



# **AGENDA**

## **Highways Committee Meeting**

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### **Committee Members**

*Paul Glaab, Chairman  
Cathy Green, Vice Chairman  
Jerry Amante  
Carolyn Cavecche  
Richard Dixon  
Allan Mansoor  
Chris Norby  
Curt Pringle*

*Orange County Transportation Authority Headquarters  
600 South Main Street, First Floor - Room 154  
Orange, California  
**Monday, October 19, 2009, at 10:00 a.m.***

Any person with a disability who requires a modification or accommodation in order to participate in this meeting should contact the OCTA Clerk of the Board, telephone (714) 560-5676, no less than two (2) business days prior to this meeting to enable OCTA to make reasonable arrangements to assure accessibility to this meeting.

Agenda descriptions are intended to give members of the public a general summary of items of business to be transacted or discussed. The posting of the recommended actions does not indicate what action will be taken. The Committee may take any action which it deems to be appropriate on the agenda item and is not limited in any way by the notice of the recommended action.

All documents relative to the items referenced in this agenda are available for public inspection at [www.octa.net](http://www.octa.net) or through the Clerk of the Board's office at the OCTA Headquarters, 600 South Main Street, Orange, California.

### **Call to Order**

### **Pledge of Allegiance**

Director Norby

### **1. Public Comments**

### **Special Calendar**

There are no Special Calendar matters.



**Consent Calendar (Items 2 through 6)**

All items on the Consent Calendar are to be approved in one motion unless a Committee Member or a member of the public requests separate action or discussion on a specific item.

**2. Approval of Minutes**

Of the August 17, 2009, Highways Committee meeting.

**3. Approval of Minutes**

Of the September 21, 2009, Highways Committee meeting.

**4. Fiscal Year 2009-10 Measure M Eligibility**

Monica Giron/Kia Mortazavi

***Overview***

In order to remain eligible to receive Measure M turnback and competitive funds, all local jurisdictions in Orange County are required to submit elements of the Growth Management Program in accordance with the Measure M Ordinance No. 2 for review to determine compliance. The eligibility review process for fiscal year 2009-10 has been completed and is presented for Board of Directors' consideration and approval.

***Recommendation***

Approve the Measure M turnback and competitive funding eligibility for all local jurisdictions in Orange County.

**5. Draft 2009 Orange County Congestion Management Program Release for Public Review**

Gregory Nord/Kia Mortazavi

***Overview***

The Orange County Transportation Authority is responsible for monitoring and reporting on the Orange County Congestion Management Program every two years, in accordance with state law. A draft 2009 Orange County Congestion Management Program report has been prepared for public review and will be circulated to local agencies with direction by the Board of Directors.

***Recommendation***

Direct staff to release the draft 2009 Orange County Congestion Management Program report for public review.



6. **Cooperative Agreement with the City of Fullerton for Railroad Grade Separation Projects**  
M. Joseph Toolson/Kia Mortazavi

***Overview***

The Orange County Transportation Authority proposes to enter into a cooperative agreement with the City of Fullerton to establish roles, responsibilities, and processes for the design, right-of-way, and construction of the railroad grade separation projects located at Raymond Avenue and State College Boulevard. This agreement also commits Renewed Measure M funding to the City of Fullerton for the two projects.

***Recommendation***

Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-9-0576 with the City of Fullerton for the implementation of the railroad grade separation projects located at Raymond Avenue and State College Boulevard.

**Regular Calendar**

7. **Selection of Firms for On-Call Utility Coordination and Support Services**  
Tom Bogard/Kia Mortazavi

***Overview***

As part of the Orange County Transportation Authority's Fiscal Year 2009-10 Budget, the Board of Directors approved the procurement of on-call utilities coordination and support services. Proposals were solicited in accordance with the Orange County Transportation Authority's procurement procedures for professional and technical services.



**7. (Continued)**

***Recommendations***

Authorize the Chief Executive Officer to execute the following on-call agreements in an aggregate amount not to exceed \$900,000:

- Agreement No. C-9-0453 between the Orange County Transportation Authority and Stantec Consulting, Inc.
- Agreement No. C-9-0750 between the Orange County Transportation Authority and Spec Services
- Agreement No. C-9-0751 between the Orange County Transportation Authority and Utility Specialists California, Inc.
- Agreement No. C-9-0752 between the Orange County Transportation Authority and APA Engineering, Inc.
- Agreement No. C-9-0753 between the Orange County Transportation Authority and Berg & Associates, Inc.

**8. Selection of Firms for On-Call Right-of-Way Services**

Tom Bogard/Kia Mortazavi

***Overview***

As part of the Orange County Transportation Authority's Fiscal Year 2009-10 Budget, the Board of Directors approved the procurement of on-call right-of-way services. Proposals were solicited in accordance with the Orange County Transportation Authority's procurement procedures for professional and technical services.

***Recommendations***

Authorize the Chief Executive Officer to execute the following on-call agreements in the aggregate amount not to exceed \$1,000,000:

- Agreement No. C-9-0452 between the Orange County Transportation Authority and Epic Land Solutions, Inc.
- Agreement No. C-9-0747 between the Orange County Transportation Authority and HDR Engineering, Inc.
- Agreement No. C-9-0748 between the Orange County Transportation Authority and Overland, Pacific and Cutler, Inc.
- Agreement No. C-9-0749 between the Orange County Transportation Authority and Paragon Partners Ltd.



9. **Change of Signage on the San Diego Freeway (Interstate 405)**  
Harry W. Thomas/Kia Mortazavi

***Overview***

In February 2009, the Board of Directors requested the California Department of Transportation change the destination signage for the southbound San Diego Freeway (Interstate 405) to indicate "Irvine/San Diego." To implement this request, a resolution is presented for Board of Directors' approval. Adoption of this resolution will start the signage change process with the California Department of Transportation, the Federal Highway Administration, and the American Association of State Highway Transportation Officials.

***Recommendation***

Adopt Resolution No. 2009-54 authorizing the Chief Executive Officer to transmit a request to the California Department of Transportation to initiate the process to designate the City of Irvine as a destination for the southbound San Diego Freeway (Interstate 405) and modify the overhead signage to indicate Irvine/San Diego.

**Discussion Items**

10. **Status Update, Advanced Freeway Management Systems**  
James Pinheiro, Caltrans District 12

In November of 2008, the Highways Committee received a report on freeway traffic management systems designed to improve traffic flow by addressing recurrent and non-recurrent (accident-type) congestion. The Highways Committee requested the California Department of Transportation return with a report on lessons learned from pilot projects, and recommendations on how to apply those technologies on various corridors. The California Department of Transportation will brief the Highways Committee, and a copy of that presentation is attached.



# **AGENDA**

*Highways Committee Meeting*

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**11. Chief Executive Officer's Report**

**12. Committee Members' Reports**

**13. Closed Session**

There is no Closed Session scheduled.

**14. Adjournment**

The next regularly scheduled meeting of this Committee will be held at **10:00 a.m. on Monday, November 2, 2009**, at the OCTA Headquarters.





# MINUTES

## Highways Committee Meeting

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### **Committee Members Present**

*Paul Glaab, Chairman  
Cathy Green, Vice Chairman  
Jerry Amante  
Carolyn Cavecche  
Richard Dixon  
Allan Mansoor  
Chris Norby  
Curt Pringle*

### **Staff Present**

*Will Kempton, Chief Executive Officer  
James S. Kenan, Deputy Chief Executive Officer  
Wendy Knowles, Clerk of the Board  
Laurena Weinert, Assistant Clerk of the Board  
Kennard R. Smart, Jr., General Counsel  
OCTA Staff and members of the General Public*

### **Committee Members Absent**

*None*

## **Call to Order**

The August 17, 2009, regular meeting of the Highways Committee was called to order by Committee Chairman Glaab at 10:00 a.m.

## **Pledge of Allegiance**

Director Cavecche led in the Pledge of Allegiance.

### **1. Public Comments**

No public comments were received.

## **Special Matters**

There were no Special Calendar items.

## **Consent Calendar (Items 2 through 4)**

### **2. Approval of Minutes**

A motion was made by Committee Vice Chairman Green, seconded by Director Cavecche, and declared passed by those present, to approve minutes of the July 20, 2009, meeting.

Director Norby was not present to vote on this matter.



**3. Cooperative Agreements with the California Department of Transportation and the City of Seal Beach for the San Diego Freeway (Interstate 405) West County Connectors Project**

A motion was made by Committee Vice Chairman Green, seconded by Director Cavecche, and declared passed by those present, to:

- A. Authorize the Chief Executive Officer to execute Cooperative Agreement No. C-9-0628 between the Orange County Transportation Authority and the California Department of Transportation for construction of the east segment project of the West County Connectors Project, in an amount not to exceed \$17,500,000.
- B. Authorize the Chief Executive Officer to execute Cooperative Agreement No. C-9-0631 between the Orange County Transportation Authority and the City of Seal Beach, in an amount not to exceed \$7,174,000, to be received by the Orange County Transportation Authority from the City of Seal Beach for construction related to the widening of the Seal Beach Boulevard overcrossing, as part of the west segment project of the West County Connectors Project.

Director Norby was not present to vote on this matter.

**4. Selection of Consultants for Construction Management Services for the San Diego Freeway (Interstate 405) West County Connectors Project**

A motion was made by Committee Vice Chairman Green, seconded by Director Cavecche, and declared passed by those present, to:

- A. Select Caltrop Corporation as the firm to perform construction management services for the west segment project of the San Diego Freeway (Interstate 405) West County Connectors Project.
- B. Select Harris & Associates, Inc., as the firm to perform construction management services for the east segment project of the San Diego Freeway (Interstate 405) West County Connectors Project.
- C. Authorize the Chief Executive Officer to request cost proposals from Caltrop Corporation and Harris & Associates, Inc., and negotiate an agreement for services.



### 4. (Continued)

- D. Authorize the Chief Executive Officer to execute Agreement No. C-9-0363 between the Orange County Transportation Authority and Caltrans Corporation to perform construction management services for the west segment of the San Diego Freeway (Interstate 405) West County Connectors Project.
  
- E. Authorize the Chief Executive Officer to execute Agreement No. C-9-0630 between the Orange County Transportation Authority and Harris & Associates, Inc., to perform construction management services for the east segment of the San Diego Freeway (Interstate 405) West County Connectors Project.

Directors Amante and Cavecche abstained on this matter.

Director Norby was not present to vote on this matter.

### Regular Calendar

#### 5. Update on Project Alternatives for the San Diego Freeway (Interstate 405) Improvement Project

Rose Casey, Program Manager of Highway Project Delivery, presented an update regarding the project location, current and projected traffic analysis, four build alternatives findings, right-of-way analysis, funding, environmental phase schedule, and Policy Working Group/public outreach meetings.

Director Cavecche requested costs per minute versus benefits for improvement projects related to the high-occupancy vehicle (HOV) lanes development/conversion.

Director Glaab requested data regarding short-term benefits of project alternatives for the Interstate 405 (I-405) improvement project.

Directors Amante, Cavecche, and Pringle expressed concerns that Alternative 3, the high-occupancy toll (HOT) lanes (or Express Lane) option, would take away the existing HOV lanes. Staff stated that the proposed Alternative 3 would add one new Express Lanes and include the existing HOV lane within the two-lane Express Lanes facility in each direction. The HOV lanes is not being eliminated or taken away. This alternative would also add one new general purpose (free) lane in each direction to fulfill the Renewed Measure M.



### 5. (Continued)

Staff will present at future Committee and Board meetings further information regarding the proposed Express Lanes concept, as well as the results of the traffic and revenue analysis. This information will also be provided for the Board's consideration before setting any operation and tolling policies for the HOV lanes and proposed Express Lanes facility for the I-405 improvement project.

Director Glaab requested data that the Express Lanes facility could significantly alleviate congestion on the I-405 by providing additional capacity. He also requested the feedback from the City Council briefings, as well as the stakeholder working group meetings.

Los Angeles Metropolitan Transportation Authority (Metro) and Caltrans District 7 are working on an I-405 design-build project to add a northbound HOV lane. In addition, their congestion pricing demonstration program is for Interstate 110 and 10, which will review converting the existing carpool lanes to toll lanes.

No action was taken on this receive and file information item.

### 6. **American Recovery and Reinvestment Act Program Update and Amendments to Transit and Surface Transportation Programs**

Abbe McClenahan, Capital Programs Manager, provided an update on the delivery status of the program of projects, discretionary grant programs, and requesting amendments to program transit funds for fixed-route operating assistance and re-program highway infrastructure cost savings.

There was additional discussion regarding:

- The Supplemental Appropriations Act of 2009 allows recipients of American Recovery and Reinvestment Act transit capital assistance an opportunity to use 10 percent towards fixed-route operating.
- Director Dixon requested that for future reference a clarification of the Pacific Surfliner corridor.
- Staff reported that the cities of Santa Ana and Tustin requested an OCTA letter of support for their Transportation Investment Generating Economic Recovery (TIGER) projects, which will be submitted directly to the Federal Highways Administration (FHWA).
- The Committee requested that the letters of support to be letters of facts. Staff will return to this Committee and Board with the letters of facts, provide information on Santa Ana's and Tustin's projects, and explain the TIGER funding/process.



**6. (Continued)**

- The TIGER program allows agencies to individually submit applications directly to the FHWA.
- Staff interacted with the Orange County agencies to come up with a comprehensive Orange County TIGER list of projects for the State, which was approved by the Board.
- The State has a TIGER stakeholder group, which represents the ports, transit, and regional agencies. The stakeholder group will prioritize the recommended projects going forward to the FHWA.

A motion was made by Committee Vice Chairman Green, seconded by Director Dixon, and declared passed by those present, to:

- A. Authorize staff to direct \$7.68 million of American Recovery and Reinvestment Act transit funds to fixed-route operating assistance.
- B. Authorize staff to apportion cost savings from the Riverside Freeway (State Route 91) Widening Project to the Garden Grove Freeway (State Route 22) West County Connectors Project.
- C. Direct staff to prepare and submit any necessary programming amendments to the Regional Transportation Improvement Program, submit necessary Federal Transit Administration grant applications, and execute any necessary agreements to facilitate above actions.

**Discussion Items**

**7. Costa Mesa Freeway (State Route 55) Access Study Update**

Tammy Warren, Project Manager, reported that at the May 18 Highways Committee meeting, Director Mansoor requested that staff meet with the cities of Costa Mesa, Huntington Beach, and Newport Beach to discuss the appropriate lead agency and review the project study report agreement.

Staff and the three cities met and agreed that a business and economic study needed to be completed or initiated by Costa Mesa. The City of Costa Mesa is drafting a scope of work for that study. In addition, OCTA staff will return to this Committee and Board within a few months with a draft cooperative agreement.

Director Norby inquired about the speed harmonization status. James Pinheiro, Caltrans District 12, Deputy District Director of Operations, responded that a follow-up report would be presented to this Committee in October 2009.



**8. Chief Executive Officer's Report**

Chief Executive Officer, Will Kempton, reported on upcoming OCTA meetings, events, and presentations.

On Tuesday, August 18, Director Cavecche and Kristine Essner, State Relations, will attend the Regional Targets Advisory Committee meeting in Sacramento.

**9. Committee Members' Reports**

There were no Committee Members' reports.

**10. Closed Session**

A Closed Session was not conducted at this meeting.

**11. Adjournment**

The meeting adjourned at 11:15 a.m. The next regularly scheduled meeting of this Committee will be held at **10:00 a.m. on September 21, 2009**, at the OCTA Headquarters.

ATTEST

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Laurena Weinert  
Assistant Clerk of the Board

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Paul Glaab  
Committee Chairman





# MINUTES

## Highways Committee Meeting

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### **Committee Members Present**

*Cathy Green, Vice Chairman  
Jerry Amante  
Richard Dixon  
Curt Pringle*

### **Staff Present**

*James S. Kenan, Deputy Chief Executive Officer  
Wendy Knowles, Clerk of the Board  
Laurena Weinert, Assistant Clerk of the Board  
Kennard R. Smart, Jr., General Counsel  
OCTA Staff and members of the General Public*

### **Committee Members Absent**

*Paul Glaab, Chairman  
Carolyn Cavecche  
Allan Mansoor  
Chris Norby*

## **Call to Order**

The September 21, 2009, regular meeting of the Highways Committee was called to order by Committee Vice Chairman Green at 10:10 a.m.

## **Pledge of Allegiance**

Committee Vice Chairman Green led in the Pledge of Allegiance.

### **1. Public Comments**

No public comments were received.

## **Special Matters**

There were no Special Calendar items.

## **Consent Calendar (Items 2 through 5)**

### **2. Approval of Minutes**

Due to lack of quorum, no action was taken on the August 17, 2009, Highways Committee minutes, and deferred to the October 5, 2009, Committee meeting.

### **3. Cooperative Agreements with the City of Buena Park for Allocation of Regional Surface Transportation Program Funds and the County of Orange for the Transfer of Regional Surface Transportation Program Funds**

Due to lack of quorum, no action was taken on this item, and it will be taken to the September 28, 2009, Board meeting.



**4. Extend Agreement with the California State University, Fullerton Center for Demographic Research Services for Fiscal Year 2009-10**

Due to lack of quorum, no action was taken on this item, and it will be taken to the September 28, 2009, Board meeting.

**5. Proposition 1B Traffic Light Synchronization Program - Substitution of Valley View Street/Bolsa Chica Road with El Toro Road**

Director Dixon pulled this item and inquired if there will be technology upgrades with local jurisdictions that have already installed traffic light synchronization.

