



Western Riverside Council of Governments Public Works Committee

AGENDA

**Thursday, September 13, 2018
2:00 p.m.**

**Western Riverside Council of Governments
Citrus Tower
3390 University Avenue, Suite 450
Riverside, CA 92501**

In compliance with the Americans with Disabilities Act and Government Code Section 54954.2, if special assistance is needed to participate in the Public Works Committee meeting, please contact WRCOG at (951) 405-6703. Notification of at least 48 hours prior to meeting time will assist staff in assuring that reasonable arrangements can be made to provide accessibility at the meeting. In compliance with the Government Code Section 54957.5, agenda materials distributed within 72 hours prior to the meeting, which are public records relating to an open session agenda items, will be available for inspection by members of the public prior to the meeting at 3390 University Avenue, Suite 450, Riverside, CA, 92501.

The Public Works Committee may take any action on any item listed on the agenda, regardless of the Requested Action.

- 1. CALL TO ORDER (Patty Romo, Chair)**
- 2. SELF INTRODUCTIONS**
- 3. PLEDGE OF ALLEGIANCE**
- 4. PUBLIC COMMENTS**

At this time members of the public can address the Public Works Committee regarding any items with the subject matter jurisdiction of the Committee that are not separately listed on this agenda. Members of the public will have an opportunity to speak on agenda items at the time the item is called for discussion. No action may be taken on items not listed on the agenda unless authorized by law. Whenever possible, lengthy testimony should be presented to the Committee in writing and only pertinent points presented orally.

5. MINUTES

- A. Summary Minutes from the August 9, 2018, Public Works Committee Meeting
are Available for Consideration.**

P. 1

Requested Action: 1. *Approve the Summary Minutes from the August 9, 2018, Public Works Committee meeting.*

6. CONSENT CALENDAR

All items listed under the Consent Calendar are considered to be routine and may be enacted by one motion. Prior to the motion to consider any action by the Committee, any public comments on any of the Consent Items will be heard. There will be no separate action unless members of the Committee request specific items be removed from the Consent Calendar.

A. TUMF Revenue and Expenditures Update P. 7

Requested Action: 1. *Receive and file.*

7. REPORTS / DISCUSSION

A. Smart Cities Update Tyler Masters, WRCOG P. 15

Requested Action: 1. *Receive and file.*

B. Inland Empire Transportation Cybersecurity Research Initiative Christopher Gray, WRCOG P. 17

Requested Action: 1. *Receive and file.*

C. Proposed New TUMF Calculation Policy Daniel Ramirez-Cornejo, WRCOG P. 41

Requested Actions:

1. *Recommend that the Executive Committee adopt changes to the Administrative Plan to allow for WRCOG to calculate and collect TUMF on behalf of its member agencies.*
2. *Recommend that the Executive Committee direct staff to prepare an amendment to the TUMF Ordinance to allow WRCOG to collect TUMF on behalf of its member agencies.*
3. *Recommend that the Executive Committee direct staff to consult with each member agency to formally determine those that wish to enroll in this process.*
4. *Recommend that the Executive Committee direct staff to work with legislative bodies with each agency wishing to enroll in this process to adopt an update to their TUMF Ordinance.*
5. *Recommend that the Executive Committee direct staff to allow those agencies which do not wish at this time to enroll in this process to continue calculating and collecting TUMF.*

D. TUMF Program 3,000 Square Foot Exemption for Retail and Service Uses Implementation Update Daniel Ramirez-Cornejo, WRCOG P. 111

Requested Action: 1. *Approve a revision to the 3,000 square foot reduction policy for retail and service uses that limits this reduction to projects that are less than 20,000 square feet.*

Requested Action: 1. *Recommend that the Executive Committee approve an update to the TUMF Zone boundaries to align with County of Riverside Supervisorial districts.*

8. REPORT FROM THE DIRECTOR OF TRANSPORTATION *Christopher Gray*

9. ITEMS FOR FUTURE AGENDAS *Members*

Members are invited to suggest additional items to be brought forward for discussion at future Public Works Committee meetings.

10. GENERAL ANNOUNCEMENTS *Members*

Members are invited to announce items / activities which may be of general interest to the Public Works Committee.

11. **NEXT MEETING:** The next Public Works Committee meeting will be held on Thursday, October 11, 2018, at 2:00 p.m., at WRCOG's office located at 3390 University Avenue, Suite 450, Riverside.

12. ADJOURNMENT

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1. CALL TO ORDER

The meeting of the Public Works Committee was called to order at 2:01 p.m. by Vice-Chair Patty Romo at WRCOG's office, Citrus Conference Room.

2. ROLL CALL

Members present:

Lori Askew, City of Calimesa
Rosalva Ureno, City of Corona
Craig Bradshaw, City of Eastvale
Remon Habib, City of Lake Elsinore
Carlos Geronimo, City of Menifee
Michael Wolfe, City of Moreno Valley
Bob Moehling, City of Murrieta
Brad Brophy, Cities of Perris and San Jacinto
Jeff Hart, City of Riverside
Patrick Thomas, City of Temecula (2:03 p.m. arrival)
Craig Bradshaw, City of Wildomar
Patricia Romo, County of Riverside
Shirley Medina, Riverside County Transportation Commission
Rohan Kuruppu, Riverside Transit Agency

Staff present:

Rick Bishop, Executive Director
Christopher Gray, Director of Transportation
Christopher Tzeng, Program Manager
Daniel Ramirez-Cornejo, Program Manager
Jessica May, Staff Analyst
Anthony Segura, Staff Analyst
Suzy Nelson, Administrative Assistant

Guests present:

David Dazlich, BIA
Glenn Higa, County of Riverside
Amer Attar, City of Temecula
Paul Rodriguez, Rodriguez Consulting Group
Steve Magner, Traffic Technology Services

3. PLEDGE OF ALLEGIANCE

Vice-Chair Patty Romo led the members and guests in the pledge of allegiance.

4. PUBLIC COMMENTS

There were no public comments.

5. SELECTION OF PUBLIC WORKS COMMITTEE CHAIR, VICE-CHAIR, AND 2ND VICE-CHAIR FOR FISCAL YEAR 2018/2019

Christopher Gray explained the selection process for Chair, Vice-Chair, and 2nd Vice-Chair of the Public Works Committee which is based on the leadership for the Executive Committee. For the current year, Chuck Washington is Chairman, Bonnie Wright from the City of Hemet is Vice-Chair, and Laura Roughton from the City of Jurupa Valley is the 2nd Vice-Chair of the Executive Committee.

Action: 1. *Selected Patricia Romo as Public Works Committee Chair, Representative from Hemet as Vice-Chair, and Representative of Jurupa Valley as 2nd Vice-Chair for Fiscal Year 2018/2019.*

(Eastvale / Lake Elsinore) 15 yes; 0 no; 0 abstention. Item 5 was approved. The Cities of Banning, Beaumont, Canyon Lake, Hemet, Jurupa Valley, and Norco, and the March JPA were not present.

6. MINUTES *(Murrieta / Temecula) 15 yes; 0 no; 0 abstention. Item 6.A was approved. The Cities of Banning, Beaumont, Canyon Lake, Hemet, Jurupa Valley, and Norco, and the March JPA were not present.*

A. Summary Minutes from the June 14, 2018, Public Works Committee Meeting are Available for Consideration.

Action: 1. *Approved Summary Minutes from the June 14, 2018, Public Works Committee meeting.*

7. CONSENT CALENDAR *(Eastvale / Murrieta) 15 yes; 0 no; 0 abstention. Item 7.A and 7.B were approved. The Cities of Banning, Beaumont, Canyon Lake, Hemet, Jurupa Valley, and Norco and the March JPA were not present.*

A. TUMF Revenue and Expenditures Update

Action: 1. *Received and filed.*

B. Finance Department Activities Update

Action: 1. *Received and filed.*

8. REPORTS / DISCUSSION

A. Personal Signal Assistant Technology

Christopher Tzeng introduced Steve Mager from Traffic Technology Services (TTS) to present on new developments related to in-vehicle personal signal assistant technology.

Committee member Patrick Thomas noted that the City of Temecula is working with TTS and its signal vendor to consider deploying this technology in Temecula.

Mr. Mager presented on the growing capabilities of this technology and emphasized the importance of implementation via public-private partnerships. Several car companies are developing equipped vehicles and partnering with cities across the country; for example, Audi has already deployed this technology in 15 cities throughout the United States. TTS works directly with advanced traffic management system providers to retain a one-way data push from local government infrastructure to the TTS servers; this data is then reformatted and used by equipped vehicles. Cities are encouraged to consider working with TTS to deploy these systems because TTS covers much of the initial startup costs and, once in-place, cities will have real-time traffic data available and will likely have safer roads.

Chair Romo asked if this technology would also help drivers identify the best routes.

Mr. Mager noted that Garmin International, which delivers innovative GPS technology across diverse markets, wants to come onboard once TTS has 50,000 intersections mapped. Also,

this technology would only lead drivers through signalized intersections – not neighborhoods or cemeteries.

Committee member Remon Habib asked if there was any application to the freeways or if this is only for local roadways.

Mr. Mager explained that TTS has a sister company in Europe that has worked on a similar system for the Autobahn; however, in the United States TTS is starting with intersections and will eventually start on freeways. TTS has an existing agreement with Caltrans and is starting to add Caltrans intersections in the Bay Area.

Chair Romo asked if there were any security concerns regarding pushing data out.

Mr. Mager responded that TTS has cyber-insurance and because there is a one-way push out, there is no opportunity for hackers to get back into city systems.

Committee member Michael Wolfe asked about pushback from city attorneys, particularly if a vehicle were to get into an accident while using this technology.

Mr. Mager explained that data sharing agreements contain a two-step indemnification wherein the original equipment manufacturer will represent a city in court, were an incident were to occur.

Action: 1. *Received and filed.*

B. Fee Comparison Analysis Update

Christopher Tzeng reported that WRCOG undertook a study in 2016 on the total fees collected for development projects within each WRCOG jurisdiction and several adjacent jurisdictions. At that time, the Executive Committee requested that this study be updated regularly on a 2-year basis.

Mr. Tzeng announced that WRCOG is starting a 2018 update to this study, using the same methodology used in 2016, and requested that agencies provide updated information if there have been any fee changes since the 2016 study.

Christopher Gray noted that a two-year schedule would be useful to provide up-to-date information, and would coincide with the TUMF Nexus Study updates planned to occur every four years.

Committee member Patrick Thomas asked if this information would be made available to the private sector.

Mr. Gray responded that this is public information and would be online, and the Building Industry Association (BIA) was supportive of the 2016 effort.

David Dazlich noted that although the San Diego chapter of the BIA funds a similar study in that subregion, the number of jurisdictions in this subregion makes it nearly infeasible to conduct a fee comparison study, but that the BIA will be supportive of the study where possible.

Rick Bishop noted that this study provides a unique perspective to jurisdictions and it is interesting for cities to learn how they compare to each other.

Action: 1. *Received and filed.*

C. Riverside County Traffic Analysis Model (RIVTAM) Update

Christopher Gray reported that WRCOG is working on an update to the RIVTAM model and will be setting up a website for agencies to submit traffic count data. The more data submitted, the better the model will be, and agencies are encouraged to submit data to Christopher Tzeng. This item will also be presented in Coachella Valley to request additional data from that part of the County.

Action: 1. *Received and filed.*

D. Proposed New TUMF Calculation Policy

Daniel Ramirez-Cornejo provided an update on the current and proposed TUMF calculation policies. Currently, agencies calculate and collect TUMF fees, which commonly results in collection errors and fee disputes that result in significant staff and legal costs. WRCOG staff propose that WRCOG assumes responsibility for all TUMF calculations. At the request of staff, WRCOG legal counsel has determined that if WRCOG were to calculate fees, the TUMF Administrative Plan would require a revision; however, if WRCOG were to calculate and collect fees, both the TUMF Administrative Plan and TUMF Ordinance would require updates.

Mr. Ramirez-Cornejo presented three options: 1) WRCOG calculates fees, 2) WRCOG calculates and collects fees for some agencies, or 3) WRCOG calculates and collects fees for all agencies. Three handouts were distributed that would be used by member agencies to submit to WRCOG for fee calculations under all proposed options. Handouts could be submitted electronically, with a 48-hour turnaround.

Christopher Gray added that agency staff would be required to submit forms, rather than developers directly coming to WRCOG, because agency staff have the full project background and can accurately describe what is being constructed. Additionally, Mr. Gray requested that agencies review the handouts and provide input on the proposed process before this item is presented to all WRCOG Committees next month.

Committee member Glenn Higa asked if fee collection would occur electronically or in-person if WRCOG were to collect the fees.

Mr. Ramirez-Cornejo responded that the collections would occur electronically and that a number of WRCOG programs, such as the HERO Program, already collect money so WRCOG has policies and procedures in place to accommodate collection.

Committee member Glenn Higa asked for clarification on TUMF credit agreements, and if WRCOG would issue credits.

Mr. Ramirez-Cornejo responded that WRCOG has a list of credit agreements and would be able to verify if a project was part of a credit agreement and collect the balance or award credit.

Mr. Gray added that credit agreements would still be between the agency and developer because agencies would be ultimately responsible for accepting the physical improvements made pursuant to agreements. Agencies would use the proposed calculation worksheets introduced by Mr. Ramirez-Cornejo to identify if a project was part of a credit agreement and WRCOG staff would develop an internal accounting process for credit agreements.

Committee member Bob Moehling asked if there were any agencies that saw a downside to WRCOG taking responsibility for calculations and noted that the City of Murrieta is happy to give up that responsibility.

Mr. Ramirez-Cornejo and Mr. Gray added that some concerns over timing were initially raised; however, WRCOG is committed to a 48-hour turnaround. Also, WRCOG collections would be done electronically, so developers would not be required to physically come into the WRCOG offices. Developers would also still have the option of paying in-person with check if preferred.

Committee member Shirley Medina asked if this change would apply to regional arterial projects.

Mr. Gray noted that there would be no change to the payment process to Riverside Transit Agency and Riverside County Transportation Commission.

Mr. Ramirez-Cornejo added that this item will be presented to the other WRCOG Committees and brought back to this Committee for recommendation in September. An updated TUMF calculation website has been created, but it is not yet live.

Mr. Gray noted that this tool would be useful for developers to obtain fee estimates, particularly when projects are still in the preliminary stages.

Action: 1. *Received and filed.*

E. TUMF Program 3,000 Square Foot Exemption for Retail and Service Uses Implementation Update

Daniel Ramirez-Cornejo provided an update on implementation of the 3,000 square foot (SF) deduction for all retail and service uses that was established in August 2017 by the Executive Committee. Mr. Ramirez-Cornejo also shared several scenarios for consideration and discussion by the group.

Rick Bishop asked if this was a one-time credit, or how it would work if a developer built a project in 3,000 SF increments.

Christopher Gray noted that it is possible but unlikely that a developer would build in 3,000 SF increments to avoid TUMF and added that implementation of this policy was left to WRCOG staff. Therefore, this item is being presented to provide an opportunity for the Committee to provide additional input and direction on implementation.

Committee member Patrick Thomas asked for clarification on the situation with four 3,000 SF tenants and the justification for no TUMF being collected.

Mr. Ramirez-Cornejo explained that staff reviewed a number of shopping centers as part of the 2016 Nexus Study Update and learned that most shopping centers are anchored by a single, large store that is the major trip generator; the smaller uses are generally local serving. Therefore, visits to these smaller stores are essentially pass-by trips.

Mr. Gray added that retail uses generally fall into three categories: 30,000 SF and larger big retailers, mid-sized retailers, and 3,000 SF and below spaces that tend to be occupied by local-serving smaller businesses. There are some exemptions to this rule, but in general, the smaller spaces do not have a large regional draw. Further, City Managers commonly see these spaces as important to economic development for independent small businesses. The 3,000 SF exemption is a policy, and implementation of the policy could be changed by the Executive Committee when it is presented in September, if this interpretation is not in accordance with their vision.

Paul Rodriguez asked about the situation where there are retail spaces earning an “exemption” for the first 3,000 SF, and if this would impact the ability of these developers to earn credit for constructing TUMF facilities.

Mr. Ramirez-Cornejo explained that developers would receive credit against their obligation and continued with a presentation of revenue loss due to the 3,000 SF deduction as well as example projects.

Mr. Gray called attention to an Arco gas station that added a car wash and did not have to pay TUMF. The current interpretation of the 3,000 SF exemption policy is coherent because individuals will not specifically travel to this facility due to the car wash and it will not generate additional trips.

Action: 1. *Received and filed.*

F. Western Riverside Energy Partnership Update

Anthony Segura introduced the Western Riverside Energy Partnership (WREP) and provided an update on recent program initiatives and successes, as well as information on streetlight rebates, and shared an opportunity for agencies to send one staff member to Building Operator Certification energy efficiency training. Upcoming WREP activities include direct install outreach and the 5th annual LED holiday light exchange.

Action: 1. *Received and filed.*

9. REPORT FROM THE DIRECTOR OF TRANSPORTATION

Christopher Gray shared a video from the Clinton Keith Road ribbon-cutting ceremony and there was some discussion on the success of the event and the significance of this project for the region.

10. ITEMS FOR FUTURE AGENDAS

There were no items for future agendas.

11. GENERAL ANNOUNCEMENTS

Chair Romo announced that the Holy Fire is impacting several communities in the region, and commended the efforts of first responders.

Christopher Gray added that WRCOG recently received a climate adaptation grant that will also provide an opportunity to study evacuation routes for the area.

12. NEXT MEETING

The next Public Works Committee meeting will is scheduled for Thursday, October 11, 2018, at 2:00 p.m., at WRCOG's office located at 3390 University Avenue, Suite 450, Riverside.

13. ADJOURNMENT

The meeting of the Public Works Committee adjourned at 3:21 p.m.



Western Riverside Council of Governments Public Works Committee

Staff Report

Subject: TUMF Revenue and Expenditures Update

Contact: Andrew Ruiz, Interim Chief Financial Officer, aruiz@wrcog.us, (951) 405-6741

Date: September 13, 2018

The purpose of this item is to provide an update on the TUMF revenues, expenditures, and reimbursements since Program inception.

Requested Action:

1. Receive and file.

For the month of July 2018, the TUMF Program received \$5,596,500 in revenue.

To date, revenues received into the TUMF Program total \$780,953,077. Interest amounts to \$33,156,708, for a total collection of \$814,109,785.

WRCOG has dispersed a total of \$378,848,342 primarily through project reimbursements and refunds, and \$23,679,926 in administrative expenses.

The Riverside County Transportation Commission share payments have totaled \$350,363,760 through June 30, 2018.

Prior Action:

None.

Fiscal Impact:

This item is informational purposes only; therefore, there is no fiscal impact.

