0%	100%	0%
Hotel/Motel	0.75 – 1.25 employees/room	0% - 10%	70% - 80%	10% – 30%
Schools	0.08 – 0.12 employees/student	0%	0%	100%
Golf Course	0.50 – 0.70 employees/acre	0% - 10%	90% - 100%	0%
Developed Park/Athletic Fields	0.20 – 0.40 employees/acre	0%	80% - 100%	0% – 20%
Park	0.05 – 0.10 employees/acre	0%	80% - 100%	0% – 20%
Agricultural	0.01 – 0.05 employees/acre	0%	0%	100%

[1] Thousands of Square Feet

EXHIBIT L-7
Employment Density Study, Table IIB
Southern California, October 31, 2001

Table II-A
Derivation of Square Feet per Employee Based on:
--MEDIAN EMPLOYEES PER ACRE
--MEDIAN FAR

Land Use Category	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial	Region
	Square Feet per Employee						
Regional Retail	--	2,322	165	1,392	990	--	1,023
Other Retail/Svc.	730	450	1,148	432	412	796	585
Low-Rise Office	471	352	598	1,014	659	415	466
High-Rise Office	377	235	--	--	--	--	300
Hotel/Motel	1,179	--	5,273	1,747	--	808	1,804
R & D/Flex Space	1,717	511	1,121	1,833	277	--	527
Light Manufacturing	1,214	786	2,221	1,538	202	2,230	924
Heavy Manufacuring	--	--	--	--	--	--	--
Warehouse	1,518	1,350	819	2,111	149	3,257	1,225
Government Offices	2,182	408	1,475	851	120	407	672

Table II-B
Derivation of Square Feet per Employee Based on:
--AVERAGE EMPLOYEES PER ACRE
--AVERAGE FAR

Land Use Category	Los Angeles	Orange	Riverside	San Bernardino	Ventura	Imperial	Region
	Square Feet per Employee						
Regional Retail	--	704	268	1,009	1,165	--	857
Other Retail/Svc.	424	325	629	124	271	255	344
Low-Rise Office	319	287	481	697	389	632	288
High-Rise Office	440	218	--	--	--	--	311
Hotel/Motel	--	--	3,476	2,544	--	311	1,152
R & D/Flex Space	1,796	466	867	834	269	--	344
Light Manufacturing	829	558	1,548	705	189	994	439
Heavy Manufacuring	--	--	--	--	--	--	--
Warehouse	1,518	979	581	1,195	131	450	814
Government Offices	1,442	206	208	188	94	322	261

Notes:
"--" = Data not available.

EXHIBIT L-8
General Plan, As Amended December 15, 2015.
Appendix E: Socioeconomic Build-Out Projections Assumptions & Methodology,
Table E-5
County of Riverside, 2015

Table E-3: Net Parcel Acre Factors

Land Use Designation	Net Parcel Area
Commercial Retail (CR)	0.75
Commercial Tourist (CT)	0.75
Commercial Office (CO)	0.75
Light Industrial (LI)	0.80
Heavy Industrial (HI)	0.75
Business Park (BP)	0.75

Net Parcel Square Feet: To convert net acres to net square feet, net acres are multiplied by 43,560 feet per acre. For example, 50 net acres of Commercial Office (66.66 gross acres) equals 2,178,000 net square feet.

Floor Area Ratio (FAR): Floor Area Ratio, or FAR, indicates the ratio of gross building square footage permitted on a parcel to net square footage of the parcel. FAR's for Commercial, Industrial and Business Park land uses are identified, in Table E-4, below. See General Plan Glossary for full definition of FAR.

Table E-4: Development FAR Factors

	FAR		
Land Use Designation	Minimum	Probable*	Maximum
Commercial Retail (CR)	0.20	0.23	0.35
Commercial Tourist (CT)	0.20	0.25	0.35
Commercial Office (CO)	0.25	0.35	1.00
Light Industrial (LI)	0.25	0.38	0.60
Heavy Industrial (HI)	0.15	0.40	0.50
Business Park (BP)	0.25	0.30	0.60

*Factor used for theoretical planning estimates.

Building Square Footage: Building square footage for the land use designations listed in the table above are calculated by multiplying the Net Square Feet of each land use designation by the corresponding FAR. For instance, 20,000 square feet of Commercial Retail with an FAR of 0.23 would yield 4,600 square feet of building space.

Square Feet (SF)/Employee Factor: This factor indicates the number of employees typically associated with a given amount of square feet of building space per employee. It is used to estimate the number of jobs resulting for a given land use designation. These factors for the commercial land use designations are listed in Table E-5 below.

Table E-5: Commercial Employment Factors

Land Use Designation	SF/Employee
Commercial Retail (CR)*	500
Commercial Tourist (CT)	500
Commercial Office (CO)	300
Light Industrial (LI)	1,030
Heavy Industrial (HI)	1,500
Business Park (BP)	600

*It is assumed that CR designated lands will build out at 40% CR and 60% MDR.

Employment: Employment for commercial, industrial, and business park land uses is calculated by dividing the total number of building square feet by the SF/Employee factor. For example, 300,000 square feet of commercial office building space would yield 1,000 employees.