Committee Vice Chairman Green inquired about the Valley View Street/Bolsa Chica Road project delay until the West County Connectors Project is completed.

Ron Keith, Principal Traffic Engineer, responded: 1) the delay is due to the fund allocations being postponed by Caltrans and the California Transportation Commission; 2) West County Connectors Project will commence in March 2010, which will disrupt traffic patterns for Valley View Street/Bolsa Chica Road; and 3) local jurisdictions that completed their traffic light synchronization project will be included in the technology upgrades.

Due to lack of quorum, no action was taken on this item, and it will be taken to the September 28, 2009, Board meeting.

### **Regular Calendar**

**6. Combined Transportation Funding Program Project Delivery Options**

Kia Mortazavi, Executive Director of Development, opened with comments that this Committee directed staff at the July 20, 2009, meeting to develop with the Technical Advisory Committee (TAC) potential options to mitigate the current delivery trends.

Roger Lopez, Manager of Local Measure M Programs, reported that staff worked with the TAC and Technical Steering Committee to develop options. A phased approach was developed with the intent to insure delivery of the most projects possible within the remaining timelines.



**6. (Continued)**

There was additional discussion regarding:

- The Combined Transportation Funding Program categories are Master Plan of Arterial Highways (street widening) and Smart Street Program.
- The match rates would stay the same for the local agencies.
- Director Pringle requested information on number of projects in each category, overview of projects in jeopardy, examples of how all recommended phases impact the overall delivery of projects, and how many projects will not be completed.
- Director Dixon requested information on why a city cannot complete a committed project.
- Phase Three addresses a project not meeting the obligation deadline. In addition, the Committee/Board would be provided a project list of the unspent balance for transfer consideration into the Renewed Measure M Regional Capacity Program.
- Director Dixon recommended a city council resolution when city staff is considering transfer of the funds.
- Director Amante requested information on the reason the local jurisdiction is requesting an extension.
- Staff will return to this Committee with detailed data as requested by the Committee.

Due to lack of quorum, no action was taken on this item and deferred to a future Committee meeting to address the Committee's requests and concerns.

**7. Central County Corridor Major Investment Study Update - Reduced Set of Alternative Strategies**

Director Amante as Chairman of the Central County Corridor Major Investment Study Policy Advisory Committee, provided opening comments that there is consensus from the stakeholders, Technical Working Group, and Policy Advisory Committee on a reduced set of alternatives.

Tamara Warren, Project Manager of Corridor Studies, presented the study area, process and status, alternative strategies and total capital cost, travel time savings, cost benefit analysis, technical recommendations, and reduced set of strategies.



**7. (Continued)**

There was additional discussion regarding:

- The study's purpose is to review all transportation modes in a north/south direction, as well as external movement going through the study area.
- Concerns regarding commuters traveling eastbound to Riverside County, and encourage connections to the 241 tollroad without placing full burden on the central part of Orange County.
- Shadow toll option at the State Route 91/241 tollroad connector is being reviewed under Alternative 5 reduced set of strategies.
- Director Pringle requested data on the shadow toll modeling referenced in Alternative 5 reduced strategy. He also requested, as a part of this study, a review of the 241 tollroad interaction and impacts to the State Route 91.
- Director Dixon suggested a review of the shadow toll benefits in regards to connecting the systems under consideration by the South and Central County major investments studies.

Due to lack of quorum, there was no action take on this item and it will be taken to the October 9, 2009, Board meeting.

**Discussion Items**

**8. Chief Executive Officer's Report**

Deputy Chief Executive Officer, James S. Kenan, reported on upcoming OCTA meetings, events, and presentations.

**9. Committee Members' Reports**

There were no Committee Members' reports.

**10. Closed Session**

A Closed Session was not conducted at this meeting.



# **MINUTES**

## ***Highways Committee Meeting***

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### **11. Adjournment**

The meeting adjourned at 11:20 a.m. The next regularly scheduled meeting of this Committee will be held at **10:00 a.m. on Monday, October 5, 2009**, at the OCTA Headquarters.

ATTEST

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Laurena Weinert  
Assistant Clerk of the Board

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Cathy Green  
Committee Vice Chairman





**October 19, 2009**

**To:** Highways Committee  
**From:** Will Kempton, <sup>JR: JPK</sup> Chief Executive Officer  
**Subject:** Fiscal Year 2009-10 Measure M Eligibility Review

**Overview**

In order to remain eligible to receive Measure M turnback and competitive funds, all local jurisdictions in Orange County are required to submit elements of the Growth Management Program in accordance with the Measure M Ordinance No. 2 for review to determine compliance. The eligibility review process for fiscal year 2009-10 has been completed and is presented for Board of Directors' consideration and approval.

**Recommendation**

Approve the Measure M turnback and competitive funding eligibility for all local jurisdictions in Orange County.

**Background**

In November 1990, the Revised Traffic Improvement and Growth Management Ordinance, known as Measure M, was passed. This implemented a one-half of 1 percent sales tax collection for the purpose of funding local transportation improvements.

Measure M includes an apportionment of 32 percent of revenues to local jurisdictions for street maintenance and improvements, which includes both turnback (formula distribution) and competitive programs. The turnback of sales tax money is apportioned by applying a formula using population, miles of existing Master Plan of Arterial Highways (MPAH) designated roadways located within the jurisdiction, and taxable sales. The competitive grants are awarded through a call for projects.

To maintain eligibility for fiscal year (FY) 2009-10 Measure M funds, all local jurisdictions are required to submit a seven-year Capital Improvement Program (CIP) and a maintenance of effort (MOE) certification. Some

jurisdictions, based on an alternating year schedule, are required to submit a pavement management plan (PMP).

The Orange County Transportation Authority (OCTA) maintains this annual eligibility process and provides a checklist to local agencies to assist with the eligibility submissions (Attachment A). In addition to specifying the requirements for local jurisdictions, the Measure M Ordinance outlines a role of oversight to the Taxpayers Oversight Committee (TOC) and the Technical Advisory Committee (TAC). During this review cycle, the TOC was responsible for reviewing and approving the local agencies' CIPs and the TAC was responsible for approving the MOE, PMP, and MPAH consistency documentation. The determinations of these committees are forwarded to the OCTA Board of Directors (Board) for final eligibility determination.

### ***Discussion***

All jurisdictions submitted documentation required by the Measure M Ordinance. OCTA staff reviewed the submittals to ensure each eligibility package was complete and accurate and worked with the local jurisdictions to obtain additional information and/or backup materials as needed.

The TOC found all local agencies to be in compliance with the expenditure of Measure M funds and approved a recommendation to forward its findings to the OCTA Board. Likewise, the TAC found all local agencies to be in compliance with the reporting requirements of Measure M and approved a recommendation to forward its findings to the OCTA Board.

A finding of compliance with eligibility requirements allows local agencies to continue to receive Measure M funds for use in funding local streets and roads projects. It is estimated that \$35.6 million in turnback funds will be provided to local agencies in FY 2009-10. In addition local agencies have \$67.4 million in competitive grants in FY 2009-10.

### ***Summary***

All local jurisdictions in Orange County have submitted FY 2009-10 Measure M eligibility packages. The information was reviewed and approved by the appropriate committees. OCTA staff is presenting the committees' findings of compliance and recommends a final finding of turnback and competitive eligibility for all local agencies.

**Attachment**

- A. Measure M Eligibility Checklist for Fiscal Year (FY) 2009-10

**Prepared by:**



Monica Giron  
Transportation Funding Analyst  
(714) 560-5905

**Approved by:**



Kia Mortazavi  
Executive Director, Development  
(714) 560-5741



**MEASURE M  
ELIGIBILITY CHECKLIST FOR FISCAL YEAR (FY) 2009-10**

Responsibility: Cities and County

**FY 2008-09 MEASURE M CHECKLIST**

**YES NO**

Capital Improvement Program (CIP)

- |    |   |                          |                          |
|----|---|--------------------------|--------------------------|
| 1. | Did you submit your draft Measure M seven-year CIP for FY 2009-10 through FY 2015-16 to the Orange County Transportation Authority (OCTA) by June 30, 2009? | <input type="checkbox"/> | <input type="checkbox"/> |
| a. | Did you utilize the required CIP development software?  | <input type="checkbox"/> | <input type="checkbox"/> |
| b. | Have you indicated what percentage of funding will come from each source for each of the projects?  | <input type="checkbox"/> | <input type="checkbox"/> |
| c. | Have you listed projects in current year (2009) dollars?  | <input type="checkbox"/> | <input type="checkbox"/> |
| d. | Did you include all projects that are partially, fully or potentially funded by Measure M?  | <input type="checkbox"/> | <input type="checkbox"/> |
| e. | Have you established an estimated target date prior to August 8, 2009, for submitting your final, adopted Measure M seven-year CIP to OCTA?                 | <input type="checkbox"/> | <input type="checkbox"/> |

Maintenance of Effort (MOE)

- |    |   |                          |                          |
|----|---|--------------------------|--------------------------|
| 2. | Did you submit your MOE certification and supporting budget documentation to OCTA by June 30, 2009?                   | <input type="checkbox"/> | <input type="checkbox"/> |
| a. | Did you use the MOE reporting form included in the Growth Management Program (GMP) preparation manual for FY 2009-10? | <input type="checkbox"/> | <input type="checkbox"/> |

Pavement Management Program (PMP)

- |    |   |                          |                          |
|----|---|--------------------------|--------------------------|
| 3. | Did you submit a PMP update to OCTA in 2008?  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. | If you answered "no" to question #3, did you submit a PMP update to OCTA for FY 2009-10 by June 30, 2009? | <input type="checkbox"/> | <input type="checkbox"/> |
| a. | Did you use the current PMP certification form?   | <input type="checkbox"/> | <input type="checkbox"/> |
| b. | Is the PMP consistent with the Arterial Highway Rehabilitation Program standards?                         | <input type="checkbox"/> | <input type="checkbox"/> |

Resolution of Master Plan of Arterial Highway (MPAH) Consistency

- 5. Did you submit a resolution demonstrating consistency with the MPAH in 2008?
  - a. If not, did you submit an MPAH consistency resolution to OCTA for FY 2009-10 by June 30, 2009?
- 6. Have you enclosed a figure representing your most current circulation element?

Development Monitoring

- 7. Has your jurisdiction established and followed performance monitoring mechanisms for development projects qualifying under the Measure M Development Phasing Program requirements?
- 8. Please check the appropriate box(es) that explain how your jurisdiction has assessed project traffic demand in relation to circulation infrastructure capacity. Has this information been included in:
  - a. Environmental documentation?
  - b. Site plan review documents?
  - c. General plan amendments?
  - d. Other (please explain below).

YES NO

<input type="checkbox"/>	<input type="checkbox"/>

Deficient Intersection List

- 9. Has your jurisdiction identified any intersections which do not meet the established Measure M level of service standard (LOS D)?
- 10. If yes, has your jurisdiction adopted a deficient intersection list through a noticed public hearing of elected officials and submitted the list to the GMA's and OCTA?

**Submitted by:**

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Name (Print)	Signature	Title
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Jurisdiction	Telephone Number	Date
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**October 19, 2009**

**To:** Highways Committee  
**From:** Will Kempton, <sup>WK</sup>Chief Executive Officer  
**Subject:** Draft 2009 Orange County Congestion Management Program Release for Public Review

**Overview**

The Orange County Transportation Authority is responsible for monitoring and reporting on the Orange County Congestion Management Program every two years, in accordance with state law. A draft 2009 Orange County Congestion Management Program report has been prepared for public review and will be circulated to local agencies with direction by the Board of Directors.

**Recommendation**

Direct staff to release the draft 2009 Orange County Congestion Management Program report for public review.

**Background**

In June 1990, the passage of Proposition 111 prompted legislation requiring urbanized areas to designate a Congestion Management Agency (CMA) and adopt a Congestion Management Program (CMP) in order to continue receiving gas tax funds. As Orange County's designated CMA, the Orange County Transportation Authority (OCTA) is responsible for developing, monitoring, and biennially updating Orange County's CMP report. The purpose for the CMP is to provide a mechanism for coordinating land use and transportation decisions and to manage traffic congestion by monitoring the transportation system.

The Orange County CMP report is a composite of data submittals such as traffic counts and capital improvement program projects. It was developed through cooperative efforts between OCTA, local jurisdictions, and public agencies over the past year, in accordance with state legislation.

***Discussion***

Staff has developed a draft 2009 Orange County CMP report (Attachment A) in compliance with state law. To assist Orange County cities, OCTA funds and administers the collection of traffic count data at the 95 intersections within the Orange County CMP highway system. The count data was used to calculate intersection capacity utilization (ICU) ratings, which represent the percent of capacity used at each intersection when demand is highest (morning and evening peak hours). Based on the ICU ratings, level of service (LOS) grades are assigned to each intersection. Local jurisdictions reviewed and approved all of the intersection performance data.

<b>LOS Grade</b>	<b>ICU Rating</b>
A	< .61
B	.61 - .70
C	.71 - .80
D	.81 - .90
E	.91 - 1.00
F	> 1.00

The general performance standard that must be maintained is a LOS grade of E or better. In most cases, if an intersection receives an F it is considered deficient - operating over capacity. As such, a deficiency plan must be developed by the agency controlling the signals at the intersection. A deficiency plan identifies the cause of congestion, the improvements needed to solve the problem, and the cost and timing of the proposed improvements.

The 2009 CMP report identifies two intersections that have exceeded the LOS standard. The California Department of Transportation (Caltrans) controls both of these intersections, which statutorily exempts the respective local jurisdictions from preparing a deficiency plan. As a result, no deficiency plans are required from any Orange County local agencies in response to the 2009 Orange County CMP report.

Improvements at the San Diego Freeway (Interstate 5)/Ortega Highway (State Route 74) interchange are in final design and scheduled to be implemented by 2014. This project will eliminate a chokepoint, reduce congestion, and accommodate forecast traffic demand.

<b>Jurisdiction</b>	<b>Responsible Agency</b>	<b>Intersection/Interchange</b>	<b>ICU</b>	
			<b>2009 AM</b>	<b>2009 PM</b>
Laguna Beach	Caltrans	Laguna Canyon Road/San Joaquin Transportation Corridor (State Route 73) northbound ramps	1.08	0.98
San Juan Capistrano	Caltrans	Interstate 5 southbound ramps/ State Route 74	0.93	1.06

Compared to the baseline year data, which represents the first year CMP data was collected for any given intersection (1991, in most cases), Orange County congestion conditions have improved. The average morning ICU rating showed a 10.59 percent improvement and the average evening ICU rating showed a 9.35 percent improvement. Note, the Imperial Highway (State Route 90) intersections at Orangethorpe Avenue, the Riverside Freeway (State Route 91) northbound ramps, and State Route 91 southbound ramps were not included in the analysis due to the ongoing construction of a rail grade separation project. The ICU data for these remaining intersections will be collected, once the construction is complete, and included in future CMP reports.

Local jurisdictions also submitted data pertaining to the Capital Improvement Program, coordination of land use and transportation, and other legislatively required elements. Based on the submittals and performance measure data, OCTA's preliminary finding is that all jurisdictions are in compliance with the CMP requirements. The Orange County CMP report must also include data on freeway LOS. This information is being prepared by Caltrans and will be included as part of the final report.

#### **Next Steps**

Upon direction by the OCTA Board of Directors (Board), the draft 2009 Orange County CMP report will be released for a three-week public review period. Once released, the draft 2009 Orange County CMP report will be circulated to local agencies for review, hardcopies will be available in-house for review by the public, and an electronic version will be available on the OCTA website. Any comments received will be incorporated into the final 2009 Orange County CMP report, as appropriate.

The final 2009 Orange County CMP report will be brought to the Board for adoption at a noticed public hearing. Upon adoption by the Board, the final 2009 Orange County CMP report will be submitted to the Southern California Association of Governments to ensure consistency with regional transportation plans, which will allow local agencies to continue receiving gas tax funds, per Proposition 111 (1990).

#### **Summary**

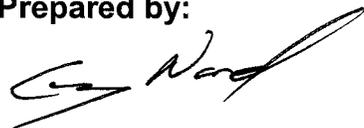
A draft 2009 Orange County CMP report has been prepared in accordance with state legislation, and developed through cooperative efforts involving local jurisdictions and public agencies. Upon Board direction, staff will circulate the draft 2009 Orange County CMP report for a three-week public review period and return with a final report for adoption at a public hearing.

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***Attachment***

- A. Draft 2009 Orange County Congestion Management Program

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DRAFT  
**2009 Orange County  
Congestion Management Program**

October 1, 2009



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## Chapter 1: Introduction

### *Purpose & Need*

In June 1990, the passage of the Proposition 111 gas tax increase required California's urbanized areas – areas with populations of 50,000 or more – to adopt a Congestion Management Program (CMP). The following year, Orange County's local governments designated the Orange County Transportation Authority (OCTA) as the Congestion Management Agency (CMA) for the County. As a result, OCTA is responsible for the development, monitoring, and biennial updating of Orange County's CMP.

The passage of Assembly Bill 2419, in July 1996, provided local agencies the option to elect out of the CMP process without the risk of losing state transportation funding. However, local jurisdictions in Orange County expressed a desire to continue the existing CMP process, because the requirements are similar to those of the Orange County Measure M Growth Management Program, and because it contributes to fulfilling federal requirements for the Congestion Management System (CMS), prepared by the Southern California Association of Governments (SCAG). The OCTA Board of Directors affirmed the decision to continue with the existing CMP process on January 13, 1997.