Attachment:

1. Summary TUMF Program revenues.

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Item 6.A

TUMF Revenue and Expenditures
Update

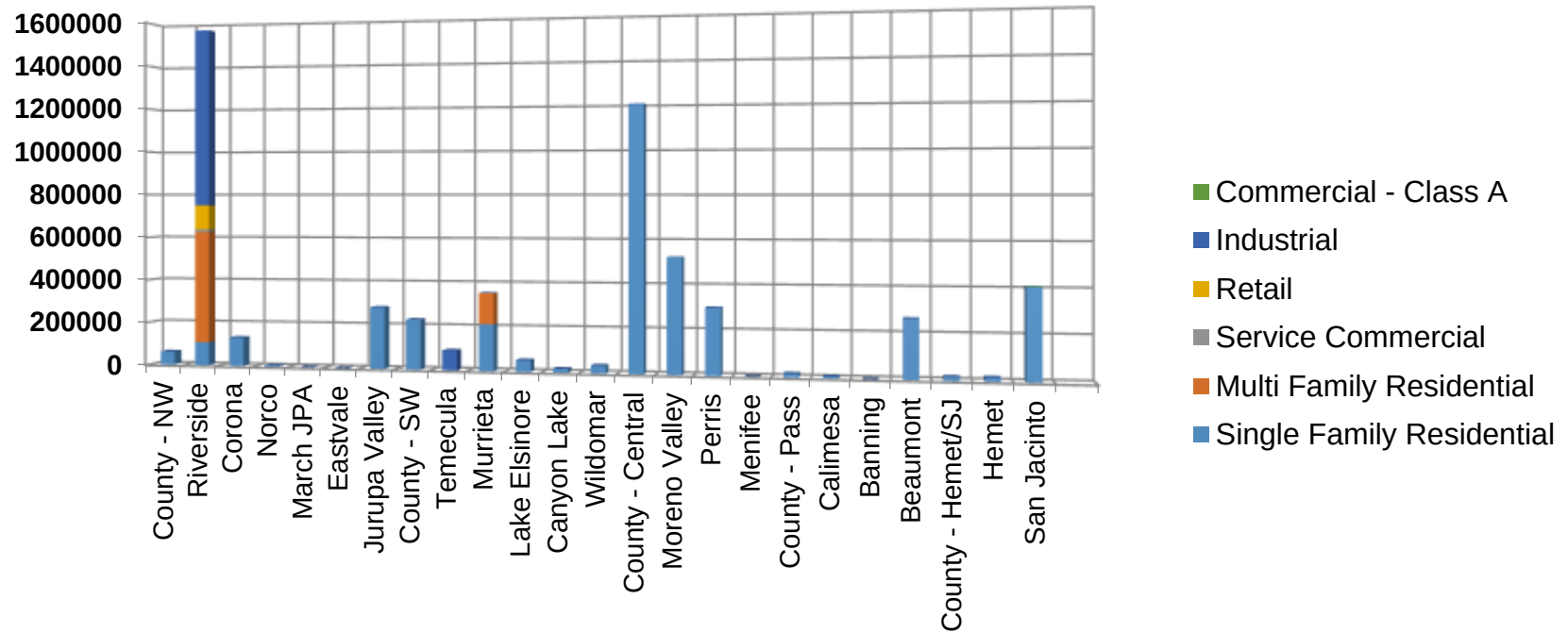
Attachment 1

Summary TUMF Program revenues

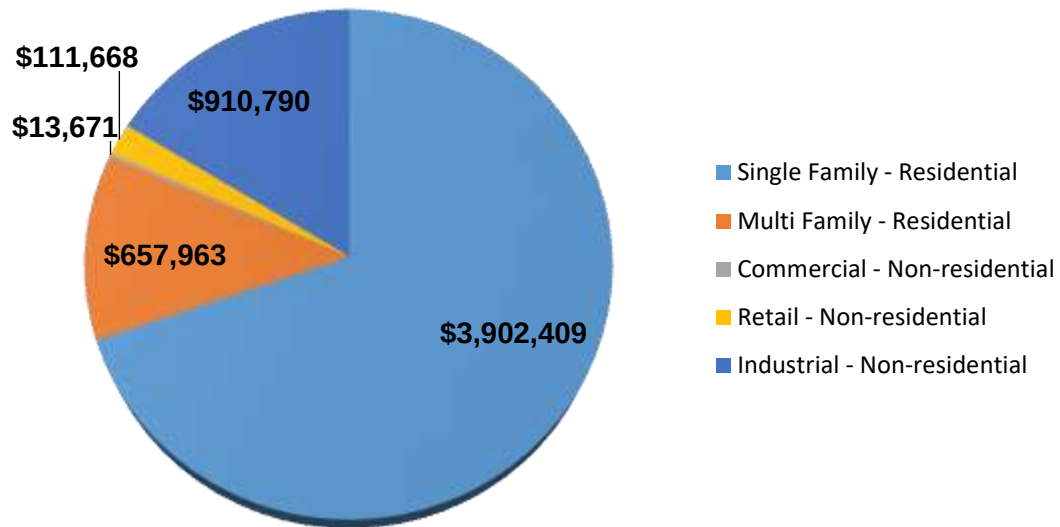
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July 2018 TUMF Revenues by Jurisdiction

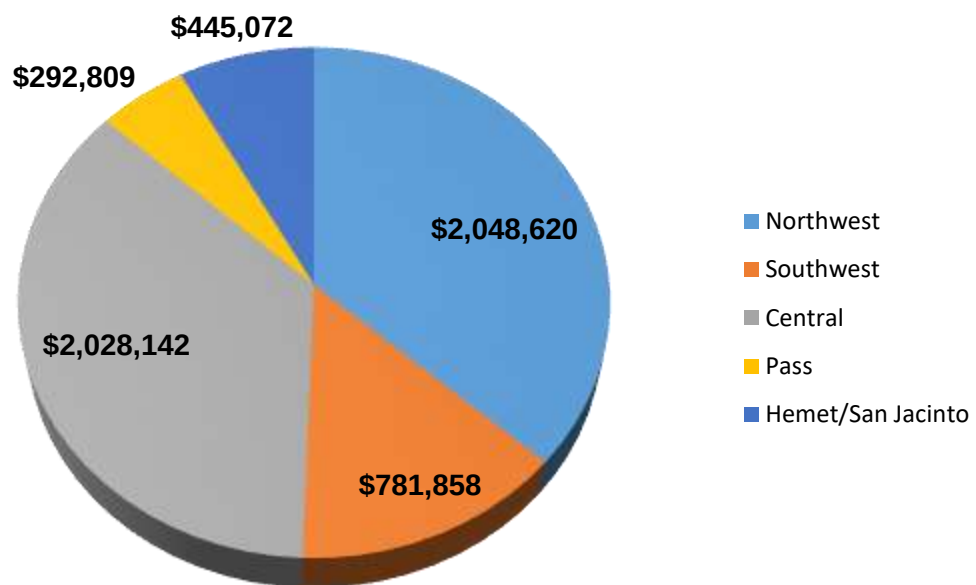
Total Revenue - \$5,956,500



July 2018 TUMF revenues by land-use type



July 2018 TUMF Revenues by Zone



Jurisdiction	Fiscal Year 17-18	2018 July	August	Fiscal Year 18-19
Banning	\$34,831	\$0		\$0
Beaumont	\$1,122,229	\$266,190		\$266,190
Calimesa	\$17,782	\$8,873		\$8,873
Canyon Lake	\$84,301	\$17,746	\$0	\$17,746
Corona	\$1,789,431	\$133,095		\$133,095
Eastvale	\$4,234,019	\$0		\$0
Hemet	\$655,213	\$18,292		\$18,292
Jurupa Valley	\$5,613,221	\$283,936		\$283,936
Lake Elsinore	\$4,042,675	\$53,238		\$53,238
March JPA	\$2,009,269	\$0		\$0
Menifee	\$3,221,139	\$0		\$0
Moreno Valley	\$6,971,308	\$523,507		\$523,507
Murrieta	\$3,142,420	\$354,034		\$354,034
Norco	\$253,632	\$5,424		\$5,424
Perris	\$769,084	\$301,682		\$301,682
Riverside	\$3,567,176	\$1,564,054		\$1,564,054
San Jacinto	\$2,445,168	\$409,034		\$409,034
Temecula	\$1,822,548	\$91,212		\$91,212
Wildomar	\$1,309,894	\$35,492		\$35,492
County Central	\$3,779,337	\$1,202,953		\$1,202,953
County Hemet/S.J.	\$515,274	\$17,746		\$17,746
County Northwest	\$2,169,944	\$62,111		\$62,111
County Pass	\$144,898	\$17,746		\$17,746
County Southwest	\$3,700,525	\$230,136		\$230,136
Total	\$ 53,415,318	\$ 5,596,500	\$0	\$ 5,596,500

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Western Riverside Council of Governments Public Works Committee

Staff Report

Subject: Smart Cities Update

Contact: Tyler Masters, Program Manager, tmasters@wrcog.us, (951) 405-6732

Date: September 13, 2018

The purpose of this item is to provide an update on the various types of Smart City opportunities available to cities that can utilize public infrastructure in the public right-of-way (streetlights, safety lights, etc.) and to hear from a City's Smart City deployment initiative outside of the subregion.

Requested Action:

1. Receive and File.

Background

Smart Cities is the general term, or goal, of Cities that work toward that using information and communication technologies to develop efficiencies and improve on the services provided by local governments. Over the past years, many of WRCOG's member jurisdictions have likely heard from many industry experts that Smart Cities are gunshot detectors, air quality sensors, public Wi-Fi, parking lot detection / sensors, fiber infrastructure, smart controls on streetlights, etc. While these are all great opportunities that can lend to the implementation of a Smart City, none of the prior listed items are necessarily a requirement of a Smart City.

To help further clarify Smart City deployment from a practical side, staff has invited a retired Director of the Los Angeles Bureau of Street Lighting (LABSL) to the Public Works Committee meeting to explain his experiences deploying Smart City Technologies on streetlights within the City of Los Angeles.

Prior Action:

None.

Fiscal Impact:

This item is for informational purposes only; therefore, there is no fiscal impact.

Attachment:

None.

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Western Riverside Council of Governments Public Works Committee

Staff Report

Subject: Inland Empire Transportation Cybersecurity Research Initiative

Contact: Christopher Gray, Director of Transportation, cgray@wrcog.us, (951) 405-6710

Date: September 13, 2018

The purpose of this item is to introduce an initiative to analyze the current regulatory environment, management, and resources available to manage cybersecurity issues related to surface transportation facilities in Riverside and San Bernardino Counties.

Requested Action:

1. Receive and file.

Over the past 20 years, the transportation system is increasing the level of connectivity with traffic signals and cameras, and transportation management centers regularly communicating with each other and the outside world. While this connectivity allows agencies to respond more quickly to changing conditions, it also has the potential to allow malicious access. WRCOG is collaborating with California State University, San Bernardino (CSUSB) to conduct a review of current guidelines and practices to share this information with our member agencies.

Research Conclusions

The final report on the research is attached. Research found that many local jurisdictions are not prepared for cyber-attacks or have limited resources to prepare a comprehensive cybersecurity system. Based on that, the report suggests next steps and initiatives.

Outreach to Local City Officials

1. Look into the feasibility of presenting initial results from this study to the WRCOG Technical Advisory Committee and other groups identified by WRCOG staff.
2. Gather interest and feasibility in a one-day conference on Transportation Cybersecurity in the Inland Empire. The event could showcase programs at CSUSB, local government work, and regional experts, highlight the findings from the Southwest Research Institute, and bring in equipment vendors who represent the higher rated companies.
3. Look into the possibility of conducting cybersecurity audits and assessments for local cities. In collaboration with WRCOG, teams of students, led by CSUSB faculty, could conduct cybersecurity audits of local jurisdictions. This could provide practical experience for the students and a service to local cities. From this work, the project team could develop a series of best practices and standard operating practices for local cities.

Intelligent Transportation System (ITS) Master Plan for Western Riverside County

1. WRCOG should investigate the feasibility of developing an ITS Master Plan for the subregion. CSUSB faculty and students can assist in the development of the Plan that will focus primarily on cyber.

Education and Internship Programming

1. Possibility to provide training seminars for current local government personnel to better understand cybersecurity issues and develop security plans based on current resources.
2. As part of the current WRCOG Fellowship Program, a specific fellowship for CSUSB cybersecurity students to work in local government or for contractors working for governments may be developed.

Prior Action:

None.

Fiscal Impact:

Transportation Department activities are included in the Agency's adopted Fiscal Year 2018/2019 Budget under the Transportation Department.

Attachment:

1. Inland Empire Transportation Cybersecurity Research Initiative Final Report.

Item 7.B

Inland Empire Transportation
Cybersecurity Research Initiative

Attachment 1

Inland Empire Transportation
Cybersecurity Research Initiative
Final Report

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Intersection Management and Cybersecurity: ITS Applications, Critical Issues, and Regulatory Scheme

Kimberly Collins, Yunfei Hou, Monty Van Wart, and Paul Suino^{1 2}

1. Introduction

Intelligent transportation systems (ITS) technologies and applications have brought enormous opportunities and challenges. ITS deployment appears to have the most broad-based benefit in the area of improved mobility (ITS-JPO 2015-2019), and in terms of opportunities and a sub-function of Smart Cities, intelligent systems are already providing advantages related to:

- Efficient timing/coordination of lights based on sensors, remote traffic monitoring and control,
- Traffic management based on road sensors, CCTV, satellites, cameras, metering, and electronic toll collections,
- Transit signal priority, and
- Traveler information systems (TIS)s.

Still, even while making the most of technologies that already exist and integrating those advancements into vehicles and infrastructure where possible, the challenges of ITS technologies and their applications are also enormous. Cyberspace is a unique environment that easily and readily allows governments, criminals, terrorists, and even mischievous juveniles to mask their identity while they wreak havoc or disable a system (APTA SS-ECS-RP 2014). Right now, the average breach in America takes around five months to discover (Prall 2017, Ensey 2016). Public agencies historically relied on “security through obscurity” to avoid attack or exploitation, knowing that a system may be vulnerable, but relying on the thought that a system’s weaknesses were not common knowledge and persons with malicious intent were unlikely to find them (Fok, Murphy Phomsavath and Walker 2015). This approach worked relatively well prior to the digital revolution, but from the late 1990s on, agencies have switched to extremely common commercial technologies such as Wi-Fi and Ethernet for field devices (traffic signals, sensors, dynamic messaging signs, etc.) that communicate with central monitoring systems.

Cybersecurity threats come in a number of ways. They may be:

- Single acts or a combination of discrete steps threaded together (APTA SS-ECS-RP 2014)
- Software attacks (both immediate and ongoing or evasive by design)
- Physical manipulation (intentional and/or unintentional exploitation of hardware)
- External or internal attacks (bad actor(s) outside or inside the system)

¹ Kimberly Collins, PhD, Executive Director, Leonard Transportation Center and Professor of Public Administration, CSUSB – kimberly@csusb.edu

Yunfei Hou, PhD, Assistant Professor of Computer Science and Engineering, CSUSB – houl@csusb.edu

Montgomery Van Wart, PhD, Professor of Public Administration, CSUSB – mvanwart@csusb.edu

Paul Suino, Editor/ Independent Researcher -- paulsuino@charter.net

The research team would like to also recognize Rudy Gonzalez, MPA, Research Technician, Leonard Transportation Center, CSUSB for his contributions to this work.

² A special thanks to the Western Riverside Council of Governments for their foresight and generous support of this research.

Intersection Management and Cybersecurity: ITS Applications, Critical Issues, and Regulatory Scheme

Inexpensive and readily available, modern technologies have reduced any value from reliance on security through obscurity. The safe and efficient operation of a traffic management system relies largely on the application of advanced technologies (Nellore and Hancke 2016). And while new technologies have greatly enhanced how traffic signals work and efficiently operate, these technologies have also increased the exposure to numerous cybersecurity threats (Chandran, Zhang and Cheng 2017). Of specific interest here are the cybersecurity threats posed by various types of connectivity, not only external, but also from “credible” sources (Gheyas and Abdallah 2016, Hill 2017). Although these threats can extend in severity all the way to the level of terrorism, some of those primary threats include:

- Denial of Service, such as jamming Wi-Fi signals or blocking access to authorized users (Pagliery 2014, Rouse 2016)
- Traffic congestion, such as wrongly rerouting/timing vehicles
- Individual/multiple traffic signal control, such as changing all lights green (Schlack 2015)
- Autonomous/connected vehicle manipulation, such as seizing command of a vehicle’s braking system (Rockwell 2014)
- Spear phishing, such as targeted online attempts to steal sensitive information, either directly from a credible actor/employee or from the system itself (Barbeau and Ligatti 2017, Giandomenico 2016)
- Privacy issues, such as bad actors tracking specific vehicles via different sensors in different positions (Chandran, Zhang and Cheng 2017)

Local Government Cybersecurity Incidents

Local governments have been shown to be susceptible to cyberattacks. According to a 2016 report (UMBC, 2016), 44% percent of local governments said they experience cyberattacks at least daily. It is believed that the actual rate of cyberattacks is much higher, since less than 60.1% of local governments catalogue or count how often their systems are attacked. The magnitude of cybersecurity incidents ranges from mischievous attacks (e.g., road signs) to attacks that interrupt the daily activities of governments (e.g., infected servers that interrupt activities). The following provides some examples of nearby agencies affected by hacking incidents, as well as a major event that occurred in the city of Atlanta.

Corona I-15 Freeway Road Sign Hack

Locally, there has been a documented instance of hacking that caused an episode of public disruption. In December 2015, an unknown person hacked into a Caltrans digital road sign in Corona along the 15 freeway. The signal was hacked to display a political message endorsing the then-presidential candidate for office, current U.S. President Donald Trump. The sign displayed the message ***“The Inland Empire Supports Donald Trump, Merry Xmas”***. The hacker was able to gain physical access to the road signal, hack the system, and obtain the security passcode to change the road sign message.

In a local news segment regarding the event, an official for the Riverside County Transportation Commission, explained that this hacking incident, although seemingly benign, is very much a public nuisance because it interferes with relaying drivers with vital information about transportation construction projects and delays that could be occurring (McMillian 2015).

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Orange County Transportation Authority Ransomware Attack

In the neighboring region of Orange County, the Orange County Transportation Authority (OCTA) had a bout with ransomware in February 2016. The attack, carried out by unknown hackers, affected around 88 of OCTA's 400 servers. The ransomware affected approximately twenty internal applications that controlled payroll, email, etc. However, transportation systems were not affected (Graham 2016).

The hackers demanded \$8,500 dollars, but OCTA chose to ignore the ransom demand and had internal staff and contractors bring the system back to normal. It took approximately two and a half days to restore the system servers. The total cost of the ransomware attack was around \$660,000 -- approximately \$330,000 went to internal labor costs and contractors, and \$218,000 was paid to Microsoft and another contractor to eliminate any remaining malicious code, and to help them devise a plan to prevent another attack (Kwong 2017).

Atlanta Cybersecurity Attack

Perhaps the most devastating known cyberattack in the United States against a government agency occurred against the City of Atlanta in March of 2018. Atlanta was hit by a variation of ransomware called "SamSam". The perpetrators of this attack are still at-large and unknown.

The City of Atlanta suffered major inconveniences as a result of the SamSam ransomware cyberattack. The deficiencies in the system had ironically been pointed out 2 months before the attack in January 2018 by the Atlanta City Auditor's Information Security Management System Pre-Certification Audit. The most crucial concerns noted in the audit report revolved around the disregard of establishing IT security control procedures (City Auditor's Office, City of Atlanta 2018). The main issues listed included the lack of creating and maintaining Information Security Management System (ISMS) formal policies and procedures; lack of creating a comprehensive annual plan to aid in the meeting of security goals and compliance; and the lack of available staffing that "impact their ability to stay ahead of the security issues, such as migration of obsolete operating systems, patch management, and vulnerability management" (City Auditors Office, City of Atlanta 2018, p. 16). On March 22, 2018, the vulnerabilities were exploited by the SamSam, even though the city had been forewarned.

In June 2018, almost three months after the attack, it was reported that the city was still struggling to recover (Hatmaker 2018). Over one-third of 424 software programs used by the city remain unusable or partly unusable. The ransomware attack took down crucial city systems that aid the city in managing police records, infrastructure maintenance requests, and revenue collection.

The ransom demanded by the SamSam hackers was a total of \$51,000 in Bitcoin. Atlanta reportedly did not pay the ransom, but the initial cost of restoring the city's computer network amounted to \$2.7 million dollars (Deere 2018). In a recent budgetary meeting, the interim CIO requested an increase of \$9.5 million dollars to the \$35 million already allocated to the IT department. The extra budget allocation would serve to continue the city's efforts of restoring the city's computer network (Freed 2018).

Overall, the SamSam ransomware cyberattack had significant impacts on the City of Atlanta's computer network, showing local government agencies the importance in keeping their systems up-to-date.

Overview of the Transportation Management Systems Report

This short report will focus on some specific elements of transportation management systems (TMS) related to intersection management, and connected and autonomous vehicles (CAV). First, it will provide a short overview of the types of components used in ITS. Second, it will provide a brief review of critical issues. Third, it will discuss some current efforts to improve the vulnerabilities in ITS. Fourth, the report will examine the current regulatory framework. Finally, the report will conclude with a section of findings based on interviews of local experts, and some recommendations.

2. Overview of ITS Applications at Signalized Intersections

Components in Traffic Signal Systems

The modern traffic intersection consists of various sensors, controllers, malfunction management units, and communication devices. Figure 1 illustrates some common devices found at intersections.

Sensors employing ultrasonic, microwave, and radar technology, as well as induction loops and video cameras are all used to detect traffic conditions at intersections. The induction loop is the most popular sensor for vehicle detection. These devices are buried under the pavement and detect vehicles by measuring a change in electric current due to the metal body of a vehicle. Video cameras are also frequently used at intersections, and rely on computer vision software to detect and classify vehicles. It is worth noting that video traffic detectors are usually stationary. Additionally, cameras are installed to provide live and steerable video feed to traffic management centers. Microwave, radar, and ultrasonic sensors are less common, but can be used for special applications. Aside from detecting fine-grained vehicle presence, Bluetooth/Wi-Fi traffic detectors are sometime installed at intersections to track vehicle travel time and speed. These sensors detect and time-stamp a Bluetooth/Wi-Fi MAC address from smartphones and in-vehicle hands-free audio, then use the time-stamps of subsequent detections of that address to determine vehicle travel time across known distances between sensors.

Traffic signal controllers are responsible for setting light timing patterns at intersections. Sensors are directly connected to the controller, allowing it to adaptively adjust signal timings based on traffic conditions. Traffic signal controllers can operate in several modes: 1) pre-timed, e.g., signal states change with predetermined intervals; 2) actuated, e.g., one or more directions are green, based on sensor input; 3) coordinated, e.g., controllers of nearby intersections can be interconnected to share timing information and react to sensor input. Traffic signal controllers are typically locked in a metal cabinet by the side of the traffic signal's pole.

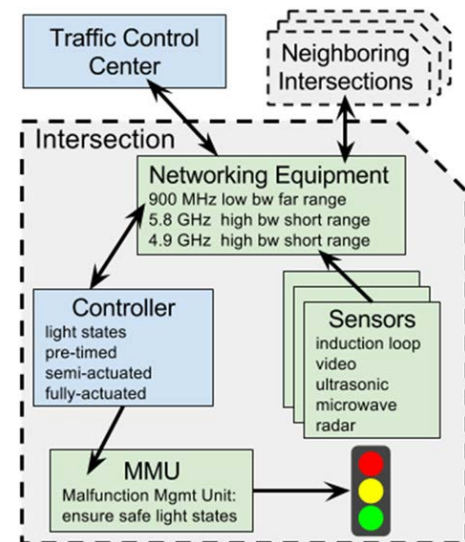


Fig. 1 Main components of a traffic signal system (Li, 2016)

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Communication and network devices for traffic signals may include both hard-wired and wireless systems. In urban areas, traffic controllers are usually hard-wired through optical or cable networks. Traffic controllers may communicate with each other and with traffic management centers. When intersections are geographically distant, wireless systems are frequently used. According to FCC regulations, these wireless systems operate on the ISM band at 900 MHz or 5.8 GHz, or in the 4.9 GHz band allocated for public safety. Communication between sensors has traditionally been connected to the traffic controller through a direct line. If wireless sensors are used, an intersection may be equipped with access points and repeaters to process, store, and relay data. Wireless systems for traffic signal controllers and sensors usually run on proprietary protocols derived from IEEE 802.11 or IEEE 802.15 standards.

Malfunction Management Units (MMU), also known as conflict monitor units (CMU), are hardware-level fail-safe mechanisms. The MMU monitors the outputs of the controller, and if a fault is detected (e.g., green signaling in all directions, or too short of a red light duration), the MMU overrides the controller and forces it to switch the intersection to a known-safe configuration (e.g., red lights flashing for all directions). While MMU prevents displaying a potentially hazardous combination of signals, its safe configurations are pre-defined and thus suboptimal. If the MMU detects a fault state, it requires manual intervention to reset.

Technologies for Signalized Intersections

While the traffic management infrastructure was traditionally built on closed, proprietary systems, the industry is currently on a journey to switch to more connected, responsive and secured networking. Virtually all aspects of a transportation management system are susceptible to cyber threats (APTA-SS-ECS-RP 2014). Nevertheless, the change to a connected system must happen due to increasing traffic demands, maintenance costs, and the complexity of legacy systems. On the other hand, consumers are demanding new transportation solutions that can provide safer, more efficient, and sustainable travel options. To this end, a wide range of transportation technologies have been proposed. In this section, we will briefly review some of the most important general applications.

ATMS/Central System: Advanced traffic management systems (ATMS) consist of transportation management centers, field infrastructure, and mobile units communicating in real time to monitor and manage transportation systems. Real-time traffic data from cameras, speed sensors, etc. are sent into a central system where it is integrated and processed (e.g., for incident detection), and may result in actions taken at traffic infrastructures (e.g., change of signal timing, roadside messages). ATMS are the command centers for reducing congestion, enhancing safety, and providing faster emergency response times. The main functions of an ATMS are: signal performance measurement, system assessment (collecting data), strategy determination, strategy execution, and strategy evaluation.

Dynamic Message Signs: Dynamic Message Signs, also known as Variable Message Signs, are the large, electronic signs which overhang or appear along roadways. The signs are typically used to display information about traffic conditions, travel times, construction, and road incidents.

Adaptive and Coordinated Signal Control: Adaptive signal control refers to technologies that capture current traffic demand data using sensors such as induction loops, and adjust traffic signal timing to optimize traffic flow accordingly. Coordinated traffic signal systems attempt to

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further improve efficiency by creating a green wave along multiple intersections (e.g., a long string of green lights) (e.g., progression) for drivers. The objective of adaptive and coordinated signal control is to provide effective signal timing settings within a range of operating conditions. It works by collecting current demand information from sensors (e.g., advance detection), evaluating performance using system specific algorithms at a central controller, and then implementing modifications based on the outcome of that evaluation via a communication network.

Transit Signal Priority and Emergency Vehicle Priority: Transit signal priority (TSP) is a set of operational improvements that modifies signal timing to favor transit vehicles (e.g., buses). TSP reduces dwell time for transit vehicles by holding green lights longer or shortening red lights. TSP systems require four components: a detection system aboard the transit vehicle; a priority request generator which can be aboard the vehicle or at a centralized management location; a strategy for prioritizing requests; and an overall TSP management system. Emergency Vehicle Priority (EVP, also known as signal preemption) is a similar application designed for special events such as a responding fire engine or police car. EVP and TSP applications can be built on a similar infrastructure, with the major difference being that signal preemption interrupts the normal signal operation rather than adjusting current signal timing.

Eco-Signal: The basic premise of the Eco-Signal concept is that if a driver has accurate information about the upcoming signal status, the vehicle speed can be adjusted accordingly to avoid stops and vehicle operation associated with increased fuel consumption (e.g., hard acceleration maneuvers). Eco-Signal application requires Signal Phase & Timing (SPaT) information from traffic controllers, which is a standard function of connected vehicle-ready traffic controllers (SAE J2735 standards). Several companies are working on commercializing such applications. They solicit traffic signal timing information from local agencies and offer a share of their revenue.

V2V/V2I Communication: V2V and V2I communication are the enabling technologies of Intelligent Transportation Systems. Vehicle to vehicle (V2V) communication is the ability to wirelessly exchange information such as speed and position between vehicles. This allows vehicles to broadcast and receive directional messages creating a net of “awareness” of other vehicles in proximity. Vehicle to infrastructure (V2I) communication is the ability to wirelessly exchange information with a structure such as a traffic signal. This can be used to gather information on traffic and road conditions. There are two mainstream technologies used in V2V/V2I communication: 1) cellular networks, such as 5G and 4G LTE, and 2) Dedicated Short Range Communication (DSRC). Cellular networks relies on cellular infrastructure along the road, while DSRC only connects vehicles in their vicinities and works in an ad-hoc manner.

Bluetooth/Wi-Fi Traffic Probe: As mentioned in Section 2.1, a basic Wi-Fi/Bluetooth sensor system for traffic monitoring consists of a Wi-Fi/Bluetooth probe device that scans for other Wi-Fi/Bluetooth-enabled devices in its radio proximity (usually within 90 feet), and then stores the data for future analysis and use. These applications may include measurements of traffic presence, density, and flow, as well as longitudinal and comparative traffic analysis.

Third Party Traffic Data: The rise of smartphone and in-vehicle apps allow large-scale vehicle probe data to be collected in real-time. Third party traffic data collected by companies such as Waze and INRIX can be used to improve traffic management. Public agencies traditionally use third party data in an

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aggregated fashion such as origin-destination analysis, operation monitoring, and performance measurement. In recent years, there is a growing interest to integrate third party traffic information into Advanced Traffic Management Systems (ATMS) for real-time signal timing adjustments.

3. Critical Issues Related to the Cybersecurity of ITS in General and Intersection Management in Particular

Transportation systems include many modes: air, ships, and a variety of ground modes. In addition to roads, ground modes include trains, inland waterways, subways, bike ways, pedestrian travel, etc. *Here we only focus on intersection management and upcoming CAV issues.* However, it should be noted that many reports focus on “critical” transportation systems. Such systems are generally thought to be air and train systems; while intersection management and TMS generally are considered significant, they are not as critical in terms of the immediate, catastrophic consequences of cyber vulnerabilities. However, the field of TMS has become aware of: (1) the issues of cybersecurity related to intersection management, (2) the fact that vulnerabilities are extensive, (3) the increasing importance of cyber issues because of CAV and public information/service expectations, (4) the perception that public sector traffic experts do not have consistently adequate training and staff to deal with cyber issues, and (5) the fact that industry vendors have not been reliable partners in cybersecurity.

From an historical perspective, the number of reported attacks and incidents is still very small and non-catastrophic, despite the series of Hollywood movie portrayals of hijacked intersection management systems to the contrary. However, in 2014, cybersecurity expert Cesar Cerrudo presented the results of extensive white-hat hacking of Sensys intersection management systems at the DefCon 22 conference. An extensive YouTube video of that presentation has been watched over 15,000 times. He not only showed how the system he hacked was vulnerable to manipulation, ransom, and potential denial-of-service, but also showed that even the simplest security measures had not been taken in the primary field test site (Washington, DC) (Cerrudo 2014), and that the vendor was misleading about the level of security provided, and initially unresponsive about cybersecurity issues as not “their” problem. Cerrudo also pointed out that most deficient sensor systems could not be retrofitted, and would need to be completely replaced when more rigorous cybersecurity standards were implemented. He estimated the then-current replacement cost of the legacy sensors at \$100,000,000. Cerrudo’s presentation was highly reported on, put the industry on notice, and so it is hopeful that improvements are being made by vendors to provide better cyber safeguards (such as simple encryption), and greater transparency (Cerrudo 2015). While improvements in the industry are likely, the private sector also has to improve. One cybersecurity expert reported that of the 250 traffic control systems he was able to discover on the internet, 49 had open devices because the username and password were disabled (Wolski 2018).

A non-comprehensive list of the challenges is provided below:

- The various devices used in intersection management frequently have low levels of cybersecurity built into them, and some legacy devices are essentially devoid of security.
- The industry has been slow to respond and be proactive in providing security controls that anticipate the next phase of black-hat hacking.

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- Cyber threats to TMS systems are not only introduced by way of individual devices, but also through the amalgamations of various devices and systems that provide nexus-point vulnerabilities.
- Federal guidance on cybersecurity has tended to be generic to date. Cybersecurity testing results of devices in the form of qualified traffic control equipment lists normally comes from state agencies. It is unclear how in-depth their testing is, especially related to program error detection that can lead to vulnerabilities. Qualified product lists, generally adopted by local governments from the state level, do not provide any information or guidance other than statements that they have been found to be acceptable on a variety of engineering factors, of which cybersecurity is only one.
- The public sector agencies who use intersection management the most are the smallest and most financially stretched. Municipalities have an enormous array of cyber threats and vulnerabilities, many of which they perceive as far more critical than traffic control systems.
- With a skills gap now estimated at 300,000 in the US (Hughes 2017, Moskites 2016), smaller agencies (counties and municipalities) often cannot compete for top-notch cybersecurity experts because of an extremely tight market.
- Building cybersecurity awareness via training and quality control programs among TMS personnel is an aspect of the larger local government problem.

Two ongoing efforts to address the TMS cybersecurity weaknesses are worthy of mention. A state-funded initiative in Florida at the National Center for Transit Research is called Enhancing Cybersecurity in Public Transportation (Barbeau and Ligatti 2017). That initiative is to: identify and mitigate transit cybersecurity liabilities, and facilitate ongoing cybersecurity information exchange among Florida transit agencies, their vendors, and cybersecurity researchers. A second ongoing effort is being spearheaded by the Southwest Research Institute, funded by the National Cooperative Highway Research Program for approximately \$750,000 (Zajac 2017) and due to be completed 8/15/2019. The description of the project is:

The objective of the research is to develop guidance for state and local transportation agencies on mitigating the risks from cyber-attacks on the field side of traffic management systems (including traffic signal systems, intelligent transportation systems, vehicle-to-infrastructure systems (V2I), and closed-circuit television systems) and, secondarily, on informing the agency's response to an attack. The guidance will address the vulnerability of field devices (e.g., traffic signal controllers and cabinets, dynamic message signs, V2I roadside units, weigh-in-motion systems, road-weather information systems, remote processing and sensing units, and other IP-addressable devices), field communications networks, and field-to-center communications. It will not address vulnerabilities within a traffic management center, within center-to-center communications, or due to insider risk (accidental or intentional).

It is anticipated that the guidance will take the form of a web-based deliverable that uses a guided risk-based decision tree (similar to a capability maturity model) to identify the most relevant content for a user. The users will range from small, local agencies with limited risks and limited capabilities to those with substantial traffic management systems and more resources available to protect them. If a viable approach and host for the

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implementation and maintenance (including updating content and addressing emerging technologies) of this type of product is not found, a traditional NCHRP document will be produced. NCHRP has begun discussions with the National Operations Center of Excellence as a possible host, but they should not be contacted by proposers regarding this effort. (NCHRP 03-127)

The most extensive and up-to-date listing of resources for TMS is the first draft of a Cybersecurity Literature Review and Efforts Report by Ramon and Zajac (2018).

Vulnerabilities of Traffic Signal Systems

We conducted a literature review on cybersecurity vulnerabilities of traffic signal systems in recent years, and a high-level of summary is presented in Table 1. In this section, we describe several possible attack scenarios and examine what kind of damage could be done.

a) Controller attacks represent attacks that target at the light controller. An attacker may attempt to gain privileged access to the controllers. On a successful intrusion, lights could be changed to be green along the route the attacker is driving. An attacker may also initiate various denial of service (DoS) attacks on the traffic light system, causing the intersection to enter an undesired and potentially dangerous state. Alternatively, an attacker could trigger the MMU to take over, which will cause the lights to enter a safe but suboptimal state (e.g., flashing all-red). Since MMU can only be reset with physical access to the controller while an attack can be triggered remotely, an adversary can disable traffic signals faster than technicians can be sent to repair them.

b) Sensor data attacks are assaults on the sensor data being communicated to the controller. A malicious party can send bogus packets to the access point, thus leading the traffic controller to operate with misinformed traffic information. For example, in a spoofing attack, an attacker can trick the loop detector by pretending to be multiple vehicles going through a road segment. Additionally, sensors used in traffic signal systems may be susceptible to firmware modification; an attacker can modify the firmware with corrupted data which will cause the sensor to no longer function (also known as “bricking” a device).

c) Physical attacks that directly tamper with the hardware. Vandalism and graffiti are common problems with public infrastructure, and traffic signal systems are designed with resiliency to handle physical system failures. However, coordinated attacks performed through a combination of cyber and physical attacks present a significant threat to the systems. For instance, if the MMU (a hardware fail-safe device) is damaged or removed, a coordinated cyberattack can trigger dangerous light timing patterns, leading to potential massive damage and/or traffic disruption.

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Table 1 Cybersecurity vulnerabilities in traffic signal systems

Classification	Attack Techniques	Consequences/Use cases
Cyberattack on traffic controller (Ghena 2014, Li 2017)	password cracking, social engineering to acquire device	control traffic signal, send commands to the controller
Cyberattack by sniffing (Cerrudo 2014, 2015)	sniffing sensor identification information, commands, etc.	send falsifying commands and data, manipulation of devices
Cyberattack on traffic sensor (Ghafouri 2016, Li 2017)	wireless sensors spoofing	destabilize the traffic network
Physical attack on traffic controller (Li 2017)	Sabotaging physical networking components	affect performance, availability of devices or services
Cyberattack on traffic controller (Ivanova 2017)	denial-of-service attack	take down the network to which the traffic signal is connected
Cyberattack on traffic sensor (Chen 2017)	data spoofing, masquerade as connected vehicles to send data	influence the signal control algorithms by sending invalid data

4. The Current Regulatory Framework for Intersection Management

The dependence on and seamless integration of technology into everyday activities and operations has exposed the critical need to address cybersecurity (APTA SS-ECS-RP 2014). The strategy at the national level has focused its regulatory schemes to aid cybersecurity by providing rules or guidance about security practices to be used by public agencies (based on ISO 27001), and by providing legal standards or guidance about equipment to either/both vendors in terms of product standards, and public agencies in terms of qualified product lists (based on ISO 27002). This and more are captured in the National Institute of Standards and Technology, “*Framework for Improving Critical Infrastructure Cybersecurity (version 1.1)*” for the federal system (2018).

To improve resilience to cyber-incidents and reduce cyber threats, at the federal level, rules have focused to date on consistent use of traffic control devices via the Manual on Uniform Traffic Control Devices (MUTCD) which is a part of 23 Code of Federal Regulations, Part 655, Subpart F. While MUTCD rules are national in scope, they do not regulate cybersecurity standards at this point. Unlike some other highly critical areas of transportation such as the Cyber Air Act of 2016 in which cybersecurity standards were implemented via such agencies and government corporations as the National Institute of Standards and Technology and the Radio Technical Commission for Aeronautics, *cybersecurity of intersection management is not federally regulated*.

However, the federal government has provided general guidance about cybersecurity such as the Framework for Improving Critical Infrastructure Cybersecurity (2017), as have private organizations (Baldrige 2016). The federal guidance includes the Roadmap to Secure Control Systems in the Transportation Sector (2012), National Security Strategy for Transportation Security (2015), and the Federal Highway Administration Cybersecurity Program Handbook (2017). Aligning with the DOT, DHS, and TSA, the American Public Transportation Association (APTA) has broadly identified four priorities for

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transportation agencies to consider, and at a minimum to address, regarding an agency's information and communication technology (ICT) infrastructure (APTA SS-EC-RP 2014). The federal government is likely to issue some initial rules and guidance on connected and autonomous vehicles cybersecurity in the near future which will have an impact on TMS in the US and elsewhere.

States tend to have the best resources to provide qualified, preferred traffic control systems lists. In California, that is the Caltrans Transportation Electrical Equipment Specification (TEES) report, last re-issued in 2009, but with supplements (called Errata) in 2010, and 2014. California's TEES guidance is used by most other states in the country, as well as local governments in California. Other than the brief mention of a password file (CA TEES, p. 46, 9.2.7.6.2) it is unclear to what degree the CA TEES includes robust cybersecurity considerations and actual field testing of any equipment for cyber concerns, at this time. However, the third errata report has been drafted and is currently under review (July 2018) and is reported to include substantially enhanced cybersecurity specifications for equipment. The new standard will promote embedded cybersecurity systems and phase out customize-after-purchase approaches. Use of the TEES list by local government agencies is not mandated, but is frequently voluntarily adopted. The state is taking an aggressive stand on cybersecurity in general at an enterprise level with a Security Operations Center in the CA Department of Technology's Office of Information Security. While this resource will likely bolster prevention of hacking of state agencies for private information and help prevent ransomware and denial-of-service attacks, it seems unlikely to have much effect in the near future on state or local intersection management issues. It should be noted that while most qualified equipment lists do not have an official regulatory status because they are dynamic, in practice they function like regulatory protocols at the time a contract is let.

Although city and county CIOs listed cybersecurity as their primary focus in 2017 (Shueh 2017), local governments do not seem to understand the scope of their problems, let alone have much in place beyond generic cybersecurity protocols, and few are equipped to stave off threats (Prall 2017). Twenty-five years ago in the southwest US, a teenage computer whiz hacked into software that controlled city traffic signals. Since then, not much has changed (Bigelow 2014). Recent cyber-attacks (e.g., two LA traffic engineers were found guilty of intentionally creating massive delays by adjusting signal times (Reilly, Martin, Payer and Bayen 2015), and reports (Cesar Cerrudo demonstrated how he accessed traffic-light systems in dozens of cities, and University of Michigan students conducted experiments that manipulated over 1,000 lights in one city alone) have heightened cybersecurity concerns dramatically, making them the top priority according to some public officials perception surveys (Bigelow 2014). Striking shortages of IT and cybersecurity personnel have been widely reported (Moskites 2016). Internal practices and policies with existing personnel create tremendous gaps in local government's cyber responses (Prall 2017). Further, local governments are cash-strapped and aren't easily convinced, for example, that they must manually update every signal controller to thwart vulnerabilities at intersections (Pagliery 2014).

5. Status of Local Government Cybersecurity Implementation and Recommendations for Future Actions

In this study, we collected 18 questionnaires and conducted six Zoom interviews spanning 14 city/county transportation agencies in Riverside and San Bernardino Counties. We also talked to two consulting companies in the area. A typical intersection management team in this region consists of 2 to 4 traffic engineers and technicians who manage day-to-day operations for about 100 to 400 traffic signals. Regarding the traffic controller hardware, over 90% of surveyed intersections were found to be using McCain systems. The majority of them use McCain 170 series controllers. For new deployment and upgrade projects, McCain 170 models are usually replaced by the McCain 2070 series which supports McCain and third party application software (e.g., applications mentioned in Section 2.2), and meets ATC 5.2b standards.

Our key findings are: 1) Connected devices are named the top threats, 2) cities lack cybersecurity support, and 3) cities need to plan for future technology.

Connected devices named top threats

Among the 1157 traffic signals surveyed in this study (refer to figure 2), 67.6% of them are connected (i.e., with signal coordination, remote traffic management capabilities), and about 10% support connected vehicle applications (which comes with newer models of traffic controllers such as the McCain 2070 series).

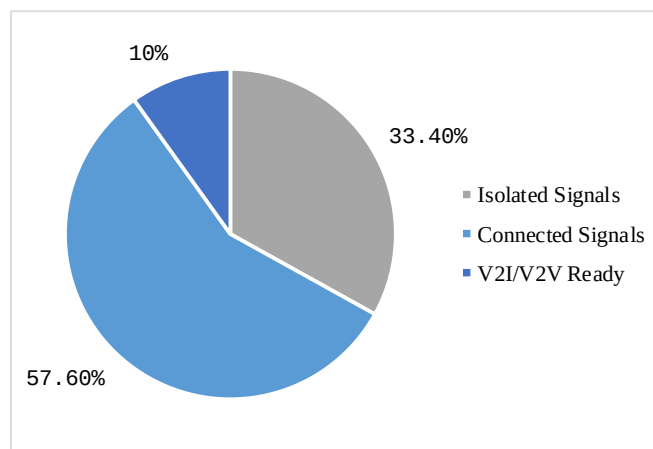


Fig 2. Types of intersection controllers

As transportation agencies build advanced and connected traffic signal infrastructure, they are becoming more aware of the potential threats to their systems. The majority of transportation professionals in this study agree that transportation cybersecurity is a priority for their organizations. In addition, 83% of transportation professionals said that connected devices and cloud infrastructure are among the most challenging risks to defend against attacks. To meet demands for information access, traffic management teams recognize that data must be made available in real time. Controlling access to data, and making sure it's available to those who need it, is a key concern for system managers.

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They also recognize that this problem will continue to grow, as most agencies plan to replace closed, proprietary systems with connected and advanced systems. Although there is no incidence of transportation related cybersecurity breaches found in this survey, cybersecurity problems are a constant concern for local governments.

Lack of cybersecurity support

Experienced security personnel can help transportation professionals navigate through security challenges, but cybersecurity is lacking. All the transportation agencies participated in this survey rely on their agency's IT department for security tasks, and many agencies work with contractors to manage their network. Most of the transportation professionals in this survey said they are not aware if their agencies follow standardized information security practices or participate in a security standards body. Two out of the eleven cities have formal written security strategies. Transportation professionals recognize the impact of the dearth of expertise: 67% said they believe a lack of trained personnel is a major obstacle to adopting advanced security processes and technology.

As cybersecurity operations capabilities become more sophisticated and specific, transportation authorities need to be able to recruit, compensate, and retain the type of high-caliber talent necessary to protect critical infrastructure.