### **CMP Goals**

The goals of Orange County's CMP are to support regional mobility and air quality objectives by reducing traffic congestion; provide a mechanism for coordinating land use and development decisions that support the regional economy; and determine gas tax fund eligibility.

To meet these goals, the CMP contains a number of policies designed to monitor and address system performance issues. OCTA developed the policies that makeup Orange County's CMP with local jurisdictions, the California Department of Transportation, and the South Coast Air Quality Management District.

### *State Legislation*

### **Required Elements**

California Government Code Section 65089(b) requires the CMP to include specific elements, which determine the nature of OCTA's CMP policies, and ensure that SCAG's CMS meets federal requirements. The government code statute for each required element is summarized below. The full text of the Government Code can be viewed at [www.leginfo.ca.gov/calaw.html](http://www.leginfo.ca.gov/calaw.html), sections 65088-65089.10.

*Traffic Level of Service Standards – §65089(b)(1)(A) & (B)*

Establish traffic level of service (LOS) standards for a system of highways and roadways. The highways and roadway system is designated by OCTA and shall include, at minimum, all state highways and principal arterials. None of the designated facilities may be removed, and new state highways and principal arterials must be added, except if it is within an infill opportunity zone. The LOS must be measured using a method that is consistent with the Highway Capacity Manual.

The LOS standards must not be below level of service “E”, unless the levels of service from the baseline CMP dataset were lower. If the LOS does not meet the minimum standard, and is outside an infill opportunity zone, a deficiency plan must be adopted.

Chapter two specifically addresses this element.

*Performance Measures – §65089(b)(2)*

Establish measures to evaluate the current and future performance of the transportation system. At minimum, the measures must be established for the highway and roadway system, frequency and routing of public transit, and for the coordination of transit service with separate operators. These measures will be used to support improvements to mobility, air quality, land use, and economic objectives, by being incorporated into the Capital Improvement Program, the Land Use Analysis Program, and any required deficiency plans.

Chapters two and three specifically address this element.

*Travel Demand – §65089(b)(3)*

Promote alternative transportation methods, improve the balance between jobs and housing, and other strategies. These methods and strategies may include, but are not limited to, carpools, vanpools, transit, bicycles, park-and-ride lots, flexible work hours, telecommuting, parking management programs, and parking cash-out programs.

Chapter six specifically addresses this element.

*Land Use Analysis Program – §65089(b)(4)*

Analyze the impacts of land use decisions on the transportation system, using the previously described performance measures. The analysis must also include cost estimates associated with mitigating those impacts. To avoid duplication, this program may require implementation through the requirements and analysis of the California Environmental Quality Act.

Chapter four specifically addresses this element.

*Capital Improvement Program – §65089(b)(5)*

Use the performance measures, described above, to determine effective projects that mitigate impacts identified in the land use analysis program, through an adopted seven-year capital improvement program. This seven-year program will conform to transportation-related air quality mitigation measures, and include any projects that will increase the capacity of the transportation system. Furthermore, consideration will be given to maintaining or improving bicycle access and safety within the project areas. Projects necessary for preserving investments in existing facilities may also be included.

Chapter five specifically addresses this element.

**CMA Requirements**

As Orange County's CMA, OCTA is responsible for the administration of the CMP, as well as providing data and models that are consistent with the Southern California Association of Governments (SCAG) region, and developing the deficiency plan processes. These requirements are described in the legislation, and are summarized below.

*Modeling and Data Consistency – §65089(c)*

In consultation with the SCAG and local governments, OCTA shall develop a uniform data base on traffic impacts for use in a countywide transportation computer model. Moreover, OCTA shall approve transportation models of areas within the county that will be used by local jurisdictions to determine the quantitative impacts of development on the circulation system, which are based on the countywide model and standardized modeling assumptions and conventions. All models and databases shall be consistent with SCAG.

Appendix D, Attachment 1, addresses this requirement.

*Deficiency Plan Procedures – §65089.4*

OCTA is responsible for preparing and adopting procedures for local deficiency plan development and implementation responsibilities. OCTA must also incorporate into its deficiency plan procedures, a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within Orange County; in which case a multi-jurisdictional deficiency plan, adopted by all participating local jurisdictions, may be required. As a precaution, OCTA must establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities.

Chapter two discusses this requirement in more detail.

## Chapter 2: Highway Level of Service

### *Level of Service Standards*

In 1991, the Orange County Transportation Authority (OCTA) implemented an Intersection Capacity Utilization (ICU) monitoring method, developed with technical staff members from local and State agencies, for measuring the Level of Service (LOS) at CMP Highway System (CMPHS) intersections. The CMP LOS grade chart is illustrated in Figure 1.

**Figure 1: LOS Grade Chart**

LOS Grade	ICU Rating
A	< .61
B	.61 - .70
C	.71 - .80
D	.81 - .90
E	.91 - 1.00
F	> 1.00

The first LOS measurement recorded for the CMP, which was in 1992 for most CMP intersections, sets the baseline for comparing future measurements. During subsequent LOS monitoring, CMP statute requires that CMPHS intersections maintain a LOS grade of ‘E’ or better, unless the baseline is lower than ‘E’; in which case, the ICU rating cannot increase by more than 0.1. The *Highway & Roadway System Performance Measures* section discusses the ICU method in more detail.

OCTA has an established CMPHS, consisting of Orange County’s state highways and arterials from OCTA’s Smart Street network (Figure 2). For any CMPHS intersection performing below the LOS standards, discussed above, the responsible agency must identify improvements necessary to meet the LOS standards. This is accomplished either through existing plans, or through the development of a deficiency plan. This is described in more detail in the *Deficiency Plans* section below.

The 2009 freeway monitoring results, provided by the California Department of Transportation (Caltrans) District 12, are located in Appendix A. Caltrans is responsible for monitoring freeway performance, and addressing any deficiency issues on state-operated facilities.

### *Highway & Roadway System Performance Measures*

This section discusses the process for determining ICU ratings, as well as how ICU ratings determine the LOS at CMPHS intersections. This method is generally consistent with the Highway Capacity Manual.

#### Overview of Intersection Capacity Utilization (ICU) Methodology

Traffic counts are manually collected at CMPHS intersections to initiate the ICU calculation process. The counts monitor the traffic flow, including the approach (northbound, eastbound, southbound, or westbound) and movement (left turn, through, or right turn) for each vehicle.



Each intersection has counts conducted in 15-minute increments, during peak periods in the AM (6:00-9:00) and PM (3:00-7:00) on three separate mid-week days (Tuesday, Wednesday, or Thursday). Irregular conditions (inclement weather, holidays, construction, etc.) will postpone counts.

The highest count total during any four consecutive 15-minute count intervals within a peak period represents the peak-hour count set. For each intersection, a peak-hour count set is determined for each day's AM and PM peak period, resulting in a group of three AM peak-hour count sets and a group of three PM peak-hour count sets.

The group of AM peak-hour count sets is averaged, as is the group of PM peak-hour count sets. The results are the volumes used to determine AM and PM volume-to-capacity (V/C) ratios for each movement through the intersection. A number of assumptions determine the capacities for each movement.

An example of an assumption used to determine capacity is the saturation flow-rate, which represents the theoretical maximum number of vehicles that can use a lane to move through an intersection. In 1991, OCTA and the technical staff members from local and state agencies agreed upon a saturation flow-rate of 1,700 vehicles per lane per hour. However, other factors can adjust this assumption.

Such factors include right turn lanes, which can increase the saturation flow-rate by 15% in specific circumstances. Right turn overlaps (signalized right turn lanes that are green during the cross traffic's left turn movements) and free right turns (the lane allows vehicles to turn right without stopping, even when the through signal is red) are some of the circumstances that will increase the saturation flow-rate. If right turns on red are permitted, a *de facto* right turn lane (approaches that do not have designated right turn lanes, but on-street parking is prohibited during peak hours, and the width from the curb through the rightmost through lane is at least 19 feet) may also increase the saturation flow rate.

The capacity can also be reduced under certain conditions. For example, if a lane is shared for through and turn movements, the saturation flow-rate of 1700 could be reduced. This occurs only when the turn movement volumes reach a certain threshold that is calculated for each intersection with shared lanes. The reduction represents the slower turning movements interfering with through movements.

Finally, if field observations indicate the presence of more than 100 pedestrians per hour at an intersection, then pedestrian counts are conducted simultaneously with vehicle counts. Saturation flow-rate calculations then

factor impacts of pedestrian activity for effected lanes, using standard reductions, in accordance with Chapter 16 of the Highway Capacity Manual.

Once the V/C ratios are determined for each movement, critical V/C ratios are calculated. Conflicting movements determine which V/C ratios are included in the calculation of the critical V/C ratios. Conflicting movements represent a situation where a movement from one approach prevents a movement from the opposite approach. For example, if through movements are being made from the southbound approach, left turn movements cannot simultaneously be made from the northbound approach. For each set of opposing approaches (north/south and east/west), the two conflicting movements with the greatest summed V/C ratios are identified. These summed V/C ratios then become known as the critical V/C ratios.

OCTA and technical staff members from local and State agencies also agreed upon a lost time factor of 0.05, in 1991. The lost time factor represents the assumed amount of time it takes a vehicle to travel through an intersection. For each intersection, the critical V/C ratios are summed (north/south + east/west), and the lost time factor is added to the sum, producing the ICU rating for the intersection.

Based on a set of ICU rating ranges, which were agreed upon by OCTA and technical staff members from local and State agencies, grades are assigned to each intersection. The grades indicate the LOS for intersections, and are used to determine if the intersections meet the performance standards described at the beginning of the chapter.

The 2009 LOS ratings for the CMP intersections have been mapped in Figure 3. The map in Figure 4 displays the LOS changes since the 2007 CMP report. Finally, a spreadsheet of the baseline and 2009 LOS ratings for the CMP intersections, and corresponding ICU measurements, is located in Figure 5.

Note that in Figure 5, Orange County's average ICU rating has improved over the baseline. The average AM ICU improved from 0.68 to 0.61 (a 10.29 percent improvement), and the PM ICU improved from 0.73 to 0.66 (a 9.59 percent improvement). The ICU improvements indicate that Orange County agencies are effectively operating, maintaining, and improving the CMP Highway System.

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Figure 3:  
2009 CMP Intersection Level of Service

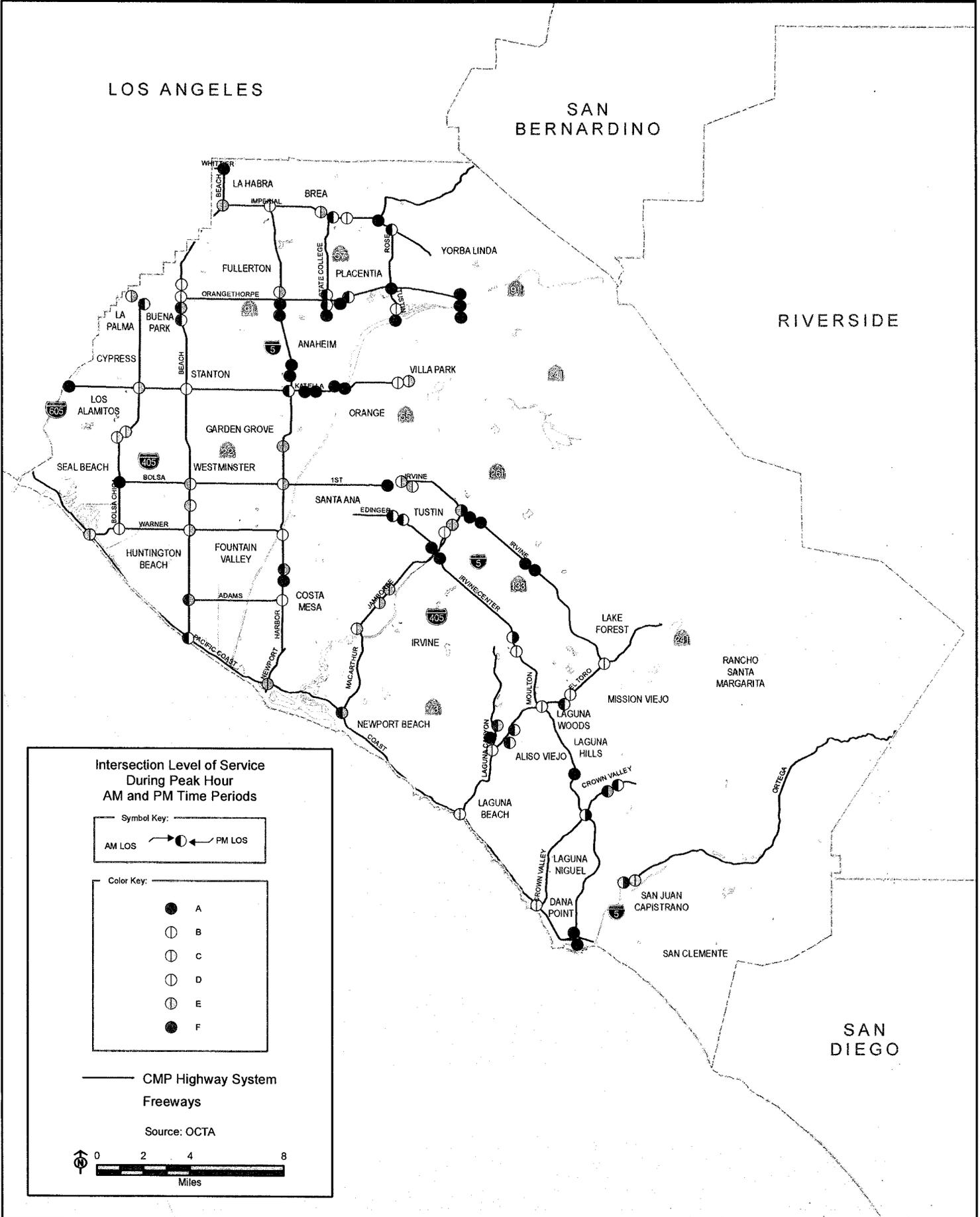


Figure 4:  
2007 vs. 2009 CMP Intersection Level of Service

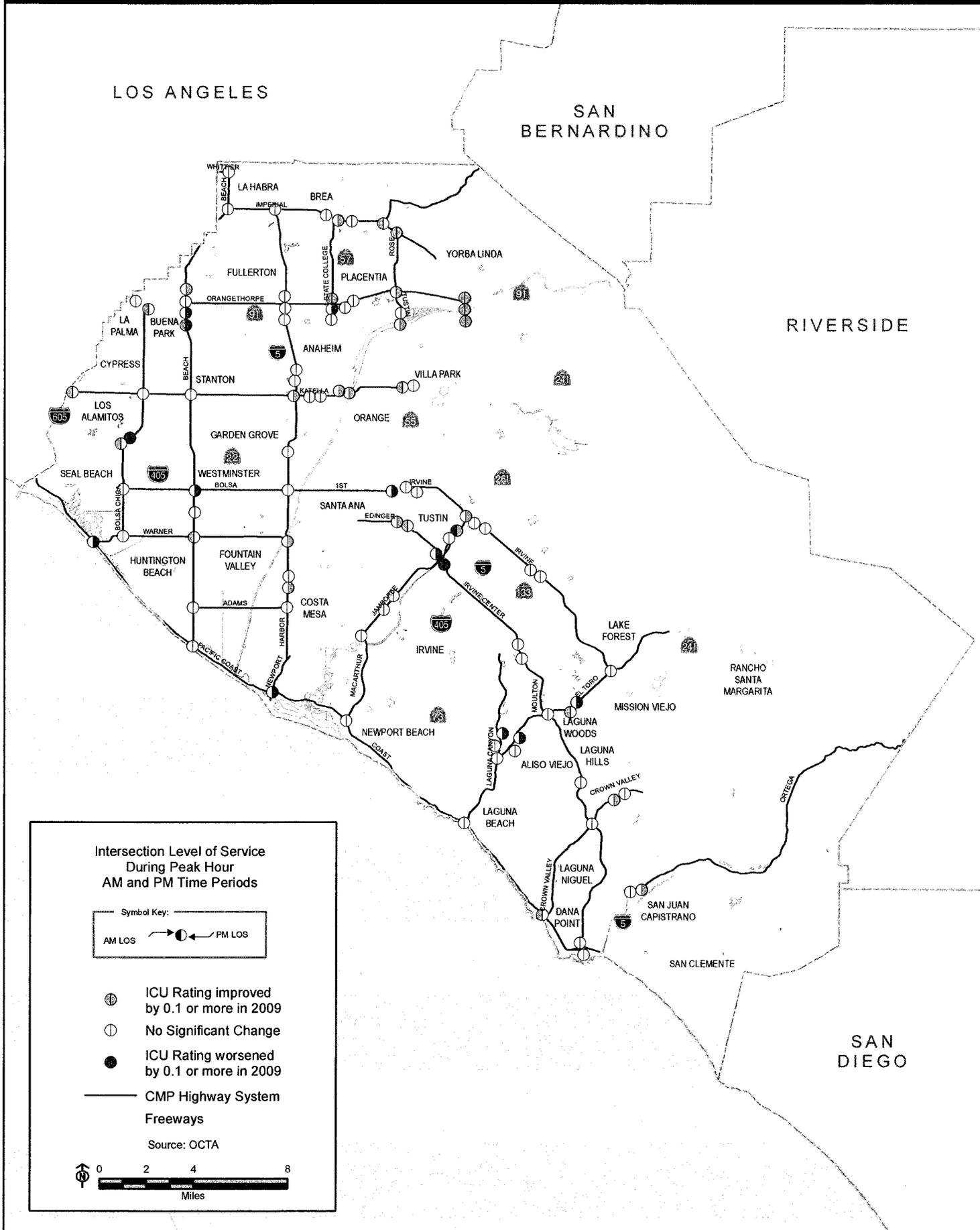


Figure 8: Page 1 of 3

Orange County Congestion Management Program  
LEVEL OF SERVICE 2009

Intersection/Interchange	Jurisdiction	Baseline AM		2009 AM		Baseline PM		2009 PM		Percent Change*	
		LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	AM ICU	PM ICU
Anaheim Blvd-I-5 NB Ramp/Katella Avenue	Anaheim	A	0.49	A	0.43	D	0.82	A	0.50	-12.24%	-39.02%
Harbor Blvd./Katella Avenue	Anaheim	A	0.53	A	0.50	B	0.67	B	0.61	-5.66%	-8.96%
I-5 NB Ramp/Harbor Boulevard	Anaheim	A	0.52	A	0.47	A	0.54	A	0.56	-9.62%	3.70%
I-5 SB Ramp/Katella Avenue	Anaheim	A	0.48	A	0.54	A	0.41	A	0.48	12.50%	17.07%
I-5 SB Ramp/Harbor Boulevard	Anaheim	A	0.29	A	0.23	A	0.31	A	0.29	-20.69%	-6.45%
Imperial Highway/Orangethorpe Avenue	Anaheim	B	0.67	A	0.60	D	0.89	A	0.70	-100.00%	-100.00%
SR-57 NB Ramps/Katella Avenue	Anaheim	A	0.51	A	0.37	A	0.41	A	0.36	-27.45%	-12.20%
SR-57 SB Ramps/Katella Avenue	Anaheim	A	0.52	A	0.42	A	0.51	A	0.36	-19.23%	-29.41%
SR-91 EB Ramp/Harbor Boulevard	Anaheim	A	0.46	A	0.47	A	0.52	A	0.57	2.17%	9.62%
SR-91 EB Ramp/Imperial Highway	Anaheim	C	0.73	A	0.60	C	0.79	A	0.60	-100.00%	-100.00%
SR-91 EB Ramps/State College Boulevard	Anaheim	B	0.69	A	0.47	D	0.82	A	0.56	-31.88%	-29.27%
SR-91 EB Ramps/Tustin Avenue	Anaheim	B	0.66	A	0.55	D	0.84	A	0.47	-16.67%	-44.05%
SR-91 WB Ramp/Harbor Boulevard	Anaheim	B	0.61	A	0.53	C	0.77	A	0.58	-13.11%	-24.68%
SR-91 WB Ramp/Imperial Highway	Anaheim	C	0.71	A	0.50	B	0.63	A	0.40	-100.00%	-100.00%
SR-91 WB Ramp/State College Boulevard	Anaheim	A	0.55	A	0.44	B	0.63	B	0.63	-20.00%	0.00%
SR-91 WB Ramps/Tustin Avenue	Anaheim	B	0.64	D	0.84	A	0.60	D	0.85	31.25%	41.67%
SR-57 NB Ramps/Imperial Highway	Brea	C	0.78	B	0.61	E	0.91	B	0.62	-21.79%	-31.87%
SR-57 SB Ramps/Imperial Highway	Brea	B	0.68	A	0.56	B	0.70	B	0.63	-17.65%	-10.00%
State College Boulevard/Imperial Highway	Brea	C	0.73	B	0.62	E	0.93	C	0.77	-15.07%	-17.20%
Valencia Avenue/Imperial Highway	Brea	A	0.56	A	0.56	A	0.59	A	0.50	0.00%	-15.25%
Beach Boulevard/Orangethorpe Avenue	Buena Park	C	0.76	B	0.63	D	0.87	B	0.66	-17.11%	-24.14%
I-5 SB Ramps/Beach Boulevard	Buena Park	C	0.72	B	0.62	C	0.78	B	0.64	-13.89%	-17.95%
SR-91 EB Ramp/Beach Boulevard	Buena Park	C	0.74	A	0.52	D	0.84	B	0.70	-29.73%	-16.67%
SR-91 EB Ramp/Valley View Street	Buena Park	A	0.58	A	0.46	D	0.86	B	0.61	-20.69%	-29.07%
SR-91 EB Ramp/Beach Boulevard	Buena Park	A	0.58	A	0.59	A	0.59	A	0.79	1.72%	33.90%
SR-91 WB Ramp/Valley View Street	Buena Park	C	0.80	B	0.65	E	0.94	C	0.73	-18.75%	-22.34%
Harbor Boulevard/Adams Avenue	Costa Mesa	E	0.99	B	0.66	F	1.09	D	0.81	-33.33%	-25.69%
I-405 NB Ramps/Harbor Boulevard	Costa Mesa	E	0.95	A	0.55	F	1.07	C	0.72	-42.11%	-32.71%
I-405 SB Ramps/Harbor Boulevard	Costa Mesa	A	0.53	A	0.46	B	0.63	A	0.56	-13.21%	-11.11%
Valley View Street/Katella Avenue	Cypress	B	0.63	B	0.63	D	0.87	C	0.76	0.00%	-12.64%
Crown Valley Parkway/Bay Drive/PCH	Dana Point	F	1.41	B	0.62	F	1.62	B	0.61	-56.03%	-62.35%
Street of the Golden Lantern/Del Prado Avenue	Dana Point	A	0.32	A	0.36	A	0.53	A	0.47	12.50%	-11.32%
Street of the Golden Lantern/PCH	Dana Point	A	0.42	A	0.45	A	0.55	A	0.55	7.14%	0.00%
Harbor Boulevard/Orangethorpe Avenue	Fullerton	A	0.60	B	0.67	E	0.94	C	0.79	11.67%	-15.96%
State College Boulevard/Orangethorpe Avenue	Fullerton	C	0.80	A	0.55	D	0.86	B	0.64	-31.25%	-25.58%

Figure 8: Page 2 of 3

### Orange County Congestion Management Program LEVEL OF SERVICE 2009

Intersection/Interchange	Jurisdiction	Baseline AM		2009 AM		Baseline PM		2009 PM		Percent Change*	
		LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	AM ICU	PM ICU
SR-22 WB Ramp/Valley View Street	Garden Grove	C	0.76	D	0.82	D	0.87	E	0.92	7.89%	5.75%
SR-22 WB Ramps/Harbor Boulevard	Garden Grove	F	1.10	C	0.74	F	1.16	C	0.75	-32.73%	-35.34%
Beach Boulevard/405 SB Ramp/Edinger Avenue	Huntington Beach	B	0.63	C	0.79	E	1.03	D	0.85	25.40%	-17.48%
Beach Boulevard/Adams Avenue	Huntington Beach	A	0.55	A	0.54	C	0.67	C	0.72	-1.82%	7.46%
Beach Boulevard/Pacific Coast Highway	Huntington Beach	A	0.45	A	0.55	A	0.47	B	0.64	22.22%	36.17%
Beach Boulevard/Warner Avenue	Huntington Beach	C	0.78	B	0.69	E	0.93	C	0.79	-11.54%	-15.05%
Bolsa Chica Street/Bolsa Avenue	Huntington Beach	B	0.66	A	0.59	A	0.53	A	0.56	-10.61%	5.66%
Bolsa Chica Street/Warner Avenue	Huntington Beach	A	0.57	B	0.65	D	0.81	B	0.68	14.04%	-16.05%
Pacific Coast Highway/Warner Avenue	Huntington Beach	D	0.81	C	0.77	B	0.72	E	0.91	-4.94%	26.39%
I-405 NB Ramps/Enterprise/Irvine Center Drive	Irvine	E	0.95	B	0.89	A	0.39	A	0.80	-27.37%	53.85%
I-405 NB Ramps/Jamboree Road	Irvine	F	1.03	C	0.77	C	0.78	C	0.78	-25.24%	0.00%
I-405 SB Ramps/Irvine Center Drive	Irvine	E	1.00	B	0.66	A	0.57	B	0.61	-34.00%	7.02%
I-405 SB Ramps/Jamboree Road	Irvine	E	0.92	D	0.88	B	0.66	C	0.79	-4.35%	19.70%
I-5 NB Ramps/Jamboree Road	Irvine	A	0.54	C	0.79	C	0.75	C	0.77	46.30%	2.67%
I-5 SB Ramps/Jamboree Road	Irvine	A	0.40	D	0.88	A	0.35	D	0.83	120.00%	137.14%
MacArthur Boulevard/Jamboree Road	Irvine	B	0.61	B	0.69	B	0.69	C	0.79	13.11%	14.49%
SR-261 NB Ramps/Irvine Boulevard	Irvine	A	0.38	A	0.45	A	0.53	A	0.55	18.42%	3.77%
SR-261 SB Ramps/Irvine Boulevard	Irvine	A	0.42	A	0.43	A	0.40	A	0.43	2.38%	7.50%
SR-133 NB Ramps/Irvine Boulevard	Irvine	A	0.37	A	0.43	A	0.33	A	0.44	16.22%	33.33%
SR-133 SB Ramps/Irvine Boulevard	Irvine	A	0.37	A	0.38	A	0.29	A	0.38	2.70%	31.03%
EI Toro Road/SR-73 NB Ramps	Laguna Beach	E	0.91	A	0.57	A	0.59	B	0.66	-37.36%	11.86%
EI Toro Road/SR-73 SB Ramps	Laguna Beach	A	0.41	A	0.46	B	0.67	B	0.66	12.20%	-1.49%
Laguna Canyon Rd/SR-73 NB Ramps	Laguna Beach	C	0.73	F	1.03	C	0.72	E	0.98	47.95%	36.11%
Laguna Canyon Rd/SR-73 SB Ramps	Laguna Beach	A	0.32	A	0.33	A	0.33	A	0.40	3.13%	21.21%
Laguna Canyon Road/EI Toro Road	Laguna Beach	F	1.54	E	0.95	F	1.16	D	0.84	-38.31%	-27.59%
Laguna Canyon Road/Pacific Coast Highway	Laguna Beach	D	0.84	E	0.92	C	0.74	B	0.70	9.52%	-5.41%
I-5 SB Ramp/Avenue de la Carlotta/EI Toro Road	Laguna Hills	F	1.18	A	0.46	F	1.13	B	0.63	-61.02%	-44.25%
Moulton Parkway/Crown Valley Parkway	Laguna Niguel	A	0.56	B	0.62	B	0.65	A	0.59	10.71%	-9.23%
Moulton Parkway/SR-73 SB Ramps	Laguna Niguel	A	0.45	A	0.38	A	0.38	A	0.44	-15.56%	15.79%
Moulton Parkway/EI Toro Road	Laguna Woods	E	0.94	D	0.82	F	1.26	D	0.86	-12.77%	-31.75%
Beach Boulevard/Imperial Highway	La Habra	D	0.85	C	0.71	D	0.87	C	0.71	-16.47%	-18.39%
Beach Boulevard/Whittier Boulevard	La Habra	A	0.33	A	0.41	A	0.29	A	0.45	24.24%	55.17%
Harbor Boulevard/Imperial Highway	La Habra	D	0.81	B	0.65	D	0.86	B	0.69	-19.75%	-19.77%
I-5 NB/Bridger/EI Toro Road	Lake Forest	A	0.56	B	0.61	D	0.81	D	0.83	8.93%	2.47%
Trabuco Road/EI Toro Road	Lake Forest	F	1.03	B	0.66	C	0.80	B	0.67	-35.92%	-16.25%

Figure 8: Page 3 of 3

### Orange County Congestion Management Program LEVEL OF SERVICE 2009

Intersection/Interchange	Jurisdiction	Baseline AM		2009 AM		Baseline PM		2009 PM		Percent Change*	
		LOS	ICU	LOS	ICU	LOS	ICU	LOS	ICU	AM ICU	PM ICU
I-605 NB Ramps/Katella Avenue	Los Alamitos	B	0.69	A	0.44	B	0.65	A	0.59	-36.23%	-9.23%
I-5 NB Ramps/Crown Valley Parkway	Mission Viejo	B	0.68	A	0.56	B	0.69	B	0.66	-17.65%	-4.35%
I-5 SB Ramps/Crown Valley Parkway	Mission Viejo	D	0.86	A	0.59	F	1.01	C	0.74	-31.40%	-26.73%
MacArthur Boulevard/Pacific Coast Highway	Newport Beach	A	0.51	A	0.60	B	0.70	C	0.73	17.65%	4.29%
Newport Boulevard/Pacific Coast Highway	Newport Beach	A	0.56	C	0.77	A	0.49	C	0.73	37.50%	48.98%
SR-55 NB Ramps/Sacramento/Katella Avenue	Orange	C	0.75	B	0.61	D	0.85	C	0.75	-18.67%	-11.76%
SR-55 SB Ramps/Katella Avenue	Orange	C	0.73	D	0.86	E	0.95	D	0.82	17.81%	-13.68%
Rose Drive/Imperial Highway	Placentia	E	0.95	A	0.58	E	0.99	B	0.70	-38.95%	-29.29%
Rose Drive/Tustin Avenue/Orangethorpe Avenue	Placentia	C	0.76	A	0.54	F	1.03	A	0.51	-28.95%	-50.49%
SR-57 NB Ramps/Orangethorpe Avenue	Placentia	B	0.67	A	0.58	C	0.80	B	0.70	-13.43%	-12.50%
SR-57 SB Ramps/Irving Place/Orangethorpe Avenue	Placentia	C	0.74	A	0.53	B	0.69	A	0.52	-28.36%	-24.64%
I-5 NB Ramps/Ortega Highway	San Juan Capistrano	A	0.52	E	0.98	A	0.58	E	0.91	88.46%	56.90%
I-5 SB Ramps/Ortega Highway	San Juan Capistrano	B	0.61	E	0.93	C	0.77	F	1.06	52.46%	37.66%
Harbor Boulevard/1st Street	Santa Ana	A	0.48	B	0.68	D	0.81	C	0.76	41.67%	-6.17%
Harbor Boulevard/Warner Avenue	Santa Ana	E	0.93	B	0.68	E	0.98	B	0.66	-26.86%	-32.65%
I-5 SB Ramps/1st Street	Santa Ana	A	0.29	A	0.44	A	0.46	A	0.56	51.72%	21.74%
SR-55 SB Ramps/Auto Mall/Edinger Avenue	Santa Ana	D	0.90	A	0.56	F	1.06	B	0.63	-37.76%	-40.57%
SR-55 SB Ramps/Irvine Boulevard (Fourth Street)	Santa Ana	B	0.68	D	0.82	D	0.83	C	0.72	20.59%	-13.25%
Beach Boulevard/Katella Avenue	Stanton	D	0.89	B	0.70	F	1.02	B	0.70	-21.35%	-31.37%
Jamboree Road/Edinger Avenue-NB Ramp	Tustin	A	0.28	A	0.39	A	0.32	A	0.51	39.29%	59.38%
Jamboree Road/Edinger Avenue-SB Ramp	Tustin	D	0.81	A	0.41	A	0.41	A	0.51	-100.00%	-100.00%
Jamboree Road/Irvine Boulevard	Tustin	B	0.65	C	0.72	A	0.59	A	0.60	10.77%	1.69%
SR-55 NB Ramps/Edinger Avenue	Tustin	C	0.72	A	0.49	B	0.65	B	0.69	-31.94%	6.15%
SR-55 NB Ramps/Irvine Boulevard	Tustin	A	0.59	C	0.74	A	0.45	D	0.81	25.42%	80.00%
Beach Boulevard/Bolsa Avenue	Westminster	F	1.09	C	0.80	F	1.11	D	0.86	-26.61%	-22.52%
Bolsa Chica Road/Garden Grove Boulevard	Westminster	E	0.91	D	0.81	E	0.97	E	0.92	-10.99%	-5.15%
<b>COUNTY AVERAGE</b>			<b>0.68</b>		<b>0.61</b>		<b>0.73</b>		<b>0.66</b>		<b>-9.35%</b>

### *Deficiency Plans*

If an intersection does not meet the LOS standards, then a deficiency plan is in order, as described under Government Code Section 65089.4. The deficiency plan identifies the cause of congestion, the improvements needed to solve the problem, and the cost and timing of the proposed improvements.

A deficiency plan process has been developed by the CMP Technical Advisory Committee to provide local jurisdictions with a framework for maintaining compliance with the CMP when a portion of the CMPHS fails to meet its established LOS standard (Appendix C-1). The Deficiency Plan Decision Tree (Appendix C-2) illustrates the individual steps that must be taken in order for a local jurisdiction to meet CMP deficiency plan requirements.

Deficiency plans are not required if a deficient intersection is brought into compliance within 18 months of its initial detection, using improvements that have been previously planned and programmed in the CMP Capital Improvement Program. In addition, CMP legislation specifies that the following shall be excluded from deficiency determinations:

- Interregional travel (trip origins outside the Orange County CMPHS)
- Construction, rehabilitation, or maintenance of facilities that impact the system
- Freeway ramp metering
- Traffic signal coordination by the state, or multi-jurisdictional agencies
- Traffic generated by the provision of low-income and very low-income housing
- Traffic generated by high-density residential development located within one-quarter mile of a fixed rail passenger station; and
- Traffic generated by any mixed-use development located within one-quarter mile of a fixed rail passenger station, but only if more than half of the land area, or floor area, of the mixed-use development is used for high-density residential housing.