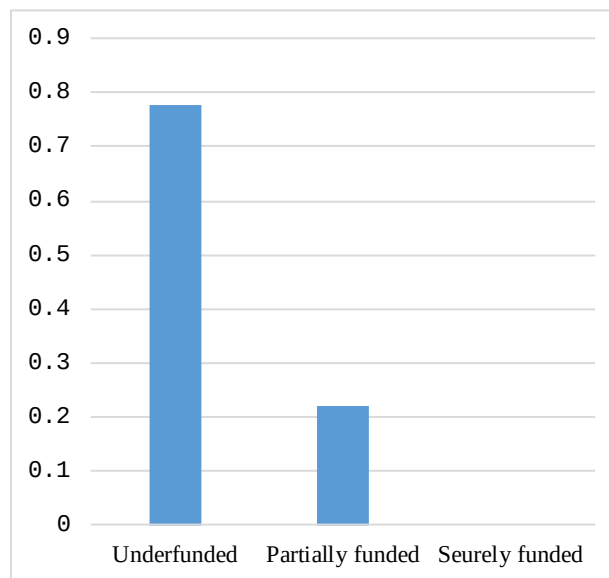


Fig. 3 Cities' funding status on transportation technology

Need to plan for future technology

The fact that transportation, like other critical infrastructure, requires new technologies to meet the ever-increasing demand may drive decisions about developing ITS applications. An overview of technologies surveyed in this study can be found in Section 2.2. Over half the cities have plans for Intelligent Transportation Systems or Traffic Signal Management. However, nearly 80% of the agencies

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said that they are underfunded for their transportation needs (Fig. 3). At the city level, ATMS/Central system, Advance Detection, and Wireless Connectivity are listed as the top applications in active operation. As for future deployment, Signal Performance Measures, Dynamic Message Signs, and Adaptive Signal Control were noted as the technologies that cities would like to implement (refer to Fig. 4). In order to move the implementation of these technologies forward, a number of actions need to be taken.

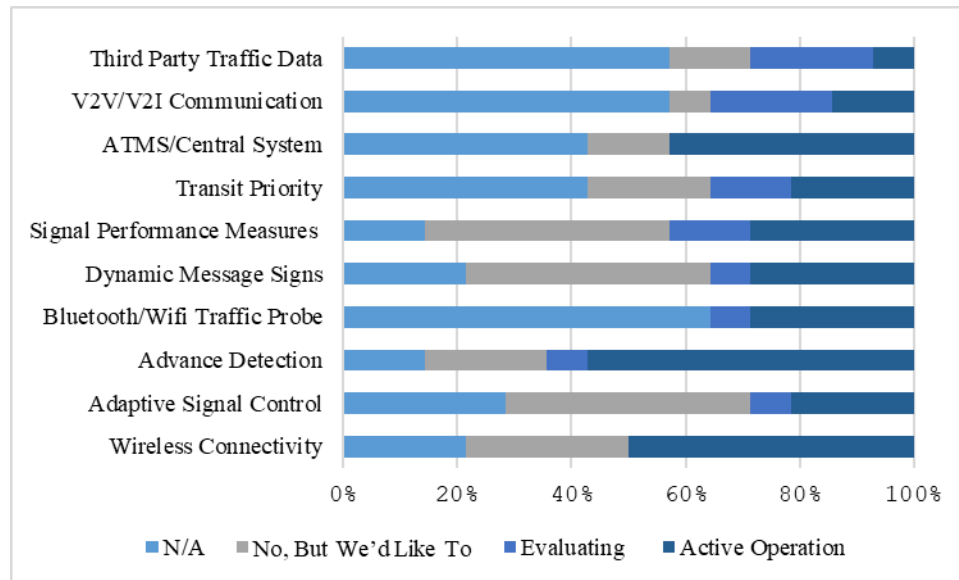


Fig. 4 Cities' plan for ITS applications

Next Steps

From this short study, we find that many Inland Empire local governments are not prepared for cyber-attacks or have limited resources to prepare a comprehensive cybersecurity system. Therefore, the next steps for this work are to:

Outreach to Local City Officials

1. Presentation of initial results from this study to the WRCOG City Managers' Council and other groups identified by staff at the WRCOG.
2. One-day conference on Transportation Cybersecurity in the Inland Empire. The event will showcase programs at CSUSB, local government work, and regional experts, highlight the findings from the Southwest Research Institute, and bring in equipment vendors who represent the higher rated companies.
3. Conduct cybersecurity audits and assessments for local cities. In collaboration with the WRCOG, teams of students, led by CSUSB faculty, will conduct cybersecurity

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audits of local jurisdictions. This will provide practical experience for the students and a service to local cities. From this work, the project team will develop a series of best practices and standard operating practices for local cities.

Information Technology Master Plan for Western Riverside Counties

1. CSUSB faculty and students will assist in the development of the WRCOG's IT Master Plan. Assistance will focus primarily on cyber, but other assistance will be offered as needed.

Education and Internship Programming

1. Provide training seminars for current local government personnel to better understand cybersecurity issues and develop security plans based on current resources.
2. As part of the current WRCOG Fellowship program, a specific fellowship for CSUSB cybersecurity students to work in local government or for contractors working for governments will be developed.

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Western Riverside Council of Governments Public Works Committee

Staff Report

Subject: Proposed New TUMF Calculation Policy

Contact: Daniel Ramirez-Cornejo, Program Manager, dramirez-cornejo@wrcog.us, (951) 405-6712

Date: September 13, 2018

The purpose of this item is to provide an update on a proposed new TUMF calculation policy that would have WRCOG calculate and collect TUMF for member agencies.

Requested Actions:

1. Recommend that the Executive Committee adopt changes to the Administrative Plan to allow for WRCOG to calculate and collect TUMF on behalf of its member agencies.
2. Recommend that the Executive Committee direct staff to prepare an amendment to the TUMF Ordinance to allow WRCOG to collect TUMF on behalf of its member agencies.
3. Recommend that the Executive Committee direct staff to consult with each member agency to formally determine those that wish to enroll in this process.
4. Recommend that the Executive Committee direct staff to work with legislative bodies with each agency wishing to enroll in this process to adopt an update to their TUMF Ordinance.
5. Recommend that the Executive Committee direct staff to allow those agencies which do not wish at this time to enroll in this process to continue calculating and collecting TUMF.

WRCOG's Transportation Uniform Mitigation Fee (TUMF) Program is a regional fee program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in Western Riverside County. Each of WRCOG's member jurisdictions and the March JPA participates in the Program through an adopted ordinance, collects fees from new development, and remits the fees to WRCOG. WRCOG, as administrator of the TUMF Program, allocates TUMF to the Riverside County Transportation Commission (RCTC), groupings of jurisdictions – referred to as TUMF Zones – based on the amounts of fees collected in these groups, the Regional Conservation Authority (RCA) and the Riverside Transit Agency (RTA).

TUMF Calculation Review

Since spring 2018, staff has pursued a potential policy change to the TUMF calculation process as the result of a comprehensive review of TUMF Remittance Reports submitted by member agencies for Fiscal Year (FY) 2017/2018 that identified a number of miscalculations that ultimately resulted in over \$300,000 in refunds to developers. Further, staff has noted that the current calculation process has led to several significant issues between WRCOG and its member agencies. These issues cost significant WRCOG and member agency staff and legal time as the issues have taken multiple years to resolve. Staff's interpretation is that similar issues will continue to arise without a modification to the TUMF calculation policy. Therefore, staff has determined that it is appropriate to provide member agencies an option that would significantly revise the TUMF calculation and collection process.

The item has been presented to various WRCOG Committees and, through the course of the presentations, staff received questions on the implementation and legal aspect of a proposed structure in which WRCOG would calculate and collect TUMF. Staff provided information on the process and schedule to the Planning

Directors, Public Works, and Technical Advisory (TAC) Committees in August. Additionally, staff presented the proposed forms for comment that member agencies would use to submit development project specifics to WRCOG for the calculation of TUMF.

At its August 16, 2018, meeting the TAC recommended that the Executive Committee approve an option that would have WRCOG calculate and collect TUMF for all member agencies. This would significantly streamline the TUMF process by reducing back-and-forth between WRCOG and member agency staff prior to fee collection.

WRCOG Calculation and Collection Feasibility

Legal counsel has prepared a memo regarding the feasibility of options presented to the WRCOG Committees; a summary is provided as follows:

The Mitigation Fee Act does not prohibit WRCOG from calculating, verifying or collecting TUMF on behalf of its member agencies.

Legal counsel has advised staff that the TUMF Model Ordinance allows either WRCOG or its member agencies to calculate TUMF obligations for new development. Having WRCOG staff calculate TUMF for its member agencies would require an amendment to the TUMF Administrative Plan, which would be subject to approval of the Executive Committee. This change to the Administrative Plan is one of the actions being presented for approval by this Committee. WRCOG may also collect TUMF on behalf of its member agencies, subject to a member agency's governing body adopting an Amendment to the current TUMF Ordinance.

Proposed TUMF Calculation Process

In response to feedback received, the proposed update to the TUMF calculation process would provide agencies the option to have WRCOG calculate and collect TUMF. Agencies would also have the option of continuing with the current TUMF calculation, collection, and remittance process.

WRCOG staff presented a series of worksheets that would be used by member agencies to submit project-specific details to WRCOG for calculation of TUMF at the August 2018 Planning Directors and Public Works Committee meetings. Staff distributed proposed worksheets to members of each Committee for additional review and comment. Staff received comments on the proposed worksheets and incorporated requested changes into the revised worksheets, included as Attachments 1 through 3.

WRCOG staff would use the information provided by the member agency staff on the calculation worksheets to calculate the TUMF based on the fee per unit and number of units proposed for each development project. This amount would then be communicated to the developer for payment of TUMF. Once TUMF has been paid to WRCOG, a receipt would be forwarded to the developer and the appropriate member agency to notify the member agency staff that the TUMF requirement has been satisfied. This communication is key because member agencies have the ultimate authority to issue project approvals, including building permits or certificates of occupancy.

During the initial presentations on the item, staff received questions regarding the turnaround time for WRCOG to provide TUMF calculations to member agencies. WRCOG has staffing resources to accommodate calculation of TUMF for all member agencies and all calculations would be provided to member agencies within 48 hours, or no longer than one week for projects that require additional review. Additionally, all of the worksheets and calculations would be completed electronically.

Fee collection would also be electronic, allowing the developer to pay TUMF in an online web portal. This approach would be no different than the process for other regional fees, such as water district or school district fees, which are calculated and collected by these agencies.

The overall calculation process for these agencies would be as follows:



Reporting requirements for agencies that elect to have WRCOG calculate and collect TUMF would be dramatically simpler, as WRCOG staff would simply verify that calculation forms were submitted for all building permits issued. This review could occur on a monthly or annual basis. Agencies that choose to continue calculating and collecting TUMF would be required to continue the current monthly Remittance Report submittals and be subject to in-depth annual reports.

Frequently Asked Questions

WRCOG staff has received a number of questions on the proposed change to the TUMF calculation and collection process. Two of the most common questions, with answers, include:

- *Could developers submit fee calculation worksheets directly to WRCOG for agencies that elect to have WRCOG calculate and collect TUMF?* Developers would not be permitted to submit TUMF Calculation Worksheets directly to WRCOG to ensure that the information provided for calculation of TUMF accurately matches the member agency's understanding of the proposed project.
- *Would the Credit Agreement process change if WRCOG were to calculate and collect TUMF?* The Credit Agreement process would not significantly change, as member agencies are ultimately responsible for acceptance of infrastructure constructed pursuant to Agreements.
- *What happens if an agency wants to maintain the current process?* If an agency wishes to still calculate and collect TUMF, they may choose to do so. WRCOG would defer to each individual agency to determine how this formal notification would occur. Potential options could include a letter from the City Manager or even formal action by the elected body of the agency. Each agency will have the option to determine how to formally notify WRCOG which can include City Council/Board of Supervisors action or a formal letter from the agency.

Answers to additional frequently asked questions can be found in Attachment 4.

Proposed Implementation Schedule

Staff anticipates that this item will be presented to the Executive Committee at its October 8, 2018, meeting for review and action. If action is taken in October, implementation of the new calculation policy could proceed as follows:

October 1, 2018: Executive Committee takes action to update the TUMF Administrative Plan to change the policy in which TUMF is calculated to allow WRCOG to calculate TUMF on behalf of member agencies. The Executive Committee takes action on the amended TUMF Ordinance to have WRCOG calculate and collect TUMF for member agencies that elect to adopt the TUMF Ordinance.

October 2, 2018 – November 30, 2018: Agencies opt-into the new TUMF calculation and collection policy that would shift responsibility from the member agency to WRCOG. All agencies will be required to formally notify WRCOG of their approach – whether shifting responsibility of calculation and collection to WRCOG or maintaining responsibility of calculation and collection with the local jurisdiction.

December 2018 – March 2019: Governing body of each member agency interested in WRCOG calculation and collection of TUMF approves TUMF Ordinance Amendment.

April 1, 2019: WRCOG begins fee collection, contingent on member agency approval of the amended TUMF

Ordinance. Agencies would also have the option of adopting the amended TUMF Ordinance after April 1, 2019; however, WRCOG will not begin collecting fees until after the amended Ordinance is adopted.

Next Steps

Once approved by the Executive Committee, WRCOG will contact each WRCOG member agency through its TAC representative and ascertain their interest in delegating fee calculation and collection to WRCOG within 30 days. Staff will ask each agency to formally notify us of their intent to either retain fee calculation and collection responsibilities or delegate them to WRCOG. Each agency will be responsible for determining the appropriate means to determine their intent, whether it be through an administrative action, action of their legislative body, or some other approach. Once we have received notices from our member agencies, WRCOG will coordinate with those enrolling in the process to move forward on an update to their respective TUMF Ordinance. If a member agency chooses to maintain fee calculation and collection responsibilities, no further action would be needed by that agency. As noted above, the fee calculation and collection process will be formalized through the adoption of an updated TUMF Ordinance by those agencies wishing to do so.

Prior Actions:

- August 16, 2018: The Technical Advisory Committee recommended that the Executive Committee approve an option that would have WRCOG calculate and collect all project TUMF fees and exemptions.
- August 9, 2018: The Public Works Committee and the Planning Directors Committee reviewed and provided input on the proposed TUMF calculation policy change.
- May 17, 2018: The Technical Advisory Committee 1) recommended that the Executive Committee approve an option that would have WRCOG verify all project TUMF fees and verify exemptions; 2) directed staff to complete a comprehensive update to the TUMF Calculator Tool by August 2018; 3) directed staff to complete the TUMF Administrative Plan update with the process for implementing an option that would have WRCOG calculate all project TUMF fees and verify exemptions by August 2018.
- May 10, 2018: The Public Works Committee 1) recommended that the Executive Committee approve an option that would have WRCOG verify all project TUMF fees and verify exemptions; 2) directed staff to complete a comprehensive update to the TUMF Calculator Tool by August 2018; 3) directed staff to complete the TUMF Administrative Plan update with the process for implementing an option that would have WRCOG verify all project TUMF fees and verify exemptions by August 2018.

Fiscal Impact:

Transportation Department activities are included in the Agency's adopted Fiscal Year 2018/2019 Budget under the Transportation Department.

Attachments:

1. Draft TUMF Worksheet for Calculations.
2. Draft TUMF Worksheet for Exemptions.
3. Draft TUMF Worksheet for Defined Land Uses.
4. Frequently Asked Questions.
5. Draft Amendment to the TUMF Ordinance.
6. Draft TUMF Administrative Plan.

Item 7.C

Proposed New TUMF Calculation
Policy

Attachment 1

Draft TUMF Worksheet for
Calculations

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TUMF CALCULATION WORKSHEET

Project Title: _____

Project Address: _____

Permit Number: _____

Agency: _____

Exemption: ☐ No / ☐ Yes (please complete TUMF Exemption Worksheet for all exemptions)

Credit Agreement: ☐ No / ☐ Yes (Name of Agreement: _____)

Project Square Footage/# of Units: _____

Note: Please complete 1 worksheet per project use.

STANDARD PROJECT TYPES (Check one)

- | | |
|--|---|
| ☐ Single-Family Residential | ☐ Retail |
| ☐ Multi-Family Residential | ☐ Service |
| ☐ Industrial | ☐ Class A & Class B Office |

TUMF CALCULATION HANDBOOK CATEGORIES (Check one & also complete TUMF Defined Land Use Worksheet)

- | | |
|--|---|
| ☐ Transit Oriented Development | ☐ Wholesale Nursery |
| ☐ Active Senior Living | ☐ Retail Nursery |
| ☐ Fuel Filling Station | ☐ High-Cube Warehouse/Distribution Center |
| ☐ Congregate Care/Nursing Home | ☐ Winery |
| ☐ Mini-Warehouse/Rental Storage | ☐ Electric Vehicle Supply Equipment Charging Station |
| ☐ Golf Course | |

Please email Jessica May at jmay@wrcog.us or call 951-405-6713 with TUMF calculation-related questions.

CERTIFICATION

Under penalty of perjury, I certify that the above is a true and accurate project description for purposes of calculating TUMF.

Name: _____

Date: _____

Signature: _____

WRCOG STAFF USE ONLY

Calculated TUMF Fee Due: _____

WRCOG Staff Signature: _____

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Item 7.C

Proposed New TUMF Calculation
Policy

Attachment 2

Draft TUMF Worksheet for
Exemptions

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TUMF EXEMPTION WORKSHEET

Project Name: _____

Permit Number: _____

EXEMPTION TYPE	DOCUMENTATION REQUIRED
☐ Low-Income Residential Housing	☐ <u>Rental Housing</u> : Restriction to lower-income households for period of 55-years after issuance of Certificate of Occupancy ☐ <u>For-Sale Units</u> : Restriction to ownership by persons and families of low or moderate income for at least 45-years after issuance of Certificate of Occupancy
☐ Government/Public Buildings, Schools, or Facilities	☐ Proof of payment of prevailing wage rates for project construction ☐ Copy of Long-term lease with a government agency ☐ Copy of deed restriction limiting use to government/public facility for minimum 20 years
☐ Development Agreement (<i>must be on WRCOG-approved list</i>)	☐ Copy of Development Agreement
☐ Rehabilitation/Reconstruction of Habitable Structures, with replacement in-kind	☐ Proof of existence prior to January 1, 2000 ☐ Project plans/description, showing replacement in-kind
☐ Rehabilitation/Reconstruction of Habitable Structures, credit for previous structure	☐ Proof of existence prior to January 1, 2000 ☐ Square footage/# of units of structure to be demolished on-site: _____
☐ "Guest Dwellings" and "Detached Second Units"	☐ Lot zoned for and contains existing single-family residence ☐ Second dwelling located on same lot as existing dwelling
☐ Additional Single-Family Residential Units on the Same Parcel as Existing	☐ Copy of agricultural zoning classifications ☐ Site plan, showing existing single-family unit
☐ Kennels and Catteries on Existing Single Family Residence	☐ Site plan, showing existing single-family unit
☐ Non-Revenue Generating Sanctuary/Activity at House of Worship	☐ Project description
☐ Non-Profit Corporation/Organization Offering Full-Time Day School	☐ Proof of organization's 501(c)(3) status/documentation that no profit will be generated by the use
☐ New Single-Family Homes for Veterans	☐ Proof of organization's 501(c)(3) status

Please email Jessica May at jmay@wrcog.us or call 951-405-6713 with TUMF calculation-related questions.

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Item 7.C

Proposed New TUMF Calculation
Policy

Attachment 3

Draft TUMF Worksheet for Defined
Land Uses

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TUMF DEFINED LAND USE WORKSHEET
Project Name and Number: _____

PROJECT TYPE	DOCUMENTATION REQUIRED
☐ Transit Oriented Development	Site plan showing: ☐ Residential use of not less than 50% of total floorspace; ☐ Maximum number of parking spaces. Location Map showing: ☐ One convenience retail store selling food within ½ mile of development; ☐ Seven eligible diverse uses within ½ mile of development, including previously described food retail store.
☐ Active Senior Living	☐ Documentation showing a minimum 20 dwelling units in community; ☐ Local zoning/governing documents characterizing development as senior citizen housing pursuant to Cal. Civ. Code §51.11; ☐ Occupancy restriction statement pursuant to Cal. Bus. & Prof. Code §11010.05 [2016].
☐ Fuel Filling Station	Total number of fuel filling positions: _____ Note: number of "fuel filling positions" = number of cars that can be fueled at the same time Total gross floor area of buildings: _____
☐ Congregate Care/Nursing Home	Total number of beds: _____
☐ Mini-Warehouse/Rental Storage	Total site area (acres): _____
☐ Golf Course	Total number of holes: _____ Total gross floor area of buildings (SF): _____
☐ Wholesale or Retail Nursery	Total site area (acres): _____ Total gross floor area of buildings (SF): _____
☐ High-Cube Warehouse/ Distribution Center	Total gross floor area of buildings (SF): _____
☐ Winery	Total gross floor area of tasting room and/or associated ancillary uses (SF): _____ Total gross floor area of all buildings (SF): _____
☐ Electric Vehicle Supply Equipment Charging Station	Total number of publicly accessible ESVE units: _____

Please email Jessica May at jmay@wrcog.us or call 951-405-6713 with TUMF calculation-related questions.

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Item 7.C

Proposed New TUMF Calculation Policy

Attachment 4

Frequently Asked Questions

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Transportation Uniform Mitigation Fee (TUMF) Frequently Asked Questions TUMF Process

WRCOG's Transportation Uniform Mitigation Fee (TUMF) Program is a regional fee program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in western Riverside County. WRCOG administers the program in partnership with its member agencies. Each member agency elects to participate in the TUMF Program through adoption of an ordinance and membership in WRCOG.

In an effort to create additional efficiencies in the TUMF Program, WRCOG is pursuing a revision in the TUMF process to give member agencies the option to shift responsibility of calculation and collection of TUMF from the member agency to WRCOG.

Below are responses to some "Frequently Asked Questions" regarding the proposed revision. Please do not hesitate to contact Christopher Gray, Director of Transportation at cgray@wrcog.us or at 951-405-6710 if you have additional questions.

Question: ***Why is WRCOG proposing a change to the TUMF process?***

Response: A number of calculation issues have arisen throughout the history of the TUMF Program, which has led to time consuming and expensive resolution processes for both WRCOG and member agency staff. Ultimately, the member agency is responsible for confirmed calculation errors. Staff's interpretation is that these types of issues will continue to arise without an update to the TUMF calculation policy.

Question: ***Can an agency continue to calculate and collect TUMF within its boundaries?***

Response: Yes. Two options are currently proposed by WRCOG staff:

1. No change to the current process – A member agency will continue to calculate and collect TUMF, before remitting TUMF to WRCOG on a monthly basis; or
2. WRCOG calculates and collects TUMF on behalf of the member agency.