Figure 6 identifies the two Orange County CMP intersections that exceeded their CMP level of service standard in 2009; however, they are both State controlled and, therefore, are statutorily exempt from the deficiency plan process.

# Highway Level of Service

**Figure 6: Status of 2009 CMP Intersections Not Meeting Standards**

Jurisdiction	Intersection/ Interchange	ICU						Status
		Baseline AM	2007 AM	2009 AM	Baseline PM	2007 PM	2009 PM	
Laguna Beach	Laguna Canyon Rd/ SR-73 NB Ramps	0.73	1.02	1.08				Statutorily exempt. Signal controlled by State
San Juan Capistrano	I-5 SB Ramps/ Ortega Highway				0.77	1.16	1.06	Statutorily exempt. Signal controlled by State



## Chapter 3: Transit Service

As Orange County's transit provider, the Orange County Transportation Authority (OCTA) continually monitors the frequency and routing of its transit services. Bus and rail transit are essential components of Orange County's transportation system, and are important tools for achieving a balanced multi-modal transportation system capable of maintaining level of service standards.

Unfortunately, since the adoption of the 2007 Congestion Management Program (CMP) report, OCTA has reduced revenue vehicle hours (hours of service provided by all fixed route buses in operation) by seven percent, due to a downturn in the economy and the complete loss of State Transit Assistance funds that has resulted in transit budget cuts. Additionally, fixed route bus ridership has decreased by ten percent.

The CMP performance measures provide an index of both the effectiveness and efficiency of Orange County's fixed-route bus and commuter rail services. ACCESS, OCTA's paratransit service, is not included in the CMP analysis because it is not considered a congestion management service.

Indices used in OCTA's long-range planning process are the basis for the performance measures included in the CMP. The performance measures allow for identification of areas in need of improved transit service. Furthermore, once adequate transit operating funds are available, the transit performance measures will work to ensure that bus and rail services meet demand and are coordinated between counties.

### *Fixed-Route Bus Service*

OCTA's fixed route bus service includes local routes, express routes, community routes, rail feeder routes and shuttles.

- Local routes provide a basic level of transit access; they operate primarily in the arterial corridors and are intended to provide intra-county service to meet the minimum service standard.
- Express routes provide limited-stop, freeway-based service to major employment areas in Orange and Los Angeles counties.
- Community routes feed the local fixed route network, and provide greater access and relatively high levels of service during peak periods, and off-peak periods when warranted by demand.
- Rail feeder routes provide access to and from employment centers for commuters using Metrolink commuter rail service.

- Shuttles serve local areas, connecting to specialty destinations.

Currently (May 2009), OCTA's fixed route bus service has a total of 80 routes which is comprised of 42 local routes, 14 community routes, 5 intra-county and 5 inter-county express routes, 13 rail feeder routes (StationLink), and 1 shuttle route.

### **Service Standards and Measures**

#### Service Standards

OCTA bus service standards direct the development, implementation, monitoring, and modification of OCTA bus services. These standards are intended to govern the planning and design of the service; and, as such, they depict a desirable state against which existing service is assessed. The standards currently in place were adopted by the OCTA Board of Directors in 1994 and are summarized in Figure 7.

The current (May 2009) adherence to these standards is detailed below:

- Eighty-eight percent of OCTA bus routes (excluding Express, Shuttle, and Rail Feeder service) fall within the minimum span of service standards. Not all routes meet the performance standards because the highest demand routes use a large portion of the limited resources, resulting in some shortcomings for other routes.
- Sixty-five percent of OCTA bus routes (excluding Express, Shuttle and Rail Feeder service) meet the minimum headway (frequency) standard. Again, this is primarily due to the need to allocate limited resources to service with the greatest demand.

Service standards are important instruments to ensure transit service meets the needs of the users while allowing for the balance of those needs against the cost effectiveness of the system. The real service levels often reflect conditions and changes that have occurred in the operating, policy, and financial environments. At this time, existing performance standards are under review with a goal to update them within calendar year 2009.

Figure 7: Service Standards for the OCTA Bus System

Bus System Improvement Project		Service Standards for OCTA Bus System					FY95
STANDARDS	BASIC NETWORK		SUPPORT SYSTEM				
	BASE ROUTES	CONNECTOR ROUTES	LOCAL FIXED ROUTES	COMMUNITY SERVICE	EXPRESS SERVICE	RAIL FEEDER SERVICE	
<b>SERVICE STANDARDS</b>							
WALKING DISTANCE CRITERIA: % OF POPULATION WITHIN 1/4 MILE OF BUS ROUTE							
• INCREMENT	50%	10%	30%		n/a	n/a	
• ACCUMULATIVE	50%	60%	90%		n/a	n/a	
MINIMUM SPAN OF SERVICE							
• WEEKDAY AND SATURDAY	5:30am-8:30pm	5:30am-8:30pm	(1)	(1)	(1)	(1)	
• SUNDAY	7:00am-7:00pm	7:00am-7:00pm	(1)	(1)	(1)	(1)	
MINIMUM HEADWAYS							
• PEAK WEEKDAY PERIOD (6-9a, 3-6p)	30 min.	30 min.	30 min.	30 min.	(2)	(2)	
• SATURDAY	30 min.	60 min.	60 min.	60 min.	n/a	n/a	
• SUNDAY	30 min.	60 min.	(1)	(1)	n/a	n/a	
MAXIMUM TRANSFER WAIT TIME							
• PEAK WEEKDAY PERIOD	15 min.	15 min.	15 min.	15 min.	n/a	n/a	
• OTHER PERIODS (3)	15 min.	30 min.	30 min.	30 min.	n/a	n/a	
LOADING STANDARDS (MAX)							
• PEAK 60 MINUTES	125%	125%	125%	125%	100%	125%	
• PEAK AND OFF PEAK PERIODS	100%	100%	100%	100%	100%	100%	
PERFORMANCE STANDARDS (4)							
BOARDINGS / RVH							
• ROUTE	30	20	20	10	20	10	
• SYSTEM	40	25	25	25	n/a	n/a	

(1) Based on demand.

(2) Minimum of two (2) trips each way per peak weekday period.

(3) May be reduced by interlining and/or timed transfers.

(4) Performance standards apply to changed existing routes and new routes after one year.

### Performance Measures

While service standards guide the delivery of service, performance measures evaluate the effectiveness of the service.

#### *Performance Measure 1: Productivity*

As a widely accepted industry measure, productivity measures the average number of riders using a bus route for each hour of service that is provided. At OCTA, productivity standards range from 10 to 30 riders per RVH, depending on the type of service. Specialized services such as rail feeders, community routes and shuttles are not expected to handle as many riders as high demand services operating on major arterials. For the month of February 2009, 84 percent of the Local routes, 72 percent of the Community routes, and 85 percent of the Rail feeder routes met the productivity standards. None of the Express routes met the productivity standards.

#### *Performance Measure 2: Vehicle Load Factor*

Vehicle load factor is the ratio of the average number of passengers on-board buses to the average number of seats scheduled for a given time period. Generally, a route with a high load factor is very productive, has a high fare box recovery, and a high boardings per service hour ranking. Load factor is often used to justify service levels and vehicle size on a route as it gives perspective on seat utilization, crowding, and compulsory bypass. Establishing a reasonable balance between the high cost of operating service and the comfort of passengers using the service is an important factor in transit service planning.

Maximum load standards differ among the classes of service operated by the OCTA and are either 100 percent or 125 percent of seated capacity depending on the type of service, and the time interval measured. The exception to this is express service where passengers generally travel much greater distances and remain on-board longer than the average local bus rider. In the case of OCTA express service, trips are scheduled to average no more than 100 percent of seated capacity.

The most recent load factor analysis (2006) revealed that less than 1 percent of OCTA's fixed route trips exceed the maximum load of 125 percent.

#### *Performance Measure 3: On-time Performance (OTP)*

The OTP goal is set at 85 percent of all bus trips system-wide, at the line level, and at the base level. Failure to achieve the goal will trigger activities to move the target service into compliance.

Currently, the OTP measurement is applied to the time-point nearest the maximum load point (MLP) of the bus route under review. As more automated measurement tools become available, measurements will be made at all time-points in the system, not just the MLP for each route.

OTP is reported to executive leadership and bus operations management on a monthly basis in the On-Time Performance Report. Currently (February 2009), system-wide 87.4 percent of OCTA's fixed route bus trips are on-time.

#### Other Bus Service Measures

##### *General Service Expansion Measures*

OCTA considers a service expansion of any of its family of bus services by determining its potential to achieve a specific minimum productivity level for that type of service within one year of operation. New lines or major extensions of established lines usually are associated with the development of major employment locations, large new residential centers or increased residential density, large retail centers or educational centers, or major medical facilities. A major consideration of service expansion to serve new markets is to ensure that the benefit of the new service will outweigh that of the established service that may have to be deleted or modified to provide resources for the new service.

##### *General Service Contraction Measures*

Routes or parts of routes that perform consistently below performance measures are candidates for service reduction or deletion to provide resources to (1) maintain measures on more productive routes, and (2) provide new services. A major consideration of service reduction is to insure that the benefits of re-deployed resources outweigh that of retaining the service. Other considerations to be taken into account include service area coverage and service span.

##### *Coordination of Transit Service with Other Carriers*

OCTA coordinates the delivery of transit services with several other transit agencies. They include Laguna Beach Transit, Riverside Transit Agency, Norwalk Transit System, Los Angeles County Metropolitan Transportation Authority, Long Beach Transit, North County Transit District, Omnitrans, various specialized charter bus services, and commuter rail services. Except for charter services, OCTA has interagency agreements with these agencies, which allow riders to transfer from one agency's services to another. In addition, OCTA coordinates schedules and bus stops with neighboring agencies and commuter rail service.

*Commuter Rail Service*

Metrolink is Southern California's commuter rail system that links residential communities to employment and activity centers. Metrolink is operated by the Southern California Regional Rail Authority (SCRRA), a joint powers authority of five member agencies representing the counties of Los Angeles, Orange, Riverside, San Bernardino and Ventura.

Currently, Metrolink provides service on seven routes, covering 512 miles through six counties in Southern California. On an average weekday, there are 149 trains operating, serving roughly 45,000 riders (one-way trips) at 55 stations. Orange County plays an important, and growing, role within this system.

As one of the five SCRRA member agencies, OCTA administers and funds Orange County's portion of the Metrolink commuter rail system. Orange County's share of Metrolink service covers 68 route miles and sees approximately 15,000 average weekday boardings, comprising more than 30 percent of Metrolink's total system-wide boardings. There are eleven stations in Orange County that serve a total of 44 round trips each weekday on three lines:

- Orange County (OC) Line: with daily service from Los Angeles Union Station to Oceanside;
- Inland Empire-Orange County (IEOC) Line: with daily service from San Bernardino, Riverside, via Orange to Oceanside; and,
- 91 Line: serving Riverside, Fullerton and Los Angeles Union Station.

On June 3, 2006, Metrolink Weekends service was introduced on the OC Line, and Sunday service began July 2, 2006. Metrolink Weekends Saturday and Sunday service on the IEOC Line started July 15, 2006.

OCTA also has 13 dedicated bus routes that connect with Orange County Metrolink stations in Anaheim Canyon, Anaheim, Orange, Santa Ana, Tustin, Irvine and Laguna Niguel/Mission Viejo. These StationLink routes offer Metrolink ticket holders free connections between stations and major employment and activity centers, with schedules designed to meet Metrolink weekday train arrivals and departures.

**Performance Measures**

SCRRA publishes a Strategic Assessment document that examines a number of performance measures and identifies preferred strategies for future improvements. The performance measures examined within the Strategic Assessment include the following:

- Available capacity (i.e. – the number of trains operating)
- Annual train miles
- Expenses and revenues per train mile
- Increase in service frequency per \$1000 invested
- Average weekday ridership
- Passenger miles carried
- Passenger miles traveled per \$1000 invested
- Expenses and revenues per passenger mile
- Farebox recovery

***Future Transit Improvements***

The OCTA Board of Directors adopted the 2006 Long-Range Transportation Plan (LRTP), which presents a balanced, multi-modal approach to improve Orange County's transportation. OCTA is continuing to work towards implementing all of the components presented in the LRTP, although timelines will likely need adjustments due to the current economic conditions.

The components of the Balanced Plan, as presented in the 2006 LRTP, include transit improvements, such as: (1) implementing bus rapid transit service on three high-demand corridors, (2) expanding the level of Metrolink commuter rail service to Los Angeles, (3) improving local connections to and from Metrolink stations, (4) expanding community shuttles, and (5) connecting Metrolink service to new regional transportation systems and centers.

**Fixed-Route Bus Service Improvements**

- Improve bus frequency, thereby reducing headways on major routes within the core service area, including those zones with the highest transit demand;
- Expand local bus service into areas outside the urbanized core;
- Accommodate Orange County's growing and aging population;

- Implement three new Bus Rapid Transit routes by 2011;
- Expand Express Bus service routes;
- Increase rail feeder service to complement anticipated increases in Metrolink rail service;
- Increase speed, reliability, and frequency of commuter rail service through improved infrastructure (i.e. adding rail track, building new strategically located stations, adding more daily and reverse service trains, and increasing parking supply at Metrolink stations).

While the improvements listed above remain long-term goals for OCTA, the loss of transit operation funds, and reduced sales tax revenues, have required OCTA to implement a transit service reduction plan. It is currently estimated that OCTA will experience a transit operations funding loss of \$272 million; therefore, the service reduction program must adjust OCTA transit services accordingly.

### Bus Rapid Transit Service

Bus Rapid Transit (BRT) typically includes bus services that are, at a minimum, faster than traditional 'local bus' service and, at a maximum, include separate facilities for bus operations. BRT represents a way to improve mobility at relatively low cost through incremental investment in a combination of bus infrastructure, equipment, operational improvements, and technology. OCTA's BRT system will eventually include transit signal priority, customized bus shelters that display real-time bus arrival information, and a branded system image that is uniquely identifiable to the public.

Three BRT routes, known as Harbor (Route 543), Westminster/17<sup>th</sup> (Route 560) and 28-mile (Route 557), are programmed to begin service by 2010. Additionally, five more BRT corridors have been identified, along Beach Boulevard, Katella Avenue, La Palma Avenue, Imperial Highway and Edinger Avenue. Also included in the BRT program is Irvine's *i*-Shuttle, which will provide feeder service to the 28-mile BRT in the Irvine Business Complex, and currently provides feeder service to the Tustin Metrolink station.

The first BRT service, Route 543 – Harbor, is anticipated to begin in June 2010. This 19-mile route will link Fullerton, Anaheim, Garden Grove, Santa Ana, Fountain Valley, Costa Mesa, and Newport Beach; and, it will provide regional connections to Amtrak and Metrolink rail services and other OCTA bus services at the Fullerton Transportation Center. This BRT service will operate weekdays from 5 a.m. to 8 p.m., every 15

minutes between Fullerton and Costa Mesa, and every 30 minutes between Costa Mesa and Newport Beach.

#### Express Bus Service

In addition to increased Local Fixed Route service and implementing a new BRT service, OCTA is planning to expand its express bus service. Traffic congestion is anticipated to increase as new residential construction in neighboring counties, especially in Riverside County, continues to provide affordable housing for individuals employed in Orange County. To address the problem, OCTA is preparing to add more new express routes to the ten existing OCTA express routes. The planned new express service includes three intracounty routes and five intercounty routes. Corridors to be served by these routes include:

- San Clemente to Laguna Hills (Route 214)
- San Clemente to South Coast Metro (Route 215)
- Rancho Santa Margarita to Irvine (Route 217)
- Riverside/Corona to Irvine (Route 793)
- Long Beach to South Coast Metro (Route 723)
- Long Beach to Orange (Route 722)
- Riverside to California State University at Fullerton (Route 791)
- Riverside to Anaheim Resort (Route 792)

The new services will be implemented as resources are available.

#### **Commuter Rail Service Improvements**

Metrolink commuter rail service in Orange County is being enhanced through OCTA's Metrolink Service Expansion Program (MSEP). SCRRRA and OCTA staff have developed an implementation plan to provide high-frequency Metrolink service on the OC Line between the Laguna Niguel/Mission Viejo station and Fullerton station. This new service is scheduled to begin operating in late 2010. The increased Orange County Metrolink service will provide additional passenger capacity as well as new off-peak trips, making Metrolink a more convenient travel alternative.

The MSEP also includes significant track and switch improvements, railroad signal and communication upgrades, station and platform improvements, including added parking capacity, and safety enhancements, as well as the addition of a new Metrolink station in the city of Placentia. These improvements will be needed to accommodate the expected growth in ridership that will come with the service expansion. Funding for the MSEP is being provided through Measure M, Orange County's ½-cent sales tax for transportation improvements.

## **Chapter 4: Land Use Impact Analysis**

The Congestion Management Program (CMP) Traffic Impact Analysis (TIA) measures impacts of development project submittals on the CMP Highway System (CMPHS). Each jurisdiction in Orange County selected either the process outlined in the CMP TIA guidelines (Appendix B-1), or their existing traffic-environmental analysis process, as long as consistency is maintained with the CMP TIA guidelines.

Since 1994, the selected TIA process has been consistently applied to all development projects meeting the adopted trip generation thresholds (i.e., 2,400 or more daily trips for projects adjacent to the CMPHS, and 1,600 or more daily trips for projects that directly access the CMPHS).

OCTA allowed exemptions from this requirement for selected categories of development projects, consistent with state legislation (Appendix B-2 for a listing of exempt projects). For each of the traffic impact analyses conducted, focus was on:

- Identifying locations where, and the extent to which, trips generated by the proposed project cause CMPHS intersections to exceed their Level of Service (LOS) standards;
- Assessing feasible mitigation strategies capable of reducing the identified impact, thereby maintaining the LOS standard; and,
- Utilizing existing environmental processes and inter-jurisdictional forums to conduct cooperative, inter-jurisdictional discussion when proposed CMP mitigation strategies include modifications to roadway networks beyond the jurisdiction's boundaries; and/or, when a proposed development is identified that will increase traffic at CMPHS locations outside the jurisdiction's boundaries.

The biennial reporting process enables jurisdictions to report any locations where projected measurements would exceed CMPHS LOS standards; as well as the projected impacts from development projects undergoing CMP traffic impact analyses. All jurisdictions in Orange County comply with the CMP land use coordination requirement.

## **Chapter 5: Capital Improvement Program**

The Capital Improvement Program (CIP) is a seven-year program of projects and programs that is adopted by each Orange County jurisdiction and integrated into a countywide CIP by the Orange County Transportation Authority. It includes projects that will help to maintain, or improve, traffic conditions on the Congestion Management Program Highway System (CMPHS) and adjacent facilities. In addition to traditional capital projects, which preserve investments in existing facilities, the CIP can include projects that increase the capacity of the multi-modal system and provide air quality benefits, such as transit projects. Consistency with statewide standards is emphasized in order for projects in the CIP to adequately compete for state funding.

The CIP projects, prepared by local jurisdictions for inclusion in the Orange County Congestion Management Program (CMP), mitigate transportation impacts identified in the Land Use Impact Analysis component of the CMP, and preserve and maintain CMPHS infrastructure. Many types of CIP projects have been submitted by local jurisdictions in the past, including freeway ramp widenings, transportation systems management projects such as bus turnouts, intersection improvements, roadway widenings, signal coordination projects, and roadway resurfacing projects.

Each Orange County jurisdictions' CIP is included in Appendix E, which is published separately. In addition, projects in the CIP that are state or federally funded, as well as locally funded projects of regional significance, are included in the Orange County portion of the Regional Transportation Improvement Program (RTIP), and are consistent with the Regional Transportation Plan (RTP).



## Chapter 6: Transportation Demand Management

Transportation Demand Management (TDM) strategies are geared toward increasing vehicle occupancy, promoting the use of alternative modes, reducing the number of automobile trips, and decreasing overall trip lengths. The adoption of a TDM ordinance was required of every local jurisdiction for Orange County's 1991 Congestion Management Program (CMP). These ordinances are no longer a statutory requirement, however Orange County Transportation Authority (OCTA) continues to support that local jurisdictions maintain these ordinances as a means of reducing greenhouse gas emissions.

### *TDM Ordinances*

The model TDM ordinance, prepared by OCTA, aims to promote carpools, vanpools, alternate work hours, park and ride facilities, telecommuting, and other traffic reduction strategies. OCTA updated the model ordinance in 2001 to reflect the adoption of Rule 2202 by the South Coast Air Quality Management District (SCAQMD), which requires employers with 250 or more employees at a worksite to develop an emission reduction program projected to meet an emission reduction target set by the SCAQMD.

Principal provisions of the TDM model ordinance are as follows:

- applies to non-residential public and private development proposals expected to generate more than 250 employees;
- contains a methodology for determining projected employment for specified land use proposals;
- includes mandatory facility-based development standards (conditions of approval) that apply to proposals that exceed the established employment threshold;
- presents optional provisions for implementing operational TDM programs and strategies that target the property owner or employer, and requires annual reporting on the effectiveness of programs and strategies proposed for facilities;
- contains implementation and monitoring provisions;
- includes enforcement and penalty provisions.

## Transportation Demand Management

Several jurisdictions have adopted ordinances that go beyond those contained in the model TDM ordinance. Such strategies include:

- encouraging employers to establish and help subsidize telecommuting, provide monetary incentives for ridesharing, and implement alternative work hour programs;
- proposing that new development projects establish and/or participate in Transportation Management Associations (TMAs);
- implementing bus loading facilities at worksites;
- implementing pedestrian facilities such as sidewalks, paved pathways, and pedestrian grade separations over arterial streets to connect a worksite to shopping, eating, recreation, parking, or transit facilities; and,
- participating in the development of remote parking facilities and the high-occupancy vehicles (i.e., shuttles, etc.) to serve them.

### *Additional TDM Programs*

TDM efforts in Orange County are not just limited to the implementation of the TDM ordinance provisions. Other TDM efforts, as described below, are also active throughout the County.

### **Freeway Construction Mitigation**

OCTA and the California Department of Transportation (Caltrans) developed a comprehensive public outreach program for commuters impacted by construction projects and improvements on Orange County freeways. The outreach program alleviates traffic congestion during freeway construction by providing up-to-date ramp, lane, and bridge closure information; as well as suggestions for alternate routes and travel modes.

Outreach efforts include public workshops, open houses, fast fax construction alerts, flyers and newsletters, as well as other materials and presentation events. Also, OCTA's website ([www.octa.net](http://www.octa.net)), and the Orange County Freeway Construction Helpline (1-800 724-0353), make detour and closure information available.

### **Transit/Shuttle Services**

Local fixed-route bus service comprises the largest portion of OCTA's transit services. In addition, OCTA provides fixed-route bus service to commuter rail (Metrolink) stations. Express bus service provides patrons with longer routes that utilize freeways to connect residential areas to

# Transportation Demand Management

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Orange County's main employment centers. Furthermore, ACCESS provides elderly and disabled residents with a convenient paratransit service for daily commutes.

## **Jobs/Housing Balance**

To satisfy the Measure M Growth Management Program requirements, all local jurisdictions in Orange County developed Growth Management Programs that address a jobs/housing balance as it relates to transportation demand. The adopted policies represent a commitment towards achieving balanced land usage, where residential, non-residential, and public land uses are proportionally balanced.

## **Transportation Management Associations**

Transportation Management Associations (TMAs) are comprised of groups of employers who work together to solve mutual transportation problems by implementing programs to increase average vehicle ridership. Presently, Orange County has TMAs located in the following areas:

- Newport Beach (Newport Center TMA)
- Irvine (Irvine Spectrum TMA)
- Anaheim (Anaheim Transportation Network)

## **Park-and-Ride Lots**

Currently there are 33 park-and-ride lots in Orange County providing over 6,000 parking spaces. Of the 33 lots, 11 are located at Metrolink stations, accounting for about 3,700 of the parking spaces. Also, four of the lots are located at OCTA transit centers, which account for another 1,180 parking spaces.

Park-and-ride lots serve as transfer points for commuters to change from one mode of travel (usually single-occupancy automobile) to another, higher capacity mode (bus, train, carpool, or vanpool). Providing a convenient system of park-and-ride transfer points throughout Orange County encourages the use of higher capacity transit systems, which improves the efficiency of the transportation system. Park-and-ride lots are also a natural companion to Orange County's network of High Occupancy Vehicle (HOV) lanes and transitways on the freeways.

## **Parking Cash-Out Programs**

Parking cash-out programs should also be considered by employers in an effort to reduce automobile trips. These are employer-funded programs that provide cash incentives to employees who do not drive to work. The

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incentive should be in an amount equivalent to the parking subsidy the employer would otherwise need to pay to provide the employee with parking.

### **Bicycle and Pedestrian Facilities**

Between 1990 and 2009, OCTA allocated more than \$53 million for bicycle and bus stop improvement projects. Historically, OCTA solicited and allocated funding to bicycle and pedestrian facility projects from Orange County local jurisdictions. Unfortunately, due to the recent loss of transit operation resources, the funds traditionally used by OCTA to support bicycle and pedestrian projects has been diverted to transit operations. However, OCTA is continually looking for funding sources that can once again support bicycle and pedestrian projects.

Currently, the 2008 Regional Transportation Improvement Program has approximately \$24 million programmed for trail investment projects in Orange County. In an effort to encourage this type of investment, OCTA developed a Commuter Bikeways Strategic Plan (CBSP), with Orange County agencies and groups, to provide local jurisdictions with easier access to the state funded Bicycle Transportation Account program. The primary focus of the plan is to provide an attractive alternative to driving, with bicycle facilities that link residential areas with activity centers and intermodal transportation centers.

OCTA recently updated the plan in 2009 to ensure consistency with the requirements of California Streets and Highways Code 891.2. Local jurisdictions may choose to adopt the 2009 CBSP as their own bicycle transportation plan, which will allow them to apply for the State Bicycle Transportation Account funds.

In addition, OCTA has shown support for bicycling by launching a successful demonstration project in 1995 to install bicycle racks on buses along four routes that served work sites, schools, shopping malls, and the beach. The success of the demonstration program led to a decision to equip all large buses in the OCTA fleet with bicycle racks. OCTA completed this program in June 1998. Also, Metrolink trains provide bicycle racks; and bicycle lockers are available at Metrolink stations in Fullerton, Tustin, Santa Ana, and Orange, as well as at OCTA owned park-and-ride lots.

## Chapter 7: CMP Conformance

As Orange County's Congestion Management Agency, the Orange County Transportation Authority (OCTA) is legislatively required to monitor the implementation of all elements of the Congestion Management Program (CMP), and biennially determine conformance. In so doing, OCTA consults with local jurisdictions in meeting these requirements.

OCTA determines if the local jurisdictions are in conformance with the CMP by monitoring the following:

- consistency with level of service standards;
- adoption of Capital Improvement Programs;
- adoption and implementation of a program to analyze the impacts of land use decisions, including an estimate of the costs associated with mitigating those impacts; and
- adoption and implementation of deficiency plans when highway and roadway level of service standards are not maintained.

OCTA gathers local traffic data to determine the levels of service (LOS) at intersections throughout the CMP Highway System (CMPHS), as discussed in Chapter 2. In addition, the local jurisdictions complete a set of checklists, developed by OCTA, that guide the local jurisdictions through the CMP conformity process (Appendix D). The checklists address the legislative requirements of the CMP, including land use coordination, the Capital Improvement Program, and transportation demand management strategies.

Based on the LOS data and CMP checklists completed by the local jurisdictions, as summarized in Figure 8, the following was determined:

### *Level of Service*

The LOS data, collected by OCTA, was provided to local jurisdictions for verification. A few discrepancies in LOS reporting occurred as a result of slight variations in the data collection methodology used by the cities and OCTA, or due to erroneously reported intersection geometry. Any discrepancies in the LOS reporting were resolved through an interactive, cooperative process, between the cities and OCTA. The data shows that all local jurisdictions are in compliance with the established LOS standards.

*Transportation Demand Management (TDM)*

OCTA has developed a travel demand element that promotes alternative transportation methods. In developing this element, the cash-out parking strategy was discussed as an option for employers.

*Capital Improvement Program*

All local jurisdictions submitted adopted seven-year capital improvement programs that included projects to maintain or improve the traffic LOS on the CMPHS or adjacent facilities, which benefit the CMPHS.

*Land Use Coordination*

All local jurisdictions have adopted CMP Traffic Impact Analysis (TIA) processes for analyzing the impacts of land use decisions on the CMP Highway System. All local jurisdictions applied their TIA processes to development projects that met the CMP minimum threshold of 2,400 or more daily trips (1,600 or more trips per day for development projects that will directly access the CMPHS).

*Deficiency plans*

Based on the data exhibited in Figure 5, all intersections on the CMP highway system were found in compliance with LOS requirements. Therefore, no deficiency plans were required for the 2009 CMP.

*OCTA Transit Performance Measures*

OCTA has an established set of performance measures and standards used to monitor transit services. Moreover, in 2007, OCTA agreed to cooperative procedures for carrying out regional transit planning and programming by signing a memorandum of understanding with the Southern California Association of Governments.

**Regional Consistency**

To ensure consistency between CMPs within the Southern California Association of Governments (SCAG) region, OCTA submits each biennial update of the Orange County CMP to SCAG. As the regional agency, SCAG evaluates consistency with the Regional Transportation Plan and with the CMPs of adjoining counties, and incorporates the program into the Regional Transportation Improvement Program (RTIP), once consistency is determined.

Figure 8: Summary of Compliance

Jurisdiction	Capital Improvement Program	Deficiency Plan	Land Use	Level of Service	2009 Compliance
Aliso Viejo *	Yes	N/A	Yes	N/A	Yes
Anaheim	Yes	N/A	Yes	Yes	Yes
Brea	Yes	N/A	Yes	Yes	Yes
Buena Park	Yes	N/A	Yes	Yes	Yes
Costa Mesa	Yes	N/A	Yes	Yes	Yes
Cypress	Yes	N/A	Yes	Yes	Yes
Dana Point	Yes	N/A	Yes	Yes	Yes
Fountain Valley *	Yes	N/A	Yes	N/A	Yes
Fullerton	Yes	N/A	Yes	Yes	Yes
Garden Grove	Yes	N/A	Yes	Yes	Yes
Huntington Beach	Yes	N/A	Yes	Yes	Yes
Irvine	Yes	N/A	Yes	Yes	Yes
La Habra	Yes	N/A	Yes	Yes	Yes
La Palma*	Yes	N/A	Yes	N/A	Yes
Laguna Beach	Yes	N/A	Yes	Yes	Yes
Laguna Hills	Yes	N/A	Yes	Yes	Yes
Laguna Niguel	Yes	N/A	Yes	Yes	Yes
Laguna Woods	Yes	N/A	Yes	Yes	Yes
Lake Forest	Yes	N/A	Yes	Yes	Yes
Los Alamitos	Yes	N/A	Yes	Yes	Yes
Mission Viejo	Yes	N/A	Yes	Yes	Yes
Newport Beach	Yes	N/A	Yes	Yes	Yes
Orange	Yes	N/A	Yes	Yes	Yes
Placentia	Yes	N/A	Yes	Yes	Yes
Rancho Santa Margarita *	Yes	N/A	Yes	N/A	Yes
San Clemente *	Yes	N/A	Yes	N/A	Yes
San Juan Capistrano	Yes	N/A	Yes	Yes	Yes
Santa Ana	Yes	N/A	Yes	Yes	Yes
Seal Beach *	Yes	N/A	Yes	N/A	Yes
Stanton	Yes	N/A	Yes	Yes	Yes
Justin	Yes	N/A	Yes	Yes	Yes
Villa Park *	Yes	N/A	Yes	N/A	Yes
Westminster	Yes	N/A	Yes	Yes	Yes
Yorba Linda *	Yes	N/A	Yes	N/A	Yes
County *	Yes	N/A	Yes	Yes	Yes

\*No CMP intersections within jurisdiction

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## **Appendix A: Freeway Levels of Service**

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# **Appendix B-1: Meeting CMP Traffic Impact Analysis Requirements**

**AN OPTIONAL GUIDANCE FOR LOCAL JURISDICTIONS**

*Prepared for:*

**Orange County Environmental Management Agency  
Orange County Transportation Commission  
Orange County Transit District  
League of Cities, Orange County Division  
Transportation Corridor Agencies**

*Prepared by:*

**Kimley-Horn and Associates, Inc.  
and  
The Planning Center**

June 11, 1991

## CMP-TIA REQUIREMENTS

### Requirements of CMP legislation

- Analyze impacts of land use decisions on CMP Highway System.
- Estimate costs associated with mitigation of impacts on CMP Highway System.
- Exclude costs associated with mitigating the impacts of interregional travel.
- Allow credits against mitigation costs for local public and private contributions to improvements to the CMP Highway System.
  - For toll road facilities, allow credits only for local public and private contributions which will not be reimbursed from toll revenues or other state or federal sources.
- Report annually on actions taken to adopt and implement a program to analyze the impacts of land use decisions on the CMP Highway System and to estimate the costs of mitigating those impacts.

### Year One Goal

- Identify the impacts of development anticipated to occur over the next 7 years on the CMP Highway System and the projected costs of mitigating those impacts.

### Actions Required of Local Jurisdictions

- A TIA will be required for CMP purposes for all proposed developments generating 2,400 or more daily trips. For developments which will directly access a CMP Highway System link, the threshold for requiring a TIA should be reduced to 1,600 or more trips per day.
- Document procedures used to identify and analyze traffic impacts of new development on CMP Highway System. This documentation should include the following:
  - Identification of type of development proposals which are subject to a traffic impact analyses (TIA);
  - Description of required or acceptable TIA methodology; and
  - Description of inter-jurisdictional coordination process used when impacts cross local agency boundaries.
- Document procedures/standards used to determine the costs of mitigation requirements for impacts of new development on CMP Highway System.
- Document methodology and procedures for determining applicable credits against mitigation costs including allowable credits associated with contributions to toll road facilities.

**SECTION 1 – INTRODUCTION****Purpose**

State legislation creating the Congestion Management Program (CMP) requires that the program contain a process to analyze the impacts of land use decisions by local governments on the regional transportation system. Once impacts of a land use decision are identified, the CMP also requires that the costs to mitigate the impacts be determined.

For CMP purposes, the regional transportation system is defined by the legislation as all state highways and principal arterials at a minimum. This system is referred to as the CMP Highway System. The identification and analysis of impacts along with estimated mitigation costs are determined with respect to this CMP Highway System.