Each member agency will be required to commit to either Option 1 or 2.

Question: *What would the new process entail?*

Response: Developers would work with member agency staff to complete TUMF Calculation Worksheets with project-specific information for submittal to WRCOG staff for fee calculation. WRCOG staff would review submitted TUMF Calculation Worksheets and provide a TUMF fee assessment or feedback within 48 hours. This submittal process would be completed electronically.

TUMF fee collection would still occur at either building permit or certificate of occupancy issuance. Developers would have the option of paying fees online or in-person at the WRCOG offices. WRCOG staff would send receipt of TUMF payment to the respective member agency for agency issuance of building permit or certificate of occupancy.

Question: *Why should a local agency support this change?*

Response: This approach provides three significant benefits. First, there will be a significant reduction in local agency staff time required to calculate and collect the TUMF. Second, there will no longer be the need for extensive end of the year audits. Third, agencies who delegate this responsibility to WRCOG will no longer be responsible for any errors or omissions related to TUMF.

It is important to understand that agency's bear the responsibility for any errors related to TUMF calculations. In the instances in which TUMF is miscalculated, an agency is ultimately responsible to pay WRCOG for the difference between the collected fee and the fee due. Sometimes, it may not be possible for an agency to collect this amount since the development project has already been approved and may already be operational.

Question: *Does the Mitigation Fee Act allow for WRCOG to calculate and collect TUMF?*

Response: The Mitigation Fee Act does not prohibit WRCOG from calculating, verifying, or collecting TUMF on behalf of its member agencies. In fact, other regional fee programs which were based on the TUMF already implement this approach, such as the Fresno COG Regional Fee Program.

The TUMF Ordinance will be amended to allow WRCOG to calculate and collect TUMF. The governing body of each member agency will be required to approve a TUMF Ordinance Amendment to allow WRCOG to calculate and collect TUMF if the agency elects to have WRCOG take responsibility for fee calculation and collection within its boundaries.

Question: *Does this mean that WRCOG is taking over land use control from local agencies?*

Response: No. Local agencies will maintain their current responsibilities in terms of reviewing and approving development projects. WRCOG will simply calculate the TUMF and collect the fee for those local agencies who chose to go this route.

This approach is no different than other regional fees such as Water District and School District fees, which are calculated and collected by these agencies.

Question: *Would the TUMF assessment on new development continue to occur at issuance of building permit?*

Response: Yes. TUMF would generally continue to be assessed at issuance of building permit; however, developers would also continue to have the option of deferring TUMF payment until final inspection or certificate of occupancy. The fees assessed shall be based on the fee amounts in effect at the time that the payment is due under the TUMF Ordinance adopted by each member agency.

Question: *Could developers submit fee calculation worksheets directly to WRCOG?*

Response: No. Member agency staff would be required to submit TUMF Calculation Worksheets to WRCOG to ensure that the information provided on the Calculation Worksheet for calculation of TUMF accurately matches the proposed development project. This is important because member agencies would still have the ultimate authority to issue project approvals including building permits or certificates of occupancy.

Question: *How would the TUMF be determined by WRCOG?*

Response: Neither fee levels or calculation methodologies would change at this time as a result of the updated fee calculation and collection policy. WRCOG staff would continue to use fee levels outlined in the 2016 Nexus Update, as approved by the WRCOG Executive Committee on July 10, 2017. The proposed Calculation Worksheets for submittal to WRCOG are based on existing methodology outlined in the TUMF Fee Calculation Handbook.

Once Calculation Worksheets would be submitted by member agency staff to WRCOG, WRCOG staff would calculate the TUMF based on the fee per unit and number of units proposed by a development project. This amount would then be communicated to the developer for payment of TUMF. Once TUMF has been paid to WRCOG, a receipt would be forwarded to the appropriate member agency staff and to the developer to notify the member agency that the TUMF requirement has been satisfied.

Question: *Would developers be required to go to the WRCOG office for payment of TUMF?*

Response: No. Developers would have the option to pay TUMF fees via a convenient online portal. In-person TUMF payment would also be available at the WRCOG office.

Question: *Would developers still have the option of entering Credit Agreements? Would this process change?*

Response: The Credit Agreement process would not significantly change. Credit Agreements would still be executed between member agencies and developers, as member agencies would ultimately be responsible for the acceptance of the infrastructure constructed pursuant to the Credit Agreement.

WRCOG staff would track administration of credits pursuant to each Credit Agreement as building permits tied to an Agreement are pulled.

Question: *What would WRCOG's response time be for calculation of TUMF?*

Response: WRCOG will commit to a 48-hour response time for TUMF fee calculations. The majority of projects will be straightforward, and a calculation would be available within this time period. For more complicated projects, WRCOG staff will initiate discussion with member agency staff within 48 hours. The turnaround time on these types of requests is currently less than a single day.

WRCOG staff has the capacity to calculate and collect TUMF. It is important to note that staff currently spends a significant amount of time working with member agency staff and developers after errors in TUMF calculation have been made and fees have been collected. This new proactive approach would avoid mistakes up-front, making the process more efficient and straight-forward for all parties involved.

Question: *Could a developer appeal WRCOG's calculation of TUMF?*

Response: Yes. The appeal process currently requires developers to pay TUMF in protest and then bring their concerns to the applicable City Council prior to formally bringing their concerns to WRCOG. Therefore, it can take several weeks for an appeal to reach WRCOG, and several more weeks before a decision can be made.

The appeal process would be significantly simplified through the WRCOG calculation and collection of TUMF, because developers would have the option to bring appeals directly to WRCOG. WRCOG staff would continue to coordinate with member agency staff to resolve appeals.

Question: *How would this change impact reporting/annual review requirements?*

Response: Because WRCOG would be responsible for TUMF calculation and collection, WRCOG staff would simply verify that TUMF Calculation Worksheets were submitted for all building permits issued within a given time period.

This would significantly streamline the process as the current process involves planning and finance staff time gathering relevant information such as receipts of TUMF payment, building permits, and Remittance Reports.

Question: *When could these changes take effect?*

Response: These proposed changes are currently being discussed in several of WRCOG's committees. A tentative schedule of implementation is shown below:

October 2018: WRCOG Executive Committee takes action to update the TUMF Administrative Plan to have WRCOG calculate TUMF for all member agencies. The WRCOG Executive Committee will also take action on the amended TUMF Ordinance to have WRCOG calculate and collect TUMF for member agencies that elect to adopt the TUMF Ordinance.

Once the Executive Committee takes action on a revised TUMF process for calculation and collection, member agencies would have thirty days to notify the WRCOG Executive Director if they intend to opt-in to have WRCOG collect fees.

November 2018: Calculation policy takes effect on predetermined date; for example, November 1, 2018.

November 2018 – March 2019: Governing body of each member agency interested in WRCOG collection of TUMF approves TUMF Ordinance Amendment.

April 1, 2019: WRCOG begins fee collection, contingent on member agency approval of the amended TUMF Ordinance. Agencies would also have the option of adopting the amended TUMF Ordinance after April 1, 2019; however, WRCOG will not begin collecting fees until after the amended Ordinance is adopted.

Question: *What happens if an agency wants to maintain the current process?*

Response: If an agency wishes to still calculate and collect TUMF, they may choose to do so. We simply ask that each agency formally notify WRCOG of their intended approach so that staff can work with those agencies who wish to delegate fee calculation and collection to WRCOG.

WRCOG would defer to each individual agency to determine how this formal notification would occur. Potential options could include a letter from the City Manager or even formal action by the elected body of the agency. Each agency will have the option to determine how to formally notify WRCOG which can include City Council/Board of Supervisors action or a letter from the City.

WRCOG is also developing new tools, such as the online fee estimator, and new reporting procedures to limit future miscalculations and streamline the process. Agencies which choose to calculate and collect TUMF should be aware that WRCOG will be requesting additional information for each fee calculation to reduce the number of errors below their current level.

Question: ***What if my agency chooses not to delegate fee calculation and collection to WRCOG at this time? Will there be future opportunities to participate in this effort?***

Response: WRCOG will be reaching out to each agency after the Executive Committee takes action in October to determine whether they want to allow WRCOG to calculate and collect the fee or retain this responsibility. Based on the schedule above, we anticipate that fee calculation and collection will take effect in April 2019.

For those agencies who may wish to wait on making this decision, WRCOG will provide future opportunities for agencies who may delegate fee calculation and collection to WRCOG in the future. We anticipate that the process would proceed as follows:

- On January 1 of each year, WRCOG will distribute a letter to each member agency that continues to calculate and collect TUMF
- This letter will ask the agency whether they plan to delegate this task to WRCOG
- If the agency elects to delegate this task, then WRCOG will work with that agency with an amended TUMF Ordinance to implement this change
- If there is no change, then no further action is necessary

Question: ***How can I find out more about WRCOG's TUMF Program?***

Response: To learn more about WRCOG's TUMF Program, please refer to the WRCOG website at www.wrcog.us and select the TUMF link. To request a meeting or presentation, please contact Christopher Gray, WRCOG Director of Transportation, at cgray@wrcog.us or at 951-405-6710.

Item 7.C

Proposed New TUMF Calculation
Policy

Attachment 5

Draft Amendment to the TUMF
Ordinance

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ORDINANCE NO. _____

AN ORDINANCE OF THE CITY OF _____ AMENDING
ORDINANCE NO. _____ TO INCLUDE A PROCESS FOR WRCOG CALCULATION AND
COLLECTION OF FEES UNDER THE WESTERN RIVERSIDE COUNTY TRANSPORTATION
UNIFORM MITIGATION FEE (TUMF) PROGRAM

The City Council of the City of _____, California “(City)” ordains as follows:

Section 1. Title.

This Ordinance shall be known as Amendment No. 1 to the “Western Riverside County Transportation Uniform Mitigation Fee Program Ordinance of 2017” (“Ordinance”).

Section 2. 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.

B. WRCOG, upon the recommendation of the WRCOG Executive Committee, now desires to adopt a process in which WRCOG calculates and collects TUMF on behalf of member agencies under the Western Riverside County Transportation Uniform Mitigation Fee Program Ordinance of 2018.

C. The findings set forth in Ordinance No. ____ remain true and correct, and by this reference are incorporated into this Ordinance No. ____ as if set forth in full herein. This Ordinance No. ____ shall amend and supersede the provisions of Ordinance No. ____, and to the extent any provisions herein conflict with any provisions of Ordinance No. ____ or any other ordinance of the City, the City Council finds and determines that it is the intent of the City Council that the provisions herein shall control.

Section 3. Definitions.

For the purpose of this Ordinance, 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. **“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.

E. **“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.

F. **“Industrial Project”** means any development project that proposes any industrial or manufacturing use allowed in the following Ordinance No. _____ zoning classifications: I-P, M-S-C, M-M, M-H, M-R, M-R-A, A-1, A-P, A-2, A-D, W-E, or SP with one of the aforementioned zones used as the base zone.

G. **“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.

H. **“Multi-Family Residential Unit”** means a development project that has a density of greater than eight (8) residential dwelling units per gross acre.

I. **“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.

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

K. **“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.

L. **“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 Ordinance No. _____ classifications: R-1, R-R, R-R-O, R-1-A, R-A, R-2, R-2-A, R-3, R-3-A, R-T, R-T-R, R-4, R-5, R-6, C-1/C-P, C-T, C-P-S, C-R, C-O, R-V-C, C-V, W-2, R-D, N-A, W-2-M, W-1, or SP with one of the aforementioned zones used as the base zone, which can include any eating/dining facility residing on the retail commercial development premises.

M. **“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.

N. **“Single Family Residential Unit”** means each residential dwelling unit in a development that has a density of eight (8) units to the gross acre or less.

O. **“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.

P. **“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.

Q. **“Government/public buildings, public schools, and public facilities”** means any owned and operated facilities by a government entity in accordance with Section G. Exemptions, Subsection 2. of this Ordinance. 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:

(a) The new development being constructed is subject to a long-term lease with a government agency.

(b) 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 of the change is made.

(c) 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.

(d) The new development is constructed at prevailing wage rates.

(e) A copy of the lease is provided to the applicable jurisdiction and to WRCOG.

(f) 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.

R. **“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 part 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.

S. **“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.

T. **“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.

U. **“Guest Dwellings” and “Detached Second Units”** according to the State of California legal definition as following: 1) The second unit is not intended for sale and may be rented; 2) The lot is zoned for single-family dwellings; 3) The lot contains an existing single-family dwelling; 4) The second unit is either attached to the existing dwelling and located within the living area of the existing dwelling or detached from the existing dwelling and located on the same lot as the existing dwelling; and 5) Are ministerially amended by each jurisdiction’s local codes.

V. **“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.

Section 4. 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 by WRCOG 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 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 by the local agency. 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 reference is subsection A, above, 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 Ordinance, 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 Ordinance.-

D. **Purpose.** The purpose of the TUMF is to fund those certain improvements to the Regional System as depicted in Exhibit "A" and identified in the 2016 Nexus Study, Exhibit "B."

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 Ordinance and in TUMF Administrative Plan:

1. Low income residential housing as described in Section 3 Definitions, Subsection G of this Ordinance and in the TUMF Administrative Plan.
2. Government/public buildings, public schools, and public facilities as described in Section 3. Definitions, Subsection Q. of this Ordinance 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 Ordinance No. _____[insert number. of original TUMF Ordinance], 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 Ordinance No. _____[insert number. of original TUMF Ordinance], 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 this Ordinance in Section 3. Definitions, Subsection U. 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:

Regional Tier

i. **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 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.

ii. **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.

iii. 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.

Local Tier

i. 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 there is a Recognized Financing District has been established.

ii. 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.

Section 5. 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 Improvement Program’s adopted annually by WRCOG.

Section 6. Procedures for the Levy, Collection and Disposition of Fees.

A. **Authority of the Building Department.** The Director of Building & Safety, or his/her designee, is hereby authorized to provide WRCOG with development project specifics for the calculation of TUMF in a manner consistent with the TUMF Administrative Plan.

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

i. 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 Ordinance and the calculation methodology set forth in the Fee Calculation Handbook adopted July 14, 2003, as amended from time to time.

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

iii. 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.

iv. Fees shall not be waived.

C. **Collection of Fees.** All fees collected hereunder shall be collected by WRCOG for deposit, investment, accounting and expenditure in accordance with the provisions of this Ordinance, TUMF Administrative Plan, and the Mitigation Fee Act.

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 Building and Safety, or his/her designee, shall prepare and deliver to the Executive Director of WRCOG, periodic reports as will be established under Section 7 of this Ordinance.

Section 7. Appointment of the TUMF Administrator.

WRCOG is hereby appointed as the Administrator of the Transportation Uniform Mitigation Fee Program. WRCOG is hereby authorized to collect 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 Ordinance and the Mitigation Fee Act. The detailed administrative procedures concerning the implementation of this Ordinance 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 one percent (1%) of the revenue raised by the TUMF Program. The TUMF Administrative Plan further outlines the fiscal responsibilities and limitations of the Administrator.

Section 8. 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 9. 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 10. No Procedural Defenses.

Prohibition of Jurisdictions 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 11. 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 _____ days of the date of adoption of this Ordinance.

Section 12. Ordinance No.

This Ordinance supersedes the provisions of Ordinance No. _____ provided this Ordinance is not declared invalid or unenforceable by a court of competent jurisdiction. If, for whatever reason, this Ordinance is declared invalid or unenforceable by a court of competent jurisdiction, Ordinance No. _____ all other related ordinances and policies shall remain in full force and effect.

Section 13. Effective Date.

This Ordinance shall take effect on XXXXXXXXXX.

MOVED AND PASSED upon this ____ day of ____ 2018, by the following vote:
AYES:

NOES:

ABSTAIN:

ABSENT:

Mayor

ATTEST:

City Clerk

EXHIBIT “A”

MAP OF REGIONAL SYSTEM

DRAFT

EXHIBIT “A”

EXHIBIT “B”

NEXUS STUDY

DRAFT

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Item 7.C

Proposed New TUMF Calculation
Policy

Attachment 6

Draft TUMF Administrative Plan

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Transportation Uniform Mitigation Fee

DRAFT

ADMINISTRATIVE PLAN

October __, 2018



PREPARED BY THE WESTERN RIVERSIDE COUNCIL OF GOVERNMENTS
RIVERSIDE COUNTY ADMINISTRATIVE CENTER ANNEX
4080 LEMON STREET, 3RD FLOOR, MS 1032
RIVERSIDE, CALIFORNIA, 92501-3609
PHONE (951) 955-7985
FAX (951) 787-7991

Western Riverside Council of Governments (WRCOG)

***Administrative Plan for the Western Riverside County
Transportation Uniform Mitigation Fee (TUMF) Program***

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***Administrative Plan for the
Western Riverside County Transportation Uniform Mitigation Fee
(TUMF) Program***

Preamble

Future development within Western Riverside County will result in traffic volumes exceeding the capacity of the Regional System of Highways and Arterials (RSHA or Regional System) as it presently exists. The Regional System needs to be expanded to accommodate anticipated future growth; current funds are inadequate to construct the Regional System needed to avoid the unacceptable levels of traffic congestion and related adverse impacts.

The TUMF Program provides significant additional funds from new development to make improvements to the Regional System, complementing funds generated by Measure A, local transportation fee programs, and other potential funding sources. By establishing a fee on new development in the sub-region, local agencies have established a mechanism by which developers effectively contribute their “fair share” toward sustaining the regional transportation system. This is a twenty-five year program and is influenced by a variety of market factors that could cause a shortfall or surplus in the revenue projections. WRCOG shall review the TUMF Program no less than every four (4) years after the effective date of the 2016 TUMF Program Ordinance. Additionally, WRCOG will bring forward, on an annual basis, a Construction Cost Index Adjustment to the TUMF in effect at the time for review and action by the WRCOG Executive Committee. The Program is not designed to be the only source of revenue to construct the identified facilities, and it will be necessary for matching funds from a variety of available sources to be provided.

It is the intent that TUMF requirements may be met by paying cash, building eligible facilities or through public financing, such as Community Facility Districts and Assessment Districts, or private financing vehicles consistent with local jurisdiction policies.

General TUMF Program parameters, definitions and procedures are described in the TUMF Program Ordinance adopted by participating Western Riverside County jurisdictions. The Western Riverside Council of Governments (WRCOG) is designated as the TUMF Program Administrator, and as such will work closely with member jurisdictions, the Riverside County Transportation Commission (RCTC), the Riverside Transit Agency (RTA), and Riverside County Regional Conservation Authority (RCA) to coordinate the TUMF expenditures to maximize the effectiveness of future transportation investments. As the Program Administrator, WRCOG, agrees to indemnify, defend and hold harmless any TUMF Program participant, and its respective agents, officers, members, officials, employees, and attorneys, whose TUMF Ordinance is challenged in court, from and against all claims, liabilities, damages, or costs of any kind whatsoever, including attorneys’ fees and court costs; provided, however, that such indemnity and defense shall not extend or apply to challenges alleging procedural defects in the adoption and implementation of the TUMF Ordinance.

“TUMF Administrative Plan” means the Administrative Plan for the Western Riverside County TUMF Program prepared by WRCOG dated March 24, 2003, in substantially the form approved by the WRCOG Executive Committee on April 7, 2003, as may be amended from time to time, provided that, any material amendments to the TUMF Administrative Plan shall be approved by WRCOG Executive Committee.”

This Administrative Plan serves as the guideline to implement the TUMF Program and will be amended as needed to address changing conditions over the life of the Program.

- I. **Purpose** - The Purpose of this Administrative Plan is to provide those jurisdictions and agencies that are participants in TUMF Program with guidelines and policies for implementation of the TUMF Program. This Administrative Plan specifies implementation and responsibilities for the TUMF Program.

TUMF Program funds may only be used for capital expenditures associated with the Regional System of Highways and Arterials and for capital expenditures for transit system improvements consistent with the TUMF Nexus Study. These purposes include expenditures for the planning, environmental review, engineering and design costs, right of way acquisition, and administrative costs.

- II. **Authority** - The TUMF Program applies to those jurisdictions in Western Riverside County (County of Riverside and the Cities of Banning, Calimesa, Canyon Lake, Corona, Eastvale, Hemet, Jurupa Valley, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto, Temecula, Wildomar and the March Joint Powers Authority (JPA)) that have adopted and are implementing the TUMF Program Ordinance. The TUMF Program has been developed pursuant to and consistent with authority provided in 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 the assessment of development impact fees in California. The Mitigation Fee Act requires that all local agencies in California, including cities, counties, and special districts follow three basic rules when instituting impact fees as follows:

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

- III. **Imposition of and Participation in the TUMF Program** - Participating jurisdictions in Western Riverside County are responsible for adopting and enforcing all provisions of the TUMF Ordinance and calculating and collecting fees on new development within their jurisdictions. However, participating jurisdictions may adopt the amendment to the TUMF Ordinance (Amendment) which shall designate and authorize WRCOG to calculate and collect the TUMF on such participating jurisdiction's behalf.

To be considered a participant in the TUMF Program, WRCOG Member Agencies which existed in 2003 must have an effective date for the TUMF Ordinance of no later than June 1, 2003. Any Member Agency formed after 2003 must enact the TUMF Model Ordinance and any amendments thereto upon incorporation. All Member Agency must adopt any amendment of the TUMF Ordinance within ninety (90) days of approval by the WRCOG Executive Committee unless otherwise directed by the WRCOG Executive Committee. Participating jurisdictions shall not repeal or modify the Model TUMF Ordinance, except that modifications are permitted to meet local municipal codes and references. Further, in order to be considered a participating jurisdiction, local jurisdictions shall collect the full TUMF and transmit the fee to WRCOG as provided

herein, or shall authorize WRCOG to collect TUMF on its behalf pursuant to the Amendment.

Those jurisdictions that have ordinances with an effective date after June 1, 2003, or opt out of the TUMF Program and decide to participate at a later date must remit to WRCOG the amount of TUMF Program revenue for new development that was not collected by the jurisdiction. In order to verify the amount of revenue that would have been collected during the period in which a jurisdiction did not participate, said jurisdiction shall provide WRCOG with an annual report of building permit activity by the land uses identified in the Nexus Study. The remittance of the fee shall be accomplished in a lump sum payment unless other arrangements are agreed to in writing by WRCOG Executive Committee. Those jurisdictions that are not considered participants in the TUMF Program shall not be eligible to participate in the TUMF Program or the decision-making processes as more fully described in this document.

Non-participating jurisdictions will be ineligible to vote on any TUMF Program item and to receive their share of an estimated \$1.02 billion in local streets and roads funds that will be allocated from the Reauthorized Measure A.

- A. Calculation of the TUMF** - Each participating jurisdiction shall calculate and collect the TUMF from new development projects as outlined in the Fee Calculation portion of the Transportation Handbook as well as the most recent TUMF Ordinances and Fee Resolutions. For residential development projects, the fee is based on the number of units and for non-residential, the fee is based on the square footage. For non-residential development projects not included in the TUMF Fee Calculation Handbook, a traffic analysis acceptable to WRCOG is required to determine the fee based on the traffic impact of the proposed project.. This method of calculation may be different from how the local development impact fee is determined.

The TUMF shall be calculated using the most current fee schedule in effect at the time the fee is due. Participating jurisdictions are prohibited from freezing TUMF by such means as "locking" a fee rate by paying a deposit or a portion of the fee prior to the date the fee is due or by entering into a Development Agreement or other agreement with a developer that freezes the fee at a certain level.

Partial Payments or Deposits: WRCOG discourages the use of deposits and partial payments as it will create additional reporting requirements for the jurisdictions and may give the developer the impression that the fees are not subject to change. However, if a jurisdiction allows for deposits or partial payments, it will transmit the partial payment/deposit to WRCOG in accordance with the TUMF ordinance along with a remittance report. In the variance column of the Remittance report, the jurisdiction shall indicate that the fee collected is a portion of the total due. When the balance is paid, the jurisdiction shall calculate the total fee for the project based on the TUMF fee schedule in place at the time the balance is paid and deduct the partial payment against the total. The balance will be transmitted in accordance with the TUMF ordinance and this Administrative Plan. The variance column of the Remittance report shall indicate that the balance is paid. If there is a fee adjustment between the deposit/partial payment and the payment of the balance, the fee that is required to be paid will be based on the most current TUMF fee schedule.

For the purpose of calculating the TUMF obligation for non-residential development the applicable land use category for a non-residential development is determined based on the predominate authorized use of the building or structure permitted by the underlying zoning associated with the new development. Projects could be subject to higher fee if the land use intensifies during the development process from what was originally proposed to the jurisdiction.

As an alternative to the above-described procedures, and at the option of each participating jurisdiction (subject to the consent of WRCOG and evidenced by adoption of the Amendment), a participating jurisdiction may elect for WRCOG to calculate and collect the TUMF on behalf of the participating jurisdiction. Should a participating jurisdiction make such an election, the participating jurisdiction shall submit all information related to the development project that, in WRCOG's determination, is necessary for making such calculation, which shall generally include (without limitation) TUMF land use, type of development, number of units for residential development, square footage for non-residential development, and additional essential information as requested by WRCOG for fee calculation. Such information shall be submitted to WRCOG no later than ___ days prior to the date on which the TUMF obligation will become due.

In submitting a development project to WRCOG for TUMF calculation, the participating jurisdiction certifies and warrants that all information related to the development project (i.e., square footage, TUMF land use, type of development, etc.) is true and accurate, as approved by the participating jurisdiction's building and safety, or equivalent, department. WRCOG shall be entitled to rely on such information, and shall not be responsible for any harm resulting from any error, inaccuracy, or otherwise. Any balance in TUMF obligation due to incorrect development project information will be the responsibility of the participating jurisdiction.

In the event a participating jurisdiction makes the election described in the above paragraph, and complies fully with the requirements in the above paragraph, WRCOG shall take full responsibility for calculating the TUMF obligation, and WRCOG shall agree to indemnify, defend, and hold harmless such participating jurisdiction, and its respective agents, officers, members, officials, employees, and attorneys, from any error resulting from WRCOG's calculation of the TUMF obligation.

Exemptions to the Payment of TUMF - The TUMF Ordinance sets forth exemptions to the payment of TUMF. Those exemptions are summarized in Exhibit "G," attached hereto.

- B. Refunds** – Under certain circumstances, such as double payment, expiration of a building permit, or fee miscalculation, an applicant may be entitled to a TUMF refund. Refunds will be reimbursed by the end of the fiscal year on a first come, first served basis, depending upon the net revenue stream. Refunds will only be considered reimbursable if requested within 3 years of the original TUMF payment. In all cases, the applicant must promptly submit a refund request with proof of TUMF payment to the local jurisdiction that collected the TUMF. The

jurisdiction will forward the request to WRCOG for verification, review and possible action.

1. **Expiration Of Building Permits** - If a building permit should expire, is revoked, or is voluntarily surrendered and is, therefore voided and no construction or improvement of land has commenced, then the applicant may be entitled to a refund of the TUMF collected which was paid as a condition of approval, less administration.

The applicant shall pay the current TUMF in effect at the time in full if he reapplies for the permit.

If a development project is partially under construction at the time of the effective date of the TUMF Ordinance, the TUMF shall be paid only on that portion of the development for which a building permit is next issued.

2. **Double Payments** – on occasion due to a clerical error, a developer has paid all or a portion of the required TUMF for project twice. In such cases, a refund of the double payment may be required. If, however, it is determined that the developer paid the fees to the jurisdiction to expedite the project with the intent of entering into a credit agreement at a later time the refund process is different and is more fully described in section VI of this document.
3. **Balance Due** – when TUMF is incorrectly calculated due to clerical error, it is the City's responsibility to remit the balance due to WRCOG. The error must be discovered within 3 years for the City to be held accountable. The amount due can be remitted through alternate methods agreed to by the WRCOG Committees. If first vetted through WRCOG staff in writing, the calculation is not subject to additional review.

- C. **March Joint Powers Authority** - The March JPA shall not have a separate vote at the WRCOG Executive Committee as it has representation by elected officials from the County of Riverside and Cities of Moreno Valley, Perris, and Riverside. The Executive Director of the March JPA shall be a voting member of the WRCOG Technical Advisory Committee (WRCOG TAC) for TUMF Program items only. The March JPA is a unique partner in the TUMF Program in that it has land use authority and therefore will need to adopt and implement the TUMF Program in the same manner as the cities and county.

- IV. **Allocation of Funds** – After the administrative costs and MSHCP are allocated (as specified in Section IX herein), TUMF funds shall be distributed in accordance with WRCOG Executive Committee actions, the Nexus Study, this Administrative Plan and any future amendments thereto.

- A. **Allocation to Regional Transit Improvements** - Of the TUMF funds received by WRCOG, 1.64% shall be allocated to the RTA for making regional transit improvements.
- B. **Allocation to Regionally Significant Transportation Improvements** - Of the TUMF funds received by WRCOG, 46.39% shall be allocated to the RCTC for

programming improvements to the arterials of regional significance on the Regional System of Highways and Arterials.

- C. Allocation to Zones** - Of the TUMF funds received by WRCOG, 46.39% shall be allocated to the five Zones for programming improvements to the Regional System of Highways and Arterials as determined by the respective Zone Committees. The amount of TUMF funds allocated to each Zone shall be proportionate to the amount of TUMF revenue generated from the zone.
- D. Allocation to Mitigate TUMF Construction Projects** – Of the TUMF funds received by WRCOG, 1.59% shall be allocated to the RCA to purchase habitat for the MSHCP, to mitigate the impacts of TUMF construction projects.
- V. Administration of the Program** - WRCOG shall administer the TUMF Program as described in the enabling Ordinance adopted by participating jurisdictions and further defined in this Administrative Plan.
- VI. Administration of Credits** – The TUMF Ordinance has a provision that if a developer constructs a TUMF facility, the developer will receive credit against the TUMF obligation for the project improvements. Please refer to the WRCOG TUMF Credit/Reimbursement Manual attached hereto as Exhibit F and incorporated in full as if set forth herein for the procedures in which credits are administered and issued for developers constructing TUMF improvements.
- VII. Administration of Reimbursements** –Local jurisdictions/agencies and developers are eligible for reimbursement for construction of TUMF facilities in certain instances. The process for local agencies is different than for landowners/developers; the processes are described in the WRCOG TUMF Credit/Reimbursement Manual, attached hereto as Exhibit F and incorporated in full as if set forth herein.
- VIII. Administrative Responsibilities**

 - A. Program Administration** - As set forth in Section II, WRCOG is designated as the TUMF Program Administrator. As Administrator, WRCOG shall receive all fees generated from the TUMF as collected by WRCOG or local jurisdictions and review permits for correct land-use type assessment and proper remittance of TUMF. WRCOG shall invest, account for and expend such fees in accordance with the TUMF Ordinance and applicable state laws.

For jurisdictions that are not participating in the TUMF Program, the representative for that jurisdiction shall not be eligible to vote on any matter related to the TUMF Program that goes before the WRCOG TAC and WRCOG Executive Committee.

- 1. The WRCOG Executive Director** - Reporting to the WRCOG Executive Committee, the Executive Director shall be responsible for the following TUMF Program activities:

 - a. Administration of the TUMF Program, including development of model credit and reimbursement agreements, fee collection process and processing Program appeals;

- b. Conduct an audit to report on the evidence that the collection and expenditure of funds collected is in accordance with the Mitigation Fee Act. The audit shall be presented to the WRCOG Executive Committee and made available to the public;
- c. Establishment and management of the "TUMF Program Trust Fund" for the purposes of depositing TUMF revenues and income interest earned on Trust Fund deposits;
- d. Preparation of an Annual Report for consideration by the WRCOG Executive Committee detailing the status of the TUMF Program including but not limited to fees collected and disseminated, capital projects planned for, prioritized, and built;
- e. Preparation of periodic comprehensive TUMF Program review and required by the California Mitigation Fee Act. The review of the TUMF Program will include a review of the various Nexus Study inputs and assumptions, and preparation of recommendations on potential TUMF Program revisions for consideration by the WRCOG Executive Committee. Such reviews and updates may include, but are not limited to recommended fee adjustments based on changes in the facilities required to be constructed, and revenues received pursuant to the Ordinance;
- f. Preparation of technical studies/analysis required to select and prioritize Regionally Significant Arterial projects;
- g. Development of a five-year TIP that identifies projects that are scheduled and funded for construction over a specified period of time and is reviewed on an annual basis;
- h. Development of a 5-year Expenditure Report that documents the expenditure of funds that identifies the purpose to which the fee is to be put, demonstrates a relationship and purpose for which the fee is being collected and identifies all sources and amount of funding anticipated to complete the financing of incomplete infrastructure facilities in accordance with California Government Code Sections 66000 et seq. for consideration by the WRCOG Executive Committee;
- i. Staff support to and coordination with each of the TUMF Zone Committees as necessary;
- j. Other related activities as directed by the WRCOG Executive Committee;
- k. Approve Zone and RTA TIP Administrative Amendments; and
- l. Execute amendments to TUMF reimbursement agreements.

2. The WRCOG Executive Committee - The WRCOG Executive Committee shall be responsible for reviewing and acting on the following:

- a. Recommendations for project selection and prioritization of the Regionally Significant Arterials, and the TIP;
- b. Review and possible approval of recommendations on projects from the Public Works Committee (PWC) and WRCOG TAC;
- c. The approval of the TUMF Program Administrative Plan, Technical Transportation Manual and any subsequent amendments thereto; and

- d. Recommendation of changes to the TUMF model Ordinance for consideration by participating jurisdictions.

In developing recommendations on Regionally Significant Arterials for consideration by the WRCOG Executive Committee, WRCOG staff and the Committee structure shall work with RCTC to coordinate compatibility with Measure A project priorities and schedules of area transportation improvements. WRCOG staff and the WRCOG Executive Committee shall also work with WRCOG jurisdictions and each Zone Committee for the same purposes.

For jurisdictions that are not participating in the TUMF Program, the WRCOG Executive Committee representative for that jurisdiction shall not be eligible to vote on any matter related to the TUMF that goes before the WRCOG Executive Committee.

3. The WRCOG Technical Advisory Committee - The WRCOG TAC shall review and make recommendations to the WRCOG Executive Committee on the following:

- a. Program updates and reviews and all supporting technical documentation;
- b. Revisions to the Administration Plan, Technical Transportation Manual, Fee Calculation Handbook and any other Program document;
- c. Ordinance revisions; and
- d. Annual fee adjustments.

The WRCOG TAC shall also provide additional assistance to the TUMF Program as requested by the WRCOG Executive Committee. For jurisdictions that are not participating in the TUMF Program, the WRCOG TAC representative for that jurisdiction shall not be eligible to vote on any matter related to the TUMF Program that goes before the WRCOG Executive Committee or WRCOG TAC.

4. The Public Works Committee/TUMF PWC - The PWC shall be comprised of the Public Works Director or designee from each participating jurisdiction of WRCOG, RCTC, RTA and WRCOG and shall be responsible for the following:

- a. Providing technical assistance and guidance for program updates;
- b. Developing objective criteria for project selection and prioritization including but not limited to the following factors: traffic safety issues potentially created by growth, regional significance, availability of matching funds, mitigation of congestion created by new development, system continuity, geographic balance, project readiness, and completed projects with reimbursement agreements;
- c. Providing additional assistance to the TUMF Program as requested by the WRCOG Executive Committee, RCTC and/or the WRCOG TAC and/or the Zone TAC;

- d. Overseeing the reparation of the Technical Transportation Manual;
- e. Preparing the 5-Year TIP, which will be reviewed and amended annually and fully adjusted every two years as members of the Zone TAC;
- f. Providing recommendations on the RCTC Regional Arterial TUMF Program of Projects every four years along with the Nexus Study update to the WRCOG TAC, WRCOG Executive Committee and RCTC;
- g. Selecting a lead agency for each of the projects on the TIP;
- h. Reviewing the Annual Report prepared by WRCOG;
- i. Revising the RSHA as may be necessary (at a minimum every 4 years); and
- j. Review and revise Unit Cost Assumptions to the RSHA as may be necessary (at a minimum every 4 years).

B. Regional Arterial Administration - RCTC through an MOU with WRCOG (effective October 1, 2008) is the responsible agency for programming and delivering the Regionally Significant Arterials designed under Measure A and defined in the Nexus Study. WRCOG and RCTC have established a committee structure that incorporates the Public Works Directors, City Managers the WRCOG Executive Committee, and the RCTC Board for the development, review and approval of the Regional Arterial TUMF Program of projects.

1. **The RCTC Executive Director** - The Executive Director shall be responsible for the following TUMF Program activities:
 - a. Establishment and management of the "TUMF Program Trust Fund" for the purposes of depositing TUMF revenues and income interest earned on Trust Fund deposits;
 - b. Development of the RCTC Regional Arterial TUMF Program that identifies Regional projects for reimbursement that are scheduled and funded for construction by jurisdictions and developers over a specified period of time and is reviewed on an annual basis;
 - c. Staff support to and coordination with the TUMF Committees as necessary; and
 - d. Other related activities as directed by the RCTC Board.
2. **The Riverside County Transportation Commission** - RCTC shall be responsible for reviewing and acting on recommendations for project selection and prioritization of the RCTC Regional Arterial TUMF Program. RCTC shall review and consider recommendations on the RCTC Regional Arterial TUMF Program project on TUMF Regional Arterial projects from the TUMF Public Works Committee, WRCOG TAC, and WRCOG Executive Committee.

C. Zone Administration - Each Zone shall establish a committee structure, similar to Exhibit "A", for the purpose of preparing a Zone Transportation Improvement Program (TIP) with the TUMF revenue that has been returned to the Zone and develop policies that impact the Zone, such as how to close a funding shortfall in the Zone. The Executive Committee has determined that the 5-Year TIP shall be

balanced to the most reasonable extent possible and that program shortfalls will need to be closed or projects could be reduced or eliminated from the TIP. The Zone TAC shall be responsible for prioritization of projects, selection of the lead agency for each project, and to review all the projects for consistency within the Zone.

All Zones shall approve their TIP by consensus and forward their recommendations to Executive Committee for review and approval to ensure compatibility with the other Zones and the Technical Transportation Manual.

Zone dollars are to be allocated by the Zone TAC only and cannot be utilized or borrowed for projects located outside the zone unless such projects are: 1) proposed and approved by the Zone Committee and have a direct benefit to the Zone and 2) are consistent with the Nexus Study. In furtherance of this Section VIII.B, each Zone shall abide by the Guidelines set forth in Exhibit "C".

The Riverside County Transportation Improvement Plan approved by Riverside County voters on November 5, 2002 states "Funding which is not allocated to a city or county because it is not a participant in the TUMF Program in the Coachella Valley area and the TUMF and MSHCP in the Western County area shall be allocated to the Regional Arterial Program in the geographic area in which the city or portion of the county is located".

Each City and a portion of the unincorporated area of Riverside County are assigned to each of the zones. The five Zones are as follows:

1. Northwest Zone – The Cities of Corona, Eastvale, Jurupa Valley, Norco, Riverside and the County of Riverside, and the March JPA;
2. Southwest Zone – The Cities of Canyon Lake, Lake Elsinore, Murrieta, Temecula, Wildomar, and the County of Riverside;
3. Central Zone – The Cities of Menifee, Moreno Valley and Perris, and the County of Riverside, and the March JPA;
4. Pass Zone – The Cities of Banning and Calimesa, and the County of Riverside;
5. Hemet/San Jacinto Zone – The Cities of Hemet and San Jacinto and the County of Riverside.

- D. Local Administration** – Participating jurisdictions that have not opted to elect that WRCOG calculate and collect the TUMF on their behalf, are responsible for collecting the TUMF, as provided in the TUMF Ordinance. Fees collected and a corresponding Remittance Report are required to be transmitted to the Executive Director of WRCOG. In accordance with the TUMF Ordinance, the Amendment, and the Mitigation Fee Act, WRCOG shall deposit, invest, and expend the transmitted fees. Participating jurisdictions that have not opted for WRCOG to calculate and collect the TUMF on their behalf, are required to transmit reports as set forth below to WRCOG which will include, but not be limited to the following information regarding the TUMF Program status.

1. **Monthly Remittance Reports** – Participating jurisdictions are required to submit the standard Remittance Reports to WRCOG by the tenth (10th) day of the month end for the previous month's activity, for example; June's Remittance report is due July 10. The report shall contain information necessary for WRCOG to determine the total amount of fees collected within each fee category as it relates to the number of building permits, certificates of occupancy, or final inspections issued during the same period of time. Remittance reports are required even when no fees have been collected, and will show building permits or certificates of occupancy have been issued. In addition the participating jurisdiction shall provide WRCOG the following information: the name of the developer or payee, project address, APN, total square feet, credits issued, variance in the fee assessed, and such other information as requested by WRCOG. As an example, the variance column needs to be filled out for any issue that will lead to a fee other than the standard calculation. This information will assist WRCOG in tracking new development, total revenue received and revenue projections for purposes of Program audits and program updates.

2. **Remittance Delays** - If a participating jurisdiction does not transmit the fees along with a corresponding Remittance Report by the tenth (10th) day of the close of the month for the previous month in which fees were collected, the following fiscal policy shall be applied:

On the eleventh (11th) day after the close of the month WRCOG staff shall notify, in writing, the delinquent jurisdiction of the delinquency and request that said jurisdiction remit by the fifteenth (15th), the fees and the required Remittance Report;

If fees and Remittance Report have not been received, by the fifteenth (15th) day, WRCOG staff will invoice the jurisdiction for the approximate amount owed plus interest and penalties which is calculated at the current interest rate earned by the Riverside County Investment Pool plus thirty-five basis parts beginning from the first day of the month following the closing of the month being reported;

WRCOG staff will continue this notification until sixty (60) days after the close of the month. At which time, WRCOG will determine if an audit is necessary of the jurisdiction's TUMF account, general ledger and any other financial data. If an audit is conducted, WRCOG will investigate the amount owed and the cause of delay. Upon completion of the audit, WRCOG staff shall make any recommendations to resolve any outstanding issues; and

If an audit is required due to reporting and remittance irregularities, the jurisdiction shall incur the cost of the audit.

3. **Accruals** - the TUMF Program utilizes the five Zone 5-Year TIPs to allocate projects, which are based on the amount of available revenue to each Zone as determined by carryover and projected funds. At fiscal year-end, any unspent funds remaining on the TIPs that are not identified and

accrued do not automatically roll over and may not be available for programming the following fiscal year. It is necessary for jurisdictions to identify those unused programmed funds so that they can be carried over to the next fiscal year. If the funds are not accrued, WRCOG cannot release the funds to the jurisdiction until the following year when the TIPs are officially adopted.

- E. Riverside Transit Agency** – In accordance with the Nexus Study 1.64% of funds received will be made available to the RTA to make capital facilities improvements for transit purposes as identified in the Nexus Study. The RTA shall provide a report to the WRCOG Executive Committee each year, which has been reviewed by the technical committees, detailing its expenditures of TUMF Program funds received, as well as future commitments for transit facilities using TUMF Program revenues as determined by the RTA Board of Directors.