The objectives of this report are to:

- Provide guidance to local agencies in conducting traffic impact analyses.
- Assist local agencies in maintaining eligibility for funds through documentation of CMP compliance.
- Make available minimum standards for jurisdictions wishing to use them for identifying and analyzing impacts on CMP Highway System.
- Establish CMP documentation requirements for those jurisdictions which elect to use their own TIA methodology.
- Establish a baseline from which TIA standardization may evolve as experience is gained in the CMP process.
- Cause the analysis of impacts on the CMP Highway System to be integrated into the local agency development review process.
- Provide a method for determining the costs associated with mitigating development impacts.
- Provide a framework for facilitating coordination between agencies when appropriate.

**Background**

Through a coordinated effort among local jurisdictions, public agencies, business and community groups, Orange County has developed a Congestion Management Program framework in response to the requirements of Assembly Bill 1791. This framework is contained in the Congestion Management Program Preparation Manual which was issued in January 1991 as a joint publication of the following agencies:

- County of Orange
- Orange County Division, League of California Cities
- Orange County Transportation Commission
- Orange County Transit District
- Transportation Corridor Agencies

The CMP Manual describes the CMP Program requirements for each component prescribed by the CMP provision of AB 1791. The components include one entitled Land Use Coordination, which sets forth the basic requirements for the assessment, mitigation, and monitoring of traffic impacts to the CMP Highway System which are attributable to development projects.

**Consolidation of Remaining Issues**

This report is intended to present a useful reference in addressing the remaining issues associated with the identification and treatment of development impacts on the CMP Highway System. It is desirable that a standardized approach be utilized for determining which projects require analysis and in carrying out the resulting traffic impact analysis (TIA). It is also desirable that a reasonably uniform approach be utilized in determining appropriate mitigation strategies and estimating the associated costs.

**TIA Survey History**

In 1989, Kimley-Horn and Associates, Inc. conducted a survey of TIA procedures being used at the time by local jurisdictions within Orange County. The survey revealed that although there were some commonalities, there was considerable variation in approach, scope, evaluation methodology, and project disposition.

As part of the CMP process, it was determined that the identification of TIA elements which can or should be standardized should be accomplished. Additional documentation of cost estimating practices and the development of standardized costs and estimating procedures will be valuable in achieving desired consistency among jurisdictions.

In order to accomplish these objectives, Kimley-Horn's previous TIA survey was updated and additional information was solicited from each local agency within Orange County. The information was obtained through telephone interviews with City Engineers and Planners after they had an opportunity to examine the survey questionnaire which was mailed to them in advance of the interview. The information obtained was used in preparing the methodology recommendations contained in this report. A summary of the update survey results is provided in the Appendix.

### **Relationships with Other Components**

In addition to being an integral part of the Land Use Coordination component of the CMP, the traffic impact analysis requirements also relate to all other CMP components to a greater or lesser degree. These components include the following:

- Modeling
- Level of Service
- Transit Standards
- Traffic Demand Management
- Deficiency Plans
- Capital Improvement Program

The Land Use Coordination section in Chapter 3 of the CMP Preparation Manual dated January, 1991 contains a detailed description of each of the component linkages listed above.

**SECTION 2- REQUIREMENTS OF CMP LEGISLATION**

The complete text of CMP legislation is contained in Appendix A to the Preparation Manual for the Congestion Management Program for Orange County dated January, 1991. For ease of reference, the requirements of this legislation related to analysis of the impacts of land use decisions made by local jurisdictions are summarized as follows:

- Analyze impacts of land use decisions on CMP Highway System.
- Estimate costs associated with mitigation of impacts on CMP Highway System.
- Exclude costs associated with mitigating the impacts of interregional travel.
- Allow credits against mitigation costs for local public and private contributions to improvements to the CMP Highway System.
  - For toll road facilities, allow credits only for local public and private contributions which will not be reimbursed from toll revenues or other state or federal sources.
- Report annually on actions taken to adopt and implement a program to analyze the impacts of land use decisions on the CMP Highway System and to estimate the costs of mitigating those impacts.

**SECTION 3 - ACTIONS REQUIRED OF LOCAL AGENCIES**

The provisions of CMP legislation, as summarized in the preceding section, impose a requirement on local jurisdictions to carry out certain actions in order to demonstrate their compliance with the CMP program. This compliance will maintain eligibility to receive state gas tax funds made available by the voter approved Proposition 111. The actions and documentation requirements related to the identification and analysis of traffic impacts include the following:

- A TIA will be required for CMP purposes for all proposed developments generating 2,400 or more daily trips. For developments which will directly access a CMP Highway System link, the threshold for requiring a TIA should be reduced to 1,600 or more trips per day.
- Document procedures used to identify and analyze traffic impacts of new development on CMP Highway System. This documentation should include the following:
  - Identification of type of development proposals which are subject to a traffic impact analyses (TIA);
  - Description of required or acceptable TIA methodology; and
  - Description of inter-jurisdictional coordination process used when impacts cross local agency boundaries.
- Document procedures/standards used to determine the costs of mitigation requirements for impacts of new development on CMP Highway System.
- Document methodology and procedures for determining applicable credits against mitigation costs including allowable credits associated with contributions to toll road facilities.
- Establish annual monitoring and reporting process to summarize activities performed in analyzing the impacts of land use decisions on the CMP Highway System and in estimating the associated mitigation costs. Procedures for incorporating mitigation measures into the Capital Improvement Program should also be established.
- For the first year, local jurisdictions may assume that all interregional travel occurs on the freeway system or they may develop an analysis methodology to determine the amount of interregional travel occurring on arterials which are part of the CMP Highway System. During the first year, TIAs need to analyze only the impacts to arterial portions of the CMP Highway System.

#### **SECTION 4 - CMP TRAFFIC IMPACT ANALYSIS METHODOLOGY**

In order to assure that the CMP Program meets its objectives of linking land use decisions with the adequate evaluation of impacts related to those decisions, traffic impact analyses must often be undertaken. There are a number of essential elements which should be included in traffic impact analyses (TIA) used to support the program. Many local jurisdictions already employ development review processes which will be adequate for addressing CMP requirements. For those jurisdictions wishing technical guidance in carrying out the analysis of traffic impacts on the CMP Highway System, this section offers an appropriate TIA methodology.

#### **PROJECTS REQUIRING TIA ANALYSIS**

All development in Orange County will use the CMP Network to a greater or lesser extent from time-to-time. The seven-year capital improvement program, together with deficiency plans to respond to deficiencies which cannot be resolved in the 7-year timeframe, are developed in response to anticipated growth in travel within a jurisdiction. Thus, a certain level of travel growth is addressed in the normal planning process and it is not necessary to evaluate relatively small projects with a TIA or to rely on TIA's as the primary means of identifying needed CMP Highway System improvements. Furthermore, County voters have approved a sales tax increase which will fund major improvements to the transit and highway systems serving the County.

Many jurisdictions will require an EIR for a proposed development project. When required, the EIR should include steps necessary to incorporate the required CMP analysis. Most or all of the TIA elements described in this section would normally be incorporated into the typical EIR traffic analysis.

Certain development projects not requiring an EIR should still be evaluated through a TIA process due to their land use type, intensity, proximity to the CMP network, and/or duration of development timeframe. In other words, developments which will significantly alter the anticipated demand on a CMP roadway should be evaluated through a TIA approach.

At the present time, there is a wide-ranging approach to determining which projects will require a TIA. In some jurisdictions, there are formal guidelines, while in others it depends primarily on the judgment of a member of staff relative to the probable significance of the project's impact on the surrounding road system.

The OCTC TIA guidelines recommended defining three percent of the level of service standard as significant impact. This seems reasonable for application for CMP purposes. Thus, project impacts of three percent or less can be mitigated by impact fees or other revenues. Projects with a potential to create an impact of more than three percent of Level of Service E capacity will require TIA's. On this basis, it is recommended that all development projects which generate more than 2,400 daily trips be subject to a TIA for CMP evaluation. For projects which will directly access or be in close proximity to a CMP Highway System link a reduced threshold of 1,600 trips/day would be appropriate. Appendix B provides background information of the derivation of these threshold values.

## **TIA PROCESS**

There are a number of essential elements in the TIA process itself. It is desirable that all of these elements be evaluated within an acceptable range of criteria in order to assure the objectives of the CMP process and to maintain a reasonable degree of equity from jurisdiction to jurisdiction. It is recognized, however, that for certain of the elements, some variations relating to professional judgment and local criteria and characteristics are necessary and appropriate to the process. These factors have been fully considered in developing the descriptions of the following elements:

- Evaluation of existing conditions
- Trip generation
- Internal capture and passer-by traffic
- Trip distribution and assignment
- Radius of development influence
- Background traffic
- Capacity analysis methodology
- Impact costs/mitigation

### **Evaluation of Existing Conditions**

In order to evaluate the relative impacts of a proposed development, determine CMP Highway System status and define appropriate mitigation for new impacts, it is necessary to understand the existing conditions on the affected roadway network. Evaluation of existing conditions is common to nearly all jurisdictions in Orange County. Given that most jurisdictions use link and intersection capacity analysis techniques compatible with the techniques identified in the level-of-service component, no changes in existing local jurisdiction procedures should be necessary in connection with the CMP Program.

### **Trip Generation**

At the foundation of traffic impact analyses is the quantification of trip generation. Use of the ITE Trip Generation Manual is common throughout Orange County. In addition, other widely accepted practices are being used when appropriate to supplement the lit data. These practices include use of acceptable rates published by local agencies and surveys conducted at similar sites, subject to approval of the reviewing agency. Given the uniformity of practice in Orange County to date, no major adjustments in this procedure should be required. It would be desirable however to establish a central library for reporting the results of special trip generation studies and making these results available to all other jurisdictions who wish them.

### **Internal Capture and Passer-by Traffic**

Techniques for identifying the internal relationship of travel within mixed-use developments and the degree to which development captures passer-by trips as opposed to creating new trips are being applied by approximately 2/3 of the local jurisdictions within Orange County. The use of

guidelines in the ITE Trip Generation Manual and appropriate professional judgment are the predominant techniques employed. To supplement the guidance available through ITE documentation, local jurisdictions are encouraged to undertake additional studies to document rates applicable within their jurisdiction. The determination of applicable rates should be undertaken by experienced transportation engineering professionals with thorough documentation of the methodology, data, and assumptions used. It is recommended that those jurisdictions which do not currently allow these adjustments establish revised TIA procedures incorporating this element. As with trip generation data, a central library would be desirable for reporting of data and analyses performed locally related to determination of appropriate factors.

### **Trip Distribution and Assignment**

Several appropriate distribution and assignment techniques are used in Orange County, depending on the size of the development and the duration of buildout. Manual and computer modeling approaches are used as appropriate. Manual methods based on the best socio-economic information available to the agency and applicant should be acceptable except when a development's size makes a modeling approach more appropriate. Sources of this information include demographic surveys, market analyses, and previous studies.

### **Radius of Development Influence**

There are numerous ways to identify the study area to be evaluated in a TIA. These include both qualitative and quantitative approaches. One of the most effective ways is through the determination of the quantity of project traffic on CMP roadway links compared to a selected level of impact. The goal of a quantitative approach is to be sure that all elements of the CMP network are addressed in a comparable manner from jurisdiction to jurisdiction. This is important due to the potential for overlapping impacts among jurisdictions. It is also important to maintain flexibility within a quantitative process to allow transportation professionals at local jurisdictions to add areas to the study which are of specific concern. It is not intended that CMP practices should restrict this aspect of each agency's existing TIA process.

It is recommended that the study area for CMP Highway System links be defined by a measure of significant impact on the roadway links. As a starting point, it is proposed that the measure be three percent of existing roadway capacity. Thus, when a traffic impact analysis is being done it would require the inclusion of CMP roadway links that are impacted by 3 percent or more of their LOS E capacity. If a TIA is required only for CMP purposes, the study area would end when traffic falls below three percent of capacity on individual roadway links. If the TIA is also required for other purposes, additional analysis can be required by the local jurisdiction based on engineering judgment or local regulation as applicable.

### **Background Traffic**

In order for a reasonable assessment of the level of service on the CMP network, it is necessary to not only identify the proposed development impact, but also the other traffic which can be expected to occur during the development of the project. There are numerous methods of evaluating background traffic. The implications of these alternative methods are that certain methodologies may result in deficiencies, while other methodologies may find an acceptable operating conditions.

The cost to mitigate impacts of a land use decision is unrelated to background traffic. Rather, it is related to the cost of replacing the capacity which is consumed by the proposed development. However, it is necessary to understand background traffic in order to evaluate level-of-service. Background traffic is composed of existing traffic demands and growth from new development which will occur over a specific period of time. Both the existing and the growth elements of background traffic contain sub-elements. These include traffic which is generated within Orange County, that which begins and/or ends within the County, and interregional traffic which has neither end in Orange County. CMP legislation stipulates that interregional traffic will not be considered in CMP evaluations with respect to LOS compliance or determining costs of mitigation.

Given that the CMP process is new, there is no existing practice of separating interregional traffic from locally generated traffic. Until a procedure for identifying interregional traffic is developed, local jurisdictions may assume that all interregional traffic occurs on the freeway system. Initially TIA's required for CMP purposes need only analyze the impacts to arterial portions of the CMP Highway System.

Local governments in Orange County are generally consistent in their approach to background traffic. There are three major approaches used. The first is to use historical growth factors which are applied to existing traffic volumes to project future demands. The second is to aggregate the impacts of specific individual projects which have been approved or planned but not built to identify the total approved background traffic on the study area roadway system. A third method is to use computer modeling to identify total traffic demands which represent both background traffic and project impact traffic. For the present CMP program, it is recommended that the discretion for the appropriate process lie within the local jurisdiction, however, the method to be used in the jurisdiction should be clearly defined in the agency's TIA rules and procedures. In addition, it is recommended that all jurisdictions create a listing of approved development projects and a map showing their locations which would be updated frequently and be available to other jurisdictions on request. The listing should include information related to type and size of land use and phasing for each project.

It is appropriate to periodically update long range forecasts based on development approvals and anticipated development growth in the region and plan a transportation system which will provide the necessary level-of-service for this amount of development. When a development proposal will significantly alter this long-term plan, it will be necessary to address the aggregate of all approved development to assure that there is a long-term solution. However, from a TIA perspective, it is reasonable and practical to consider only that development traffic which can be expected to exist at the time of buildout of a new development proposal. That is to say, for CMP purposes background traffic should be limited to that traffic which is generated by development which will exist at the time of buildout of a proposed development. CEQA requirements may dictate that other background traffic scenarios be analyzed as well.

#### **Capacity Analysis Methodology**

Once the projected traffic demands are known, it is necessary to evaluate these demands relative to available and planned roadway capacity. The methodology used in capacity determination in Orange County is relatively uniform. Additionally, the level of service (LOS) component of the CMP Program has identified specific criteria which are to be used in determining level-of-service on the CMP Highway System.

**Impact Costs/Mitigation**

This element is at the heart of the CMP process; that is to identify the costs of mitigating a land development decision on the CMP System.

The current practice throughout Orange County is to require mitigation only when the level-of-service standard is exceeded. However, some jurisdictions require regular impact mitigation fees and phasing road improvements with development. The growth management requirement of the sales tax Measure M mandates a traffic phasing program. Often, mitigation is equated to construction of roadway improvements to maintain an acceptable level-of-service and/or to maintain the existing level-of-service. In some instances, a pay and go mitigation approach is allowed. This means that new development may pay its fair share and go forward and the provision of improvements remain the responsibility for the local jurisdiction.

In order to assess responsibility for impacts, there are a variety of approaches. One approach is to consider impact traffic as a percent of total traffic. Impact traffic may also be taken as a percentage of existing capacity. Another common approach is to use the net impact of development as a percent of total future traffic demand.

Since CMP legislation requires the identification of costs of land use decisions and impacts across jurisdictional lines, it is desirable that the CMP program have a consistent method for identifying the costs of development impacts. On the other hand, a wide variety of mitigations can occur from jurisdiction to jurisdiction.

It is recommended that the impact costs be calculated as the total of new development traffic on a roadway link requiring improvement divided by the capacity of the improvement times the cost of the improvement. This can be expressed in a formula as follows:

$$\text{Impact Cost} = \frac{\text{development traffic}}{\text{capacity of improvement}} \times \text{improvement cost}$$

Improvements to be included in the cost analysis should be those identified in the jurisdiction's adopted Circulation Element and any additional improvements identified in the development TIA. The total impact cost for a development would be the sum of costs for all significantly impacted links. Funds collected from these assessments could be aggregated and applied to specific projects on an annual basis in accordance with locally established priorities. If project impacts extend across jurisdictional boundaries the impact costs calculated for significantly impacted links in an adjacent jurisdiction should be allocated to that jurisdiction for use in its program of prioritized improvements.

Through this process, progress can be achieved in implementing system improvements without having to wait for 100% of the funds being collected for each individual improvement. In theory, all required improvements will be accomplished over time as new developments are approved which will generate traffic to utilize available and planned system capacity. The costs should be based on recent Unit cost experience in Orange County and may include planning, permitting, preliminary engineering, design, right-of-way, construction, landscaping, construction inspection, and, if applicable, financing costs.

There are two approaches to mitigation. One is traffic reduction and the other is to build improvements to accommodate the new traffic. Traffic reduction through transportation demand ordinances or other regulations which will reduce impacts can be calculated in the same way a development impact would be calculated. But in this case, it would be taken as a credit or a reduction in impact. Mitigation techniques such as TDM or phasing or reduction in project intensity merely reduce for a new development the amount of impact which must be mitigated and are changes which should occur prior to the calculation of project impact costs. A monitoring program should be established to confirm that anticipated reductions are realized.