- IX. Administrative Costs.** The TUMF Ordinance, including as amended by the Amendment, authorizes WRCOG to expend funds generated from TUMF that are necessary and reasonable to carry out its responsibilities to implement the Program. The WRCOG Executive Committee adopted a series of policies that clarify the expenditure and retention of program funds for the Administration of the Program and they are as follows:

1. WRCOG will retain no more than one percent (1%) of the total TUMF Program revenue for administration salaries and benefits;
2. Administration costs will be budgeted at whatever is reasonable and necessary, but not to exceed four percent (4%) of the TUMF revenues collected (inclusive of the one percent administrative salaries and benefit cap) unless otherwise directed by the Executive Committee.
3. Beginning July 1, 2006, WRCOG will take the administrative component from the revenue collected based on the total fee obligation inclusive of executed credit agreements.
4. Beginning July 1, 2006, all CFD's, SCIP and other financing mechanisms will pay the maximum (4%) administrative component in cash to WRCOG. When the administrative component is less than 4% then the surplus revenue will be allocated in accordance to their adopted percentages to the Multi-species Habitat Conservation Plan, RCTC, RTA and the Zones.
5. For refunds, whether it is because the project is no longer going forward or expiration of building permits (where no construction has commenced), the applicant is entitled to a refund less the administrative component. Refunds will be processed based on available cash and will not take precedence over the projects identified as funded on the approved TIP. Refunds will however take precedence over the addition of new projects to the TIP.

- X. Appeals.** Appeals shall only be made in accordance with the provisions of this Section X.

- A. Persons or Entities Who Having Standing to Appeal.** No person or entity shall have standing to avail themselves of this Section X, except those persons or individuals who are responsible for paying the TUMF and have an unresolved appealable issue or matter.

B. Appealable Issues and Matters. No issue or matter shall be heard or reviewed under this Section X unless the issue or matter is appealable. An issue or matter is appealable, if a qualified person or entity ("Appellant") has a good-faith dispute directly related to Appellant's Property ("TUMF Dispute") regarding (i) the amount of Appellant's TUMF obligation; (ii) the administration of TUMF Credits; (iii) exemption of Appellant's property from the TUMF Program; or (iv) administration of TUMF reimbursements.

C. Appeal Process.

1. If a qualified person or entity has a TUMF Dispute, he or she shall first attempt to resolve the dispute informally with WRCOG staff. The staff of the local jurisdiction may also participate in such discussions. If the TUMF Dispute remains unresolved after a reasonable attempt to address it at the local level, the qualified person or entity may submit a written appeal to the WRCOG Executive Director. The Appellant and WRCOG staff shall attempt to resolve the issue within thirty (30) days of the WRCOG Executive Director's receipt of the appeal. At the conclusion of the thirty (30) day period, WRCOG staff shall render a written decision on the appeal. In such cases, if the Appellant desires further review from WRCOG, the Appellant must submit a written request for review to the WRCOG Executive Committee chair.
2. After the written appeal is received by the WRCOG Executive Committee chair, the item shall be presented to the WRCOG Administration & Finance Committee for review. At the request of either WRCOG staff or the Appellant, the decision of the WRCOG Administration & Finance Committee shall be forwarded to the WRCOG Executive Committee for review and action. The decision of the WRCOG Executive Commission shall be final.

XI. Arbitration. When there is a dispute among the Zone members that cannot be resolved and prevents the adoption of a project prioritization schedule, the matter shall be forwarded to the WRCOG TAC and WRCOG Executive Committee for a determination. Once the WRCOG Executive Committee takes action on the issue the decision is final.

If there is a dispute at the WRCOG Executive Committee level regarding project prioritization of a specific project(s) and a consensus cannot be reached, that project shall be tabled until such time as new information is presented and the matter can be resolved.

XII. TUMF Program Amendments. WRCOG shall undertake a review of all components of the TUMF Program in accordance with Government Code Section 66000 et seq. and other applicable laws, and, if necessary, recommend Program amendments and/or adjustments. Amendments to the Administrative Plan will be subject to the approval of the WRCOG Executive Committee. Amendments required to the TUMF Program Ordinance shall be approved by each participating jurisdiction, acting on recommendations provided by the WRCOG Executive Committee. The review shall consider whether future administration costs to participating jurisdictions are needed.

- 1. TUMF Network Revisions:** The TUMF Network is reviewed and revised at regular Nexus Study updates, with minor adjustments such as name changes, distances, and other errors that may be found from time to time occurring on a more frequent basis. However, there could be instances when certain assumptions were made during a Nexus Update that did not come to fruition that should be addressed. The primary cause is when a new city is incorporated and inherits the TUMF Network, which may not reflect the new jurisdiction's General Plan or priorities; another example is if a jurisdiction needs to "trade" a facility on the Network due to a rapid change in development patterns that should not wait for the normal revision cycle.

For new cities there would be an opportunity to review the TUMF Network with WRCOG staff to ensure that the Network identifies their priorities and allows them to make recommendations and to have the ability to swap out facilities. Any revision request must meet the criteria to be on the Network before the PWC will consider the request.

Jurisdictions that are not part of the above mentioned group that need to swap out facilities, must justify the swap by demonstrating that it provides continued regional circulation, meets the criteria to be on the TUMF Network, and does not provide an advantage to a specific land-use, community, developer/project for the purposes of TUMF credits or reimbursements. These jurisdictions must also demonstrate that the impacts mitigated in the swapped facilities are substantially similar to those impacts that would have been mitigated in the abandoned facilities.

This process is intended to be applied on an annual basis during interim years between revisions to the TUMF Nexus Study that would inherently include a revision to the TUMF Network. The deadline to submit any revision is June 30th. The focus of this process is the ability to shift projects on the TUMF Network with the intent to incur minimal fiscal impacts to the Program fee and Nexus determination, rather than adding new projects that would have a far more significant effect on the Program fee and therefore would be more appropriately addressed during the regular Nexus Study reviews. The exception to this policy is the ability for newly incorporated cities to request new additions during the initial cycle of this adjustment process to ensure appropriate facilities are designated to address their individual city's needs.

The process requires the jurisdiction to submit a written justification of the requested TUMF Network facility shift. Elements to be addressed in the written justification should include an explanation of the rationale for the proposed facility shift specifically explaining why the facility should be addressed as part of the TUMF Program and cannot be addressed as part of an equivalent local program, and verification that the proposed shift in facility does not unduly favor or disadvantage a specific developer or development interest. Proximity to areas of significant recent development activity (i.e. shifts in development patterns resulting in changes in transportation system impacts to be mitigated) and the net cost differential to the program following the facility adjustment are key elements to be addressed in the written justification. The written justification must also demonstrate that the impacts mitigated in the proposed facility shift are

substantially similar to those impacts that would have been mitigated in the abandoned facilities.

The existing criteria contained in the TUMF Nexus Study for identifying facilities to be included in the TUMF Network was refined for the purposes of evaluating requests for TUMF Network Amendments. All requested Network adjustments will be evaluated and scored using a point system based on key performance indicators consistent with the existing criteria contained in the TUMF Nexus Study. The scoring criteria is “Exhibit D” of this Plan. Only facilities defined in a participating jurisdiction’s General Plan Circulation Element (or equivalent document) as an arterial highway facility with a minimum four (4) lanes at build-out will be evaluated for inclusion in the TUMF Network.

- XIII. CEQA.** The TUMF Program currently is a financing mechanism dependent on future actions of the WRCOG Executive Committee for improvements to the RSHA. WRCOG and its associated committees will be prioritizing and scheduling improvements on the RSHA, as such, the appropriate environmental documentation, shall be completed before a project can commence construction.

The TUMF Program was developed to mitigate the cumulative impacts of future growth on the RSHA. It was not developed to mitigate project-specific traffic impacts. Accordingly the program does not relieve any development project of the responsibility to mitigate project-specific impacts identified in the environmental analysis prepared for the project. When a development project is required to construct RSHA facilities as project-specific mitigation, it shall be eligible for credit and or reimbursement.

EXHIBIT “A”

TUMF Program Administration and
Implementation (nd RTA)
(Example of a single zone)
Executive Office and the Public
Works Directors from each
jurisdiction in the Zone

ing Process

EXHIBIT “B”

Guidelines for the Administration of the Programmed Projects in the Zone’s Adopted 5-Year TIP

Once each Zone’s 5-Year Transportation Improvement Program (TIP) is adopted by the WRCOG Executive Committee, said TIPs shall be incorporated into and governed by these guidelines, the Administrative Plan, and Technical Transportation Manual in accordance with AB 1600. Annually, WRCOG staff meets with the Zone Technical Advisory Committees to review the status of all programmed projects on the 5-Year TIPs and bring the subsequent project adjustment requests to the Zone Committees for approval. The goals of the annual review process are as follows: (i) to update project cost estimates; (ii) to review project status; (iii) to determine the continued viability of projects; (iv) review the backlog of reimbursement projects; (v) to address local jurisdiction issues; and (vi) address compliance with AB 1600.

Adjustments:

In accordance with the Technical Transportation Manual and the original reimbursement agreement entered into with the lead jurisdiction, all approved projects’ funding and schedules are directly tied to critical milestones. As such, requests to change a project’s funding or schedule shall necessitate an amendment to the original agreement and the adopted TIP. Annual 5-Year TIP adjustments could include, but are not limited to:

- Scope of work reductions or additions;
- Project or phase delays;
- Project or phase cancellations;
- New shelf-ready network projects being added as replacement projects;
- Project or phase advances; and
- Request to transfer funding beyond a programmed project’s limits within a Zone.

Levels of Approval:

A. Zone Committee/WRCOG Executive Committee

The following shall be approved by the Zone Committee and adopted by the WRCOG Executive Committee as required in the Administrative Plan:

1. Annual updates to the Zone TIP.
2. Requests to increase total TUMF funding allocations to projects on the Zone TIP. These requests may be made by the local jurisdiction administratively outside of the annual TIP update cycles if deemed necessary by one of the Zone participating jurisdictions and WRCOG management due to unforeseen circumstances that necessitate immediate action. Such unforeseen circumstances shall include, but not be limited to, higher than expected bid prices, TUMF as a Federal or State match, etc. WRCOG staff will obtain action from the Zone Committee in these cases either by calling for a Special Zone Committee meeting or through individual consultation.

3. Administrative requests to advance funds or adjust project schedules on TIP approved projects, upon the recommendation of the Public Works Committee. Such advancements are subject to:
 - Jurisdiction's proof of readiness to move forward with project, and
 - Zone's current cash flow can support the advancement or change.

B. WRCOG Executive Director

The WRCOG Executive Director shall be responsible for the review and approval of the following changes to an approved Zone TIP, including the review and approval of any agreements, for:

1. Change in Lead Jurisdiction, with the written consent of the transferring and accepting Lead Jurisdiction.
2. Cancellation of project upon request of the local jurisdiction. In the event of cancellation, all funds shall revert to the Zone TIP Trust account.
3. Approval of final completion of the project. Upon notification from the Jurisdiction that the Project has been completed, all unused funds programmed for that Project shall revert to the Zone TIP Trust account.
4. All other administrative requests, upon consultation with the Public Works Committee.

C. Public Works Committee

The Public Works Committee shall be responsible for the review and approval of the following:

1. Requests to move funds within project categories (environmental, design, etc.) administratively, contingent upon participating jurisdiction's certification of viability of all phases.
2. Provide recommendations to the WRCOG Executive Director on any other requests that are deemed administrative in nature by the Director.

All administrative adjustments will be submitted to the WRCOG Executive Committee as part of the next Annual Review Report for final adoption.

D. Obligor Programmed Funds

The TUMF Program has established the policy that construction projects take priority, and therefore, WRCOG limits the obligation of TUMF dollars. WRCOG has two options by which to obligate TUMF. In both options, steps 1, 2, and 3 (Option A) or 6 (Option B) must be completed by the local jurisdiction to ensure TUMF funding can be made available for use on an eligible project. Since TUMF project funds are generally obligated on a first come first served basis, failure to follow the prescribed steps for either option may preclude a project sponsor from receiving TUMF payments for completed work until sufficient funds are available to be obligated.

Option A:

Funding for a project programmed on Zone 5-Year TIPs is not considered obligated by WRCOG until certain steps outlined below have been accomplished by the local jurisdiction.

1. Ensure that funding for the project phase is **programmed in the current year** of an adopted 5-Year TIP.
2. Ensure that there is a **signed (executed) reimbursement agreement** that matches the funding amount with the funding amount of the project phase in the adopted TIP.
3. Submit **an invoice for TUMF eligible work** prior to the end of the fiscal year to obligate the project phase funding. At the time of submitting the first invoice, the project sponsor will be required to submit all necessary supporting documentation (not previously submitted) in accordance with the provisions of the reimbursement agreement.
4. WRCOG will obligate the entire phase of the project if there is available revenue at the time the invoice is submitted.

Option B:

Funding for a project programmed on Zone 5-Year TIPs is not considered obligated by WRCOG until the steps outlined below have been accomplished by the local jurisdiction.

1. Ensure that funding for the project phase is **programmed in the current year** of an adopted 5-Year TIP.
2. Ensure that there is a **signed (executed) reimbursement agreement** that matches the funding amount with the funding amount of the project phase in the adopted TIP.
3. Send WRCOG a letter of **notice of intent** to issue RFP, solicit bids, make offer to purchase ROW or other similar action to verify that sufficient funding is available and that funds are obligated and reserved exclusively for the particular project phase.
4. Receive a **notice of obligation** from WRCOG within fourteen working days of receipt of the notice of intent confirming the amount of funding that is obligated and reserved exclusively for the particular project phase. Alternatively, the project sponsor will receive a notice of deferred obligation if WRCOG determines that insufficient funds are currently available for the project phase to be obligated.
5. Award the project and execute a contract within four months of receipt of the notice of obligation from WRCOG and send a letter of **confirmation of award** to WRCOG including evidence of a Board/Council action relating to the project award and contract execution.
6. Commence project work and submit the **first invoice** for payment within nine months of receipt of letter of obligation by WRCOG to preserve fund obligation. At the time of submitting the first invoice, the project sponsor will be required to submit all necessary supporting documentation (not previously submitted) in accordance with the provisions of the reimbursement agreement.

If a contract has not been executed within four months of receipt of the notice of obligation from WRCOG (step 5), there will be a review of the project status. Based on the review of project status, WRCOG will either:

- i. extend the fund obligation for up to a total of nine months from the notice of obligation if the project sponsor can demonstrate a realistic expectation that the project will be awarded and a confirmation of award can be provided to WRCOG within that time frame; or
- ii. de-obligate the funds.

Similarly, if the first invoice has not been submitted to WRCOG within nine months of receipt of the letter of obligation (step 6), there will be a review of the project status. Based on the review of project status, WRCOG will either:

- i. extend the fund obligation for up to an additional nine months if the project sponsor can demonstrate a realistic expectation that the project work will commence and a first invoice is submitted within that time frame; or
- ii. de-obligate the funds.

E. Programming the Cost Assumption's 10 Percent Contingency

The TUMF Program has established the policy allowing local jurisdictions the ability to choose how to apply the available 10 percent Contingency costs historically assigned to the construction phase of a project when it is programmed on a TUMF 5-Year Transportation Improvement Program (TIP). The Contingency fund is 10 percent of the sum of the new lane, right-of-way, bridge, interchange, and railroad costs.

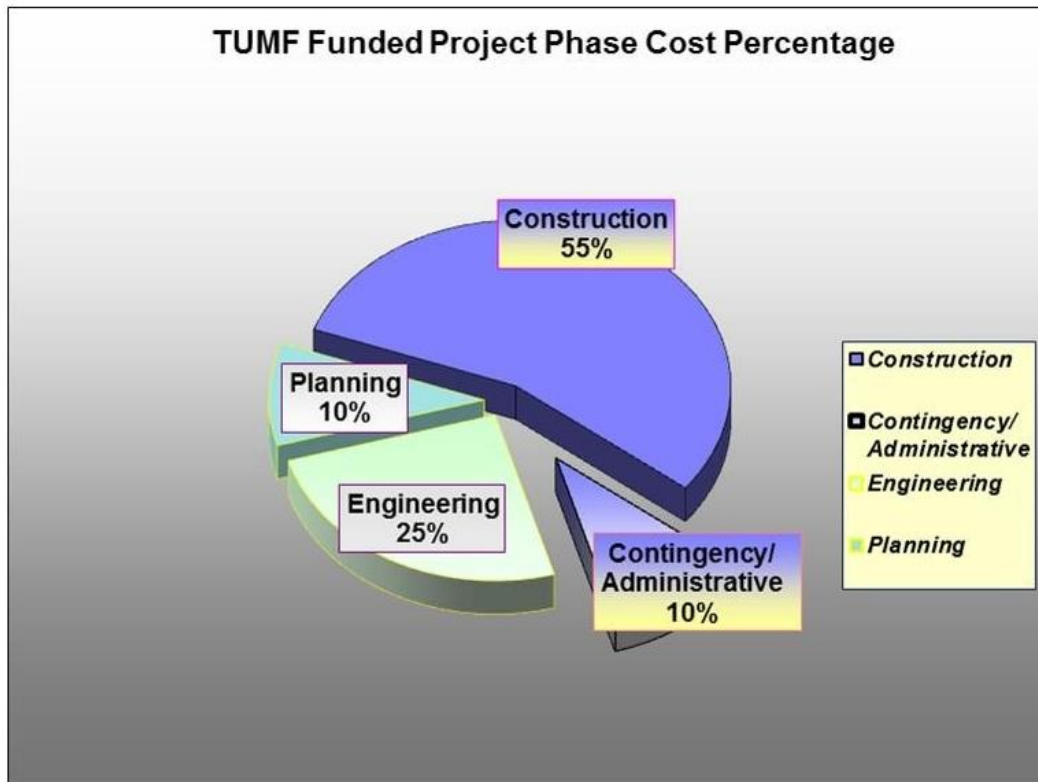
Under this new policy, some jurisdictions may opt to continue applying the 10 percent Contingency to the construction costs, while others may choose to apply a portion of the 10 percent Contingency to help defray their administrative costs incurred during the planning and engineering phase delivery.

Since currently programmed construction funds already reflect the eligible 10 percent Contingency, the policy only applies to those projects that have not obligated or received payments on their construction phases.

For those jurisdictions who wish to recapture administrative costs of ongoing projects programmed on the TIP that do not involve an obligated construction phase, up to 10 percent of each of the programmed planning and engineering phases would be eligible for administrative costs and would be deducted from the available 10 percent contingency (leaving the remaining balance to be applied to construction costs or construction administration costs.)

Scenario –

Construction costs	= \$1,000,000
Contingency	= \$ 100,000 (or 10%)
Planning costs	= \$ 100,000
Engineering costs	= \$ 250,000
Admin costs (PA&ED)	= \$ 10,000 (or 10% of \$100k)
Admin costs (ENG)	= \$ 25,000 (or 10% of \$250k)
Balance Contingency	= \$ 65,000 (for construction admin or contingency costs)



Jurisdictions may apply a portion or all of the available 10 percent Contingency to reimburse accrued administration costs for all three phases by requesting the amount to be programmed as a separate line item on the TIP during a biennial TIP review or amendment as any other project adjustment.

All existing and future reimbursement agreements, cost estimates, and scopes of work will need to be amended to include specific language covering the jurisdiction's individual contingency use option.

EXHIBIT “C”

The following table summarizes the criteria, evaluation thresholds and point values for evaluating TUMF Network adjustment requests for approval. For each evaluation measure, the maximum point value has been highlighted in **bold** font for easy reference.

Criteria	Evaluation Thresholds	Points
Minimum number of lanes at build-out	Less than 4 lanes	not eligible
	4 or 5 lanes	5
	6 or more lanes	15
Jurisdictions served	1 jurisdiction	0
	2 jurisdictions	5
	3 or more jurisdictions	10
Future forecast traffic volumes	Less than 20,000 vehicles per day	0
	20,000 to 24,999 vehicles per day	5
	25,000 to 29,999 vehicles per day	10
	30,000 to 34,999 vehicles per day	15
	35,000 to 39,999 vehicles per day	20
	40,000 or more vehicles per day	25
Future forecast volume to capacity ratio	< 0.80 (LOS A/B/C)	0
	0.81 – 0.90 (LOS D)	5
	0.91 – 1.00 (LOS E)	10
	> 1.00 (LOS F)	15
Regional fixed route transit services accommodated	No service	0
	1 or more services	10
Net fiscal impact of TUMF Network adjustment	More than \$1,000,000 cost addition	-15
	\$200,000 to \$1,000,000 cost addition	-5
	\$199,999 cost addition to \$199,999 cost savings	5
	\$200,000 to \$1,000,000 cost savings	15
	More than \$1,000,000 cost savings	25
Maximum Possible Score		100

EXHIBIT “D”

TUMF Program Definitions

For the purpose of the TUMF Administrative Plan, 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. **“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.

E. **“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.

F. **“Industrial Project”** means any development project that proposes any industrial or manufacturing use allowed in the following Ordinance No. _____ zoning classifications: I-P, M-S-C, M-M, M-H, M-R, M-R-A, A-1, A-P, A-2, A-D, W-E, or SP with one of the aforementioned zones used as the base zone.

G. **“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. (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.

H. **“Multi-Family Residential Unit”** means a development project that has a density of greater than eight (8) residential dwelling units per gross acre.

I. **“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.

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

K. **“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.

L. **“Retail Commercial Project”** means any development project with the predominant use that proposes any retail commercial activity use not defined as a service commercial project allowed in the following Ordinance No. _____ classifications: R-1, R-R, R-R-O, R-1-A, R-A, R-2, R-2-A, R-3, R-3-A, R-T, R-T-R, R-4, R-5, R-6, C-1/C-P, C-T, C-P-S, C-R, C-O, R-V-C, C-V, W-2, R-D, N-A, W-2-M, W-1, or SP with one of the aforementioned zones used as the base zone, which can include any eating/dinning facility residing on the retail commercial development premises.

M. **“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, which can include a stand-alone eating/dining facility residing on the service commercial development premises.

N. **“Single Family Residential Unit”** means each residential dwelling unit in a development that has a density of eight (8) units to the gross acre or less.

O. **“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.

P. **“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.

Q. Government/public buildings, public schools, and public facilities that are owned and operated by a government entity in accordance with Section G. subsection Iv of the model TUMF Ordinance. 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:

(a) The new development being constructed is subject to a long-term lease with a government agency.

(b) 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 of the change is made.

(c) No less than ninety percent of the total square footage of the building is leased to the government agency.

(d) The new development is constructed at prevailing wage rates.

(e) A copy of the lease is provided to the applicable jurisdiction and to WRCOG.

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

R. **“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 part 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.

S. **“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.

T. **“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.

U. **“Guest Dwellings”** and **“Detached Second Units”** according to the State of California legal definition as following: 1) The second unit is not intended for sale and may be rented; 2) The lot is zoned for single-family dwellings; 3) The lot contains an existing single-family dwelling; 4) The second unit is either attached to the existing dwelling and located within the living area of the existing dwelling or detached from the existing dwelling and located on the same lot as the existing dwelling; and 5) Are ministerially amended by each jurisdiction’s local codes.

EXHIBIT “E”

TUMF Program Exemptions

The following types of new development shall be exempt from the provisions of the TUMF Administration Plan:

1. Low income residential housing as defined in Exhibit E, Section G of the Administrative Plan.
2. Government/public buildings, public schools, and public facilities that are owned and operated by a government entity in accordance with Section Q of Exhibit E of the Administrative Plan and Section G. subsection Iv of the model TUMF Ordinance. 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 June 30, 2003, 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 June 30, 2003, 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 defined in Exhibit E of the Administrative Plan and the TUMF Ordinance.
6. Additional single-family residential units located on the same parcel pursuant to the provisions of any agricultural zoning classifications set forth in the Municipal Code.
7. Kennels and Catteries established in connection with an existing single family residential unit.
8. 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 venue, coffee/snack shop, book store, for-profit pre-school day-care, etc.)
9. 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.
10. “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.”

EXHIBIT “F”

DRAFT



Western Riverside Council of Governments Public Works Committee

Staff Report

Subject: TUMF Program 3,000 Square Foot Reduction for Retail and Service Uses Implementation Update

Contact: Daniel Ramirez-Cornejo, Program Manager, dramirez-cornejo@wrcog.us, (951) 405-6712

Date: September 13, 2018

The purpose of this item is to provide an update on implementation of the 3,000 square foot (SF) deduction for retail and service uses previously approved by the Executive Committee on August 7, 2017.

Requested Action:

1. Approve a revision to the 3,000 square foot reduction policy for retail and service uses that limits this reduction to projects that are less than 20,000 square feet.

As part of the 2016 TUMF Nexus Study update, member jurisdictions expressed concerns about the impacts of TUMF on retail uses and directed staff to evaluate potential exemptions for said uses. In response, WRCOG staff convened a TUMF Ad Hoc Committee to explore options for exempting locally serving retail and service uses. The TUMF Ad Hoc Committee met on July 25, 2017, and recommended that WRCOG exempt the first 3,000 SF of retail and service uses.

During the August 2017 Executive Committee meeting, staff was directed to implement a policy to exempt the first 3,000 SF of retail and service uses (both for new development and for modifications to existing development) from TUMF assessments.

Implementation of the Reduction

The policy enacted in August 2017 provided a 3,000 SF reduction to all retail and service uses, not only to those uses that are 3,000 SF and below. As the retail and service industries go through their cycles, the need to expand an existing use occurs frequently; as such, this option also benefits existing uses that are taking a risk to expand their use and provide more economic development.

Since approval of the policy on August 7, 2017, project applicants are not required to pay TUMF fees on the first 3,000 SF of retail and service projects. Therefore, no TUMF is paid if a retail or service project is less than 3,000 SF, and the fee is reduced if a retail or service project is more than 3,000 SF. Staff have also interpreted this policy to include Class A and Class B office buildings.

Staff has received many questions related to applicability of the 3,000 SF reduction; however, staff has uniformly applied the deduction to all retail and service uses, whether the proposed uses are standard fee calculations or based on the unique fee calculation worksheets in the TUMF Calculation Handbook.

For multi-use projects or projects with multiple tenants, the 3,000 SF reduction would apply to each individual use or each individual tenant. Since each tenant is operating independently of one another, they are viewed as separate uses. As such, a single 12,000 SF building divided into four tenant spaces of 3,000 SF each would not be required to pay TUMF because each space would be awarded a 3,000 SF reduction. It is

important to note that, in the situation of a single building divided into multiple tenant spaces, the division into multiple tenant spaces must be documented on project plans to be awarded the deduction per tenant space. If a developer were to pay TUMF on their whole undivided 12,000 SF building and later decided to divide the building, staff would not retroactively refund this developer, as this would constitute a tenant improvement.

Staff has developed the below scenarios regarding the 3,000 SF reduction when the developer pays TUMF:

Scenario #1: A 12,000 SF retail building that will be occupied by one tenant would only pay TUMF on 9,000 sq. ft.

$$\begin{aligned} \text{TUMF} &= (12\text{k}-3\text{k}) \times \$7.50 \\ \text{TUMF} &= (9\text{k}) \times \$7.50 \\ \text{TUMF} &= \$67,500 \end{aligned}$$

Scenario #2: A 12,000 SF retail building that that will be occupied by four tenants would not pay TUMF.

$\begin{aligned} \text{TUMF} &= (3\text{k}-3\text{k}) \times \$7.50 \\ \text{TUMF} &= \$0 \end{aligned}$	$\begin{aligned} \text{TUMF} &= (3\text{k}-3\text{k}) \times \$7.50 \\ \text{TUMF} &= \$0 \end{aligned}$	$\begin{aligned} \text{TUMF} &= (3\text{k}-3\text{k}) \times \$7.50 \\ \text{TUMF} &= \$0 \end{aligned}$	$\begin{aligned} \text{TUMF} &= (3\text{k}-3\text{k}) \times \$7.50 \\ \text{TUMF} &= \$0 \end{aligned}$
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Scenario #3: An existing 12,000 SF retail building that will expand building footprint by 3,000 SF would not pay TUMF.

Existing 12,000 square-foot building	$\begin{aligned} \text{TUMF} &= (3\text{k}-3\text{k}) \times \$7.50 \\ \text{TUMF} &= \$0 \end{aligned}$
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Proposed Implementation Change

A study of several mid-size shopping centers in the subregion was completed by WRCOG in 2016, as part of the Nexus Study update. Results from this study show that these shopping centers are generally anchored by a large tenant, typically occupying a space over 20,000 SF, and that these large spaces are surrounded by a number of smaller tenant spaces. The larger spaces are commonly occupied by large retailers such as grocery stores, clothing stores, and supermarkets; however, smaller tenant spaces are more commonly occupied by restaurants, beauty salons, dental offices, or electronics shops. Whereas the larger spaces may create a regional traffic draw, these smaller uses are generally more local-serving. For example, a new 200,000 SF retail super center may draw traffic from adjacent cities, as there are a limited number of these retailers in the region. However, the smaller uses, such as a beauty salon or dental office, are generally located in every jurisdiction and will not create a large regional draw. Thus, even if a smaller use does generate additional traffic, this traffic will generally be local (i.e., new drive-through coffee shop locations, as there are numerous locations throughout the region). Additionally, the fee relief from the 3,000 SF deduction makes up a larger percentage of the total TUMF for these smaller projects than the larger projects.

Therefore, staff propose that application of the 3,000 SF deduction for retail and service uses is limited to spaces that are 20,000 SF or less. This update would maintain the fee relief for smaller uses, while also recognizing that larger tenants generally create more regional traffic.

Fiscal Impact

Since the first full month of implementation in September 2017, through June 2018, approximately \$4.8 million has been collected from retail, service, and Class A and B office uses combined. This is lower than the amount collected in the previous fiscal year, in-part due to the reduction of approximately \$3/SF for the retail TUMF land use. Staff has determined that the reduction in the TUMF rate for the retail land use has resulted in revenue loss of approximately \$1.6 million.

Reduction of the first 3,000 SF of all retail and service uses has resulted in a direct revenue loss of approximately \$1 million. Staff will continue to monitor revenue loss and development trends.

Combined, the reduction in the TUMF retail land use rate and the implementation of the 3,000 SF reduction resulted in a loss of approximately \$2.6 million, or approximately 5% of all total revenue collections for Fiscal Year 2017/2018.

A total of three retail projects and five service projects larger than 20,000 SF have paid TUMF since the first full month of implementation in September 2017 through June 2018. Total revenue loss from the 3,000 SF deduction for the retail projects is approximately \$90,000 and the total revenue loss from these service projects is \$82,080. The largest retail project during this period was approximately 64,000 SF – the revenue loss from the 3,000 SF deduction for this project represents just 5% of what the total project TUMF fees would have been without the deduction.

Prior Actions:

August 9, 2018: The Public Works Committee received an update on implementation of the 3,000 SF deduction, one year after the policy was implemented.

August 7, 2017: The Executive Committee directed staff to exempt the first 3,000 SF of retail and service uses.

July 25, 2017: The TUMF Ad Hoc Committee 1) concluded that exempting the first 3,000 SF of retail and service uses was preferable; 2) requested that staff identify a method to allow this option to be implemented expeditiously and also conduct outreach efforts with jurisdiction staff to facilitate its implementation; and 3) discussed the need to monitor this

approach and provide a report within one year on its implementation and any recommended changes.

Fiscal Impact:

Transportation related activities are included in the Agency's adopted Fiscal Year 2018/2019 Budget under the Transportation Department.

Attachment:

None.



Western Riverside Council of Governments Public Works Committee

Staff Report

Subject: TUMF Zone Boundaries Update

Contact: Daniel Ramirez-Cornejo, Program Manager, dramirez-cornejo@wrcog.us, (951) 405-6712

Date: September 13, 2018

The purpose of this item is to provide an update regarding a request to update the TUMF Zone boundaries to correspond with County of Riverside Supervisor Districts.

Requested Action:

1. Recommend that the Executive Committee approve an update to the TUMF Zone boundaries to align with County of Riverside Supervisorial districts.

WRCOG's Transportation Uniform Mitigation Fee (TUMF) Program is a regional fee program designed to provide transportation and transit infrastructure that mitigates the impact of new growth in Western Riverside County. Each of WRCOG's member jurisdictions and the March JPA participates in the Program through an adopted ordinance, collects fees from new development, and remits the fees to WRCOG. WRCOG, as administrator of the TUMF Program, allocates TUMF to the Riverside County Transportation Commission (RCTC), groupings of jurisdictions – referred to as TUMF Zones – based on the amounts of fees collected in these groups, the Regional Conservation Authority (RCA) and the Riverside Transit Agency (RTA).

TUMF Zone Boundaries

There are five geographically based zones for administration of the TUMF Program, each of which is governed by committees for the purpose of preparing a Zone Transportation Improvement Program (TIP). The TIP identifies priority projects for funding with the TUMF revenue that has been returned to the Zone. All Zones approve their respective TIP by consensus at meetings attended by one elected official from each member agency within each respective Zone.

The Zone boundaries currently do not take into account County Supervisor district boundaries. Staff recommends revising the Zone boundaries to better align with the County Supervisor districts. A revised Zone boundary map has been prepared showing the proposed boundary changes for the Zones, which is included as Attachment 1. The proposed revision would not impact the Zone designation of any member cities; rather, proposed changes would shift Zone boundaries within unincorporated Riverside County land to match existing County Supervisor district boundaries.

Prior Action:

None.

Fiscal Impact:

Transportation Department activities are included in the Agency's adopted Fiscal Year 2018/2019 Budget under the Transportation Department.

Attachment:

1. Draft TUMF Zone Boundary Update.

Item 7.E

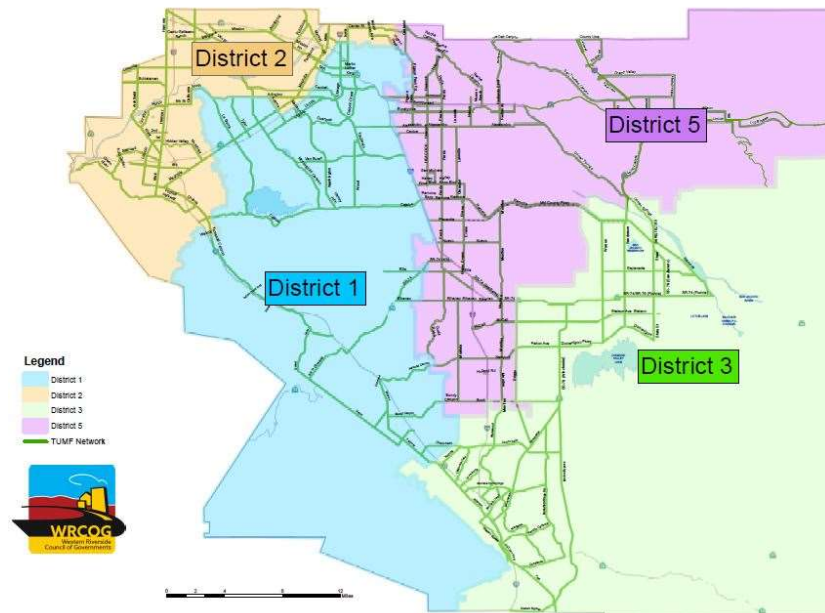
TUMF Zone Boundaries Update

Attachment 1

Draft TUMF Zone Boundary Update

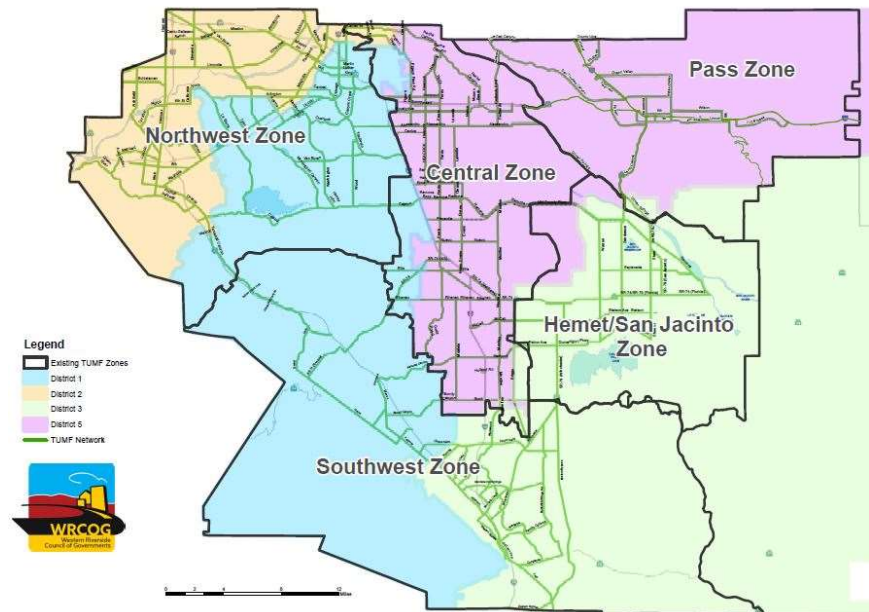
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Supervisor Districts



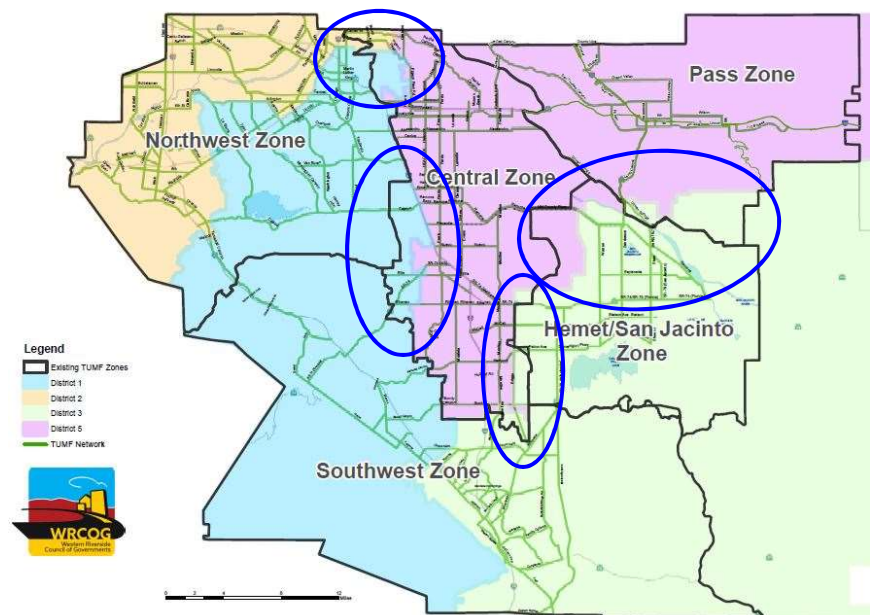
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Supervisor Districts, with Existing Zone Boundaries



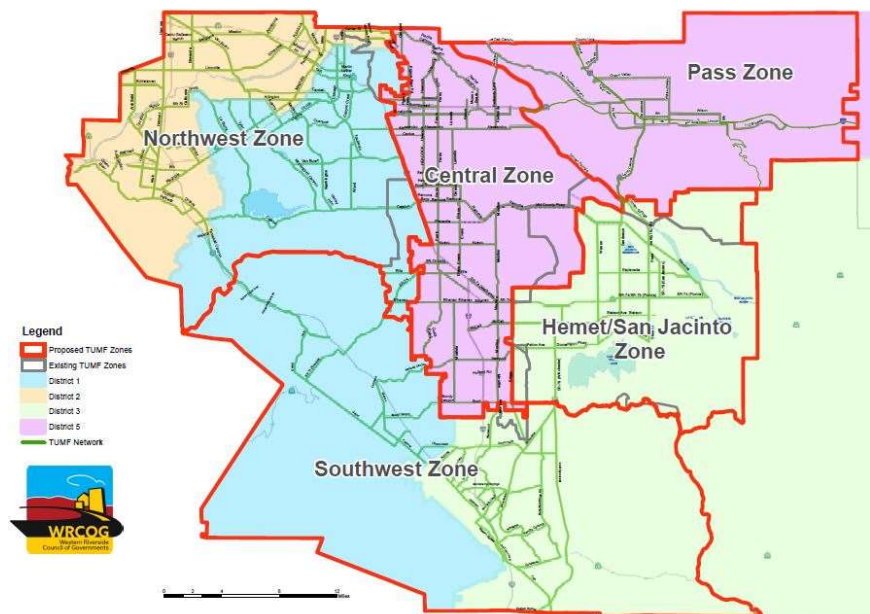
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Supervisor Districts, with Existing Zone Boundaries



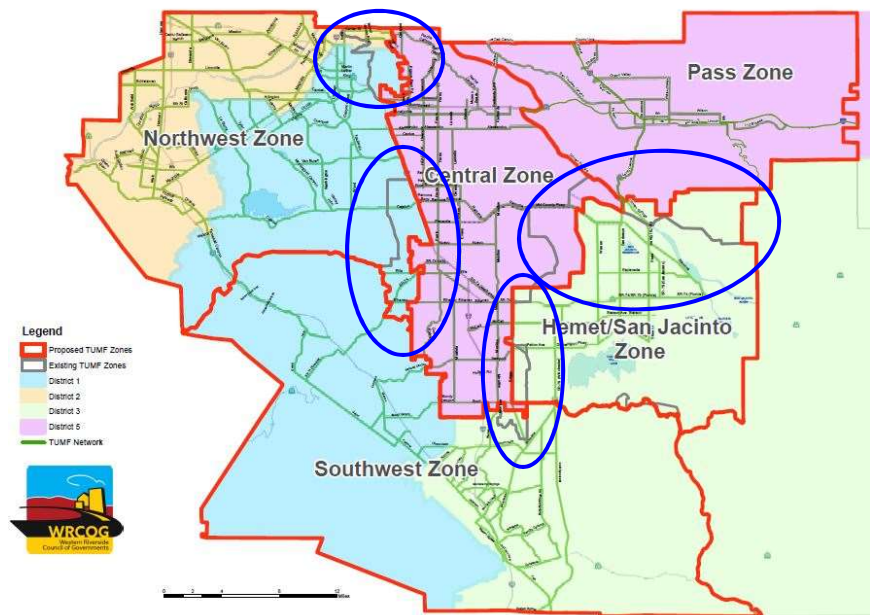
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Supervisor Districts, with Proposed & Existing Zone Boundaries



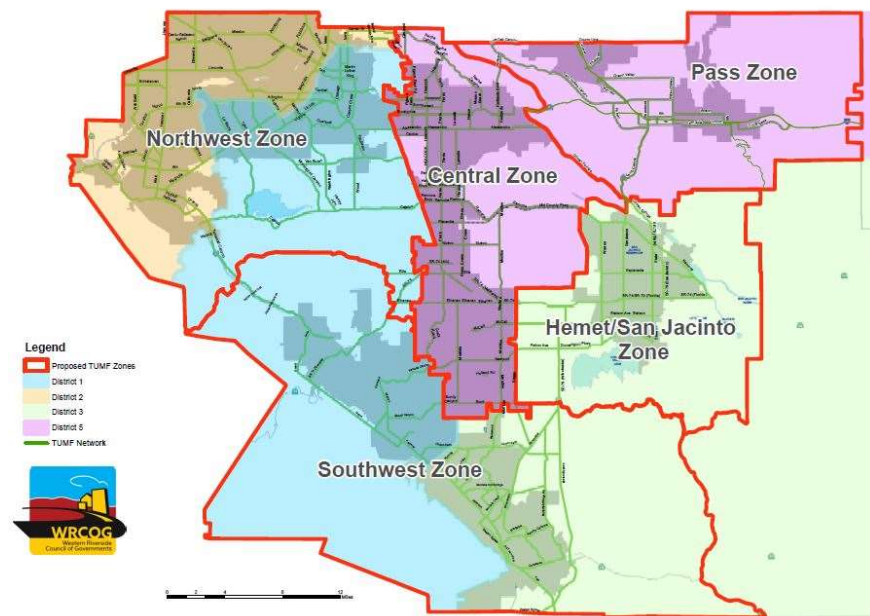
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Supervisor Districts, with Proposed & Existing Zone Boundaries



5

Proposed Zone Boundaries, with Cities



6

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