To comply with the CMP process, a local jurisdiction should accomplish two things. First, it should demonstrate that it is analyzing and mitigating the impact of new development on the CMP Highway System. Second, it should maintain the level-of-service standards or adopt a deficiency plan Consistent with CMP legislation. In order to demonstrate the mitigation which has been undertaken, the local jurisdiction should maintain a record of the cumulative impact cost of all development approvals and the cumulative mitigation value of improvements provided by the local jurisdiction. These could be construction programs or credits from a TDM ordinance or other traffic reduction measures. It is then only necessary to show on an annual basis that the total improvement costs plus traffic reduction credits are equal to or greater than the total impact cost of new development approvals to prove mitigation compliance.

The maintenance of level-of-service would come through implementation of improvements contained in the 7-year capital improvements element, Measure M and state-funded improvements, additional improvements which may be made in conjunction with development approvals, and from deficiency plans which may be required from time to time. From a TIA perspective, it would be necessary to document the following:

- a. the level-of-service on the CMP network at buildout of the proposed development will be: 1) level—of-service “E or better, or 2) will not result in a cumulative increase of more than 0.10 in v/c ratio if the established LOS standard is worse than LOS E.
- b. a deficiency plan exists to address the links for which level-of-service is not provided, and
- c. a deficiency plan will be developed for a new link when a deficiency will occur.

#### **DOCUMENTATION OF RULES AND PROCEDURES**

To assure a clear understanding of the TIA procedures which are necessary to support a viable CMP program, it is recommended that a set of rules and procedures be established by each local jurisdiction. Ideally, these rules and procedures would cover the requirements for the full TIA analysis and would include minimum requirements for the CMP process. Local jurisdictions which prefer not to adopt separate CMP TIA standards could implement standards for CMP requirements within a TIA and maintain their existing approach for all other aspects of their existing TIA process. The following is a summary of the elements which should be included in CMP procedures documentation and the methodologies applicable to each element:

1. **Thresholds for Requiring a TIA for CMP** - Projects with the potential to create an impact of more than 3% of LOS “E” capacity on CMP Highway system links should require a TIA. All projects generating 2,400 or more daily trips should require a TM for CMP evaluation. If a project will have direct access to a CMP link this threshold should be reduced to 1,600 or more daily trips. A TIA should not be required again if one has already been performed for the project as part of an earlier development approval which takes the impact on the CMP Highway System into account.
2. **Existing Conditions Evaluation** - Identify current level-of-service on CMP roadways and intersections where the proposed development traffic will contribute to 3 percent of the existing capacity. Use procedures defined in the level-of-service component for evaluation of level—of-service.
3. **Trip Generation** - ITE trip generation rates or studies from other agencies and locally approved studies for specific land uses.
4. **Internal Capture and Passerby Traffic** - Justification for internal capture should be included in the discussion. Passerby traffic should be calculated based upon ITE data or approved special studies.
5. **Distribution and Assignment** - Basis for trip distribution should be discussed and should be linked to demographic or market data in the area. Quantitative and/or qualitative information can be used depending on the size of the proposed development. As the size of the project increases, there should be a tendency to use a detailed quantitative approach for trip distribution. Trip assignment should be based on existing and projected travel patterns and the future roadway network and its travel time characteristics.
6. **Radius of Impact/Project Influence** - The analysis should identify the traffic assignment on all CMP roadway links until the impact becomes less than 3 percent of level of service E capacity.
7. **Background Traffic** - Total traffic which is expected to occur at buildout of the proposed development should be identified.
8. **Impact Assessment Period** - This should be the buildout timeframe of the proposed development.
9. **Capacity Analysis Methodology**- The methodology should be consistent with that specified in the level-of—service component of the CMP Program.
10. **Improvement Costs** - The cost of roadway improvements should include all costs of implementation including studies, design, right-of-way, construction, construction inspection, and financing costs, if applicable.
11. **Impact Costs and Mitigation** - The project impact divided by the capacity of a roadway improvement times the cost of the improvement should be identified for each significantly impacted CMP link and summed for the study area.
12. **Projected Level-of-Service** - The TIA should document that the projected level-of-service on all CMP links in the study area will be at Level-of-Service “E” or the existing level-of-service whichever is less, or that a deficiency plan exists or will be developed to address specific links or intersections.

**SECTION 5 – APPENDICES**

Appendix A – Summary of TIA Update Survey Results (Available Upon Request)

Appendix B – Deviation of Thresholds for Projects Requiring TIA Analysis

**APPENDIX B****DERIVATION OF THRESHOLDS FOR PROJECTS  
REQUIRING TRAFFIC IMPACT ANALYSIS**

The TIA process recommendation is to require a TIA for any project generating 2,400 or more daily trips. This number is based on the desire to analyze any impacts which will be 3% or more of the existing capacity. Since most CMP Highway System will be four lanes or more, the capacity used to derive the threshold is a generalized capacity of 40,000 vehicles/day. The calculations are as follows:

$$40,000 \text{ veh./day} \times 3\% = 1,200 \text{ veh./day}$$

Assuming 50/50 distribution of project traffic on a CMP link

$$1,200 \times 2 = 2,400 \text{ veh./day total generation}$$

As can be seen, a project which will generate 2,400 trips/day will have an expected maximum link impact on the CMP system of 1,200 trips/day based on a reasonably balanced distribution of project traffic. On a peak-hour basis, the 3% level of impact would be 120 peak-hour trips. For intersections, a 3% level of impact applied to the sum of critical volume (1,700 veh./hr.) would be 51 vehicles per hour.

A level of impact below 3% is not recommended because it sets thresholds which are generally too sensitive for the planning and analytical tools available. Minor changes in project assumptions can significantly alter the results of the analysis and the end result can be additional unnecessary cost to the developer and additional review time by staff with little benefit. Additionally, a lower threshold of significance will expand the study area, which also increases effort and costs, and increases the probability that the analysis would extend beyond jurisdictional boundaries.

The following illustration shows that the 2,400 trip/day threshold would be expected to produce a 3% impact on the CMP System only when the project has relatively direct access to a CMP link. As a project location moves further off the CMP System the expected impacts is reduced. With a more directional distribution of project traffic a development with direct CMP System access could produce a 3% impact with somewhat lower daily trip generation.

The table included on the following page illustrates the daily trip generation thresholds which would produce various levels of impact on the CMP System for project locations with and without direct access to the system. Based on a 3% impact the trip generation thresholds for requiring a TIA are 1,600 veh./day with direct CMP System access and 2,400 veh./day if a project does not have direct CMP System access.

**CMP Highway System Impacts for Development Generating 2,400 trips/day  
Based on proximity to CMP System**

	50		50		250	
	80	80		280	80	
100	100	100		300	100	300
200	600	800	2400	800	600	100
300	100	300		200	100	200

MAXIMUM IMPACT < 1%

400						200
200	600	700			600	800
	200	300	1200	1200	300	200
			2400			200

MAXIMUM = 1.8%

	400				100		200
200	800	1000	1200	1200	900	700	300
	200		2400		100		200

MAXIMUM = 3%  
COULD BE 4.5% WITH 75/25 SPLIT

**Alternative Criteria**

Assume 75/25 distribution

For direct access to CMP System:  
 $1,200 / .75 = 1,600 \text{ veh./day}$

For no direct CMP System Access:  
Approximately 1/3 less impact on CMP System  
 $1,600 \times 3/2 = 2,400 \text{ veh./day}$

Daily Trip Generation

Significant Impact	Direct Access	No Direct Access
1%	500	800
2%	1,100	1,600
3%	1,600	2,400

## Appendix B-2: Traffic Impact Analysis Exempt Projects

Projects exempt from the requirements of a mandatory, CMP Traffic Impact Analysis are listed below. This list is not meant to be all-inclusive. Any inquiries regarding additional exemptions shall be transmitted in writing to the Orange County Transportation Authority, attention CMP Program Manager.

Project Not Requiring a CMP TIA Analysis:

1. Applicants for subsequent development permits (i.e., conditional use permits, subdivision maps, site plans, etc.) for entitlement specified in and granted in a development agreement entered into prior to July 10, 1989.<sup>1</sup>
2. Any development application generating vehicular trips below the Average Daily Trip (ADT) threshold for CMP Traffic Impact Analysis, specifically, any project generating less than 2,400 ADT total, or any project generating less than 1,600 ADT directly onto the CMPHS.<sup>1,2</sup>
3. Final tract and parcel maps.<sup>1,2,3</sup>
4. Issuance of building permits.<sup>1,2,3</sup>
5. Issuance of certificates of use and occupancy.<sup>1,2,3</sup>
6. Minor modifications to approved developments where the location and intensity of project uses have been approved through previous and separate local government actions prior to January 1, 1992.<sup>1,2,3</sup>

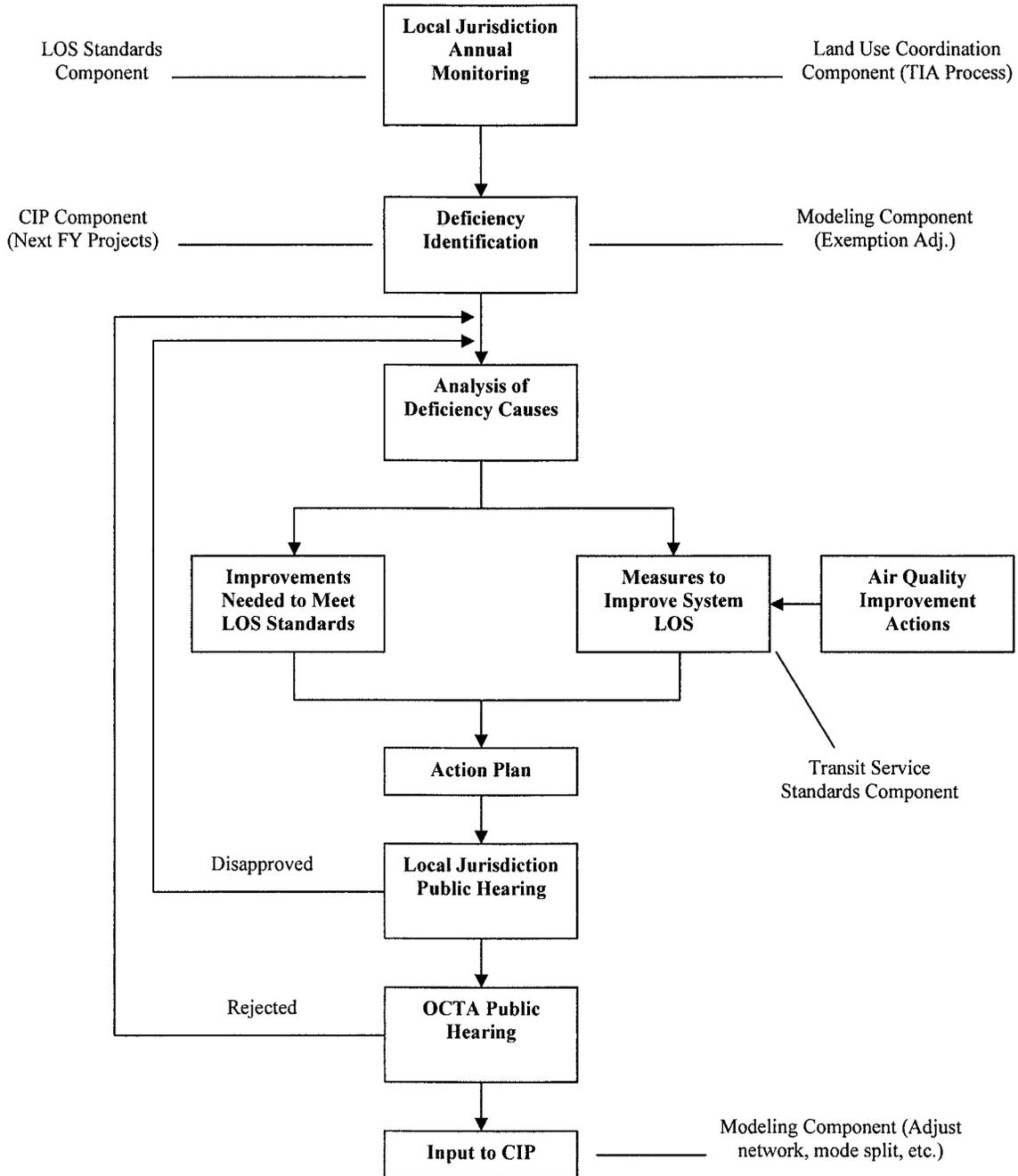
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<sup>1</sup> Vehicular trips generated by CMP TIA-exempt development applications shall not be factored out in any traffic analyses or levels of service calculations for the CMPHS.

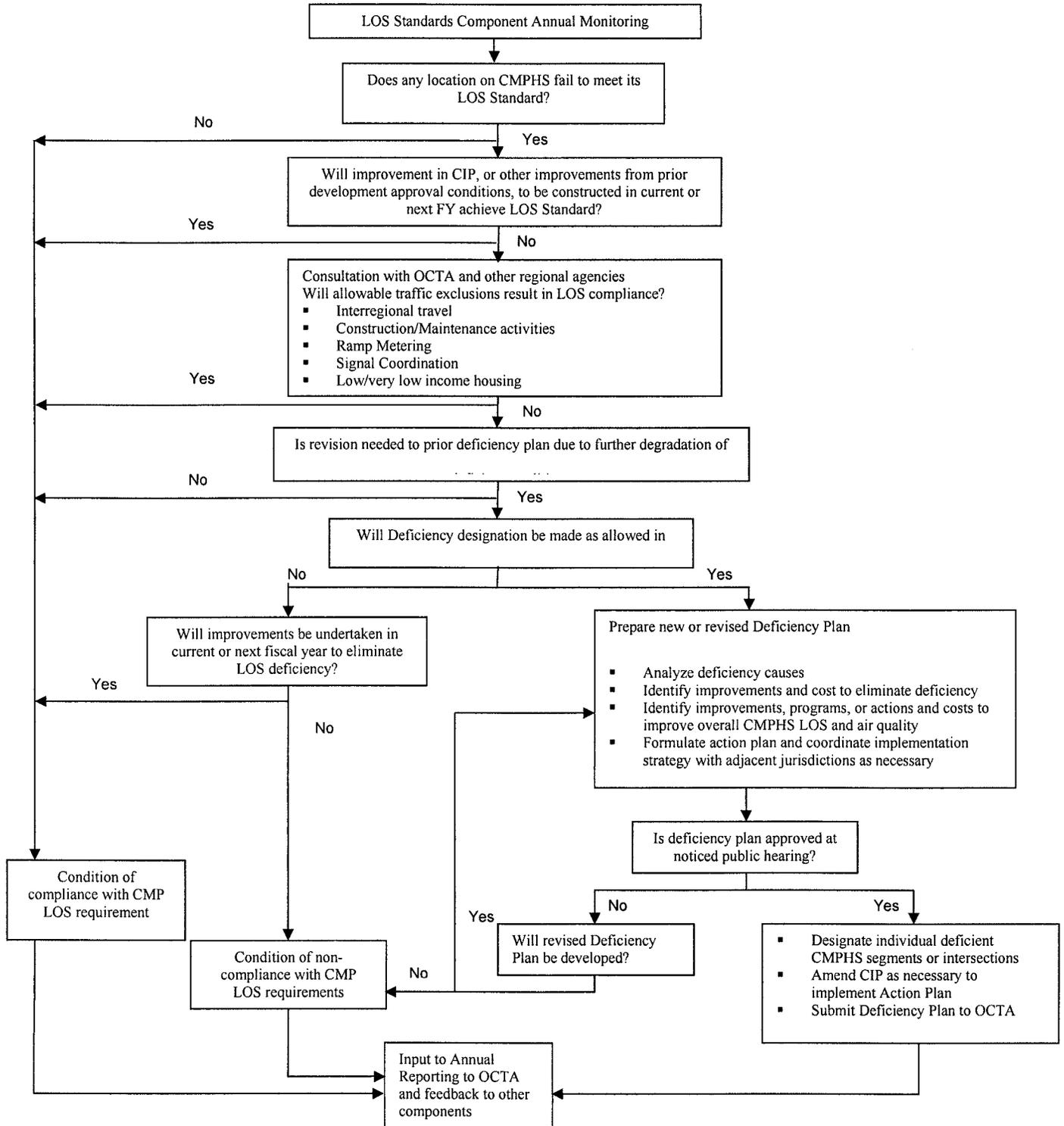
<sup>2</sup> Exemption from conduction a CMP TIA shall not be considered an exemption from such projects' participation in approved, transportation fee programs established by the local jurisdiction.

<sup>3</sup> A CMP TIA is not required for these projects only in those instances where development approvals granting entitlement for the project sites were granted prior to the effective date of CMP TIA requirements (i.e., January 1992).

# APPENDIX C-1: CMP Deficiency Plan Flow Chart



# APPENDIX C-2: Deficiency Plan Decision Flow Chart



## **APPENDIX D: CMP Monitoring Checklists**

<b>CMP MONITORING CHECKLIST CAPITAL IMPROVEMENT PROGRAM</b>
---

Responsibility: Cities, County, Caltrans, transit operators

**2009 CMP CHECKLIST**

	YES	NO
1. Did you submit a seven-year Capital Improvement Program (CIP) to OCTA by June 30, 2009?	<input type="checkbox"/>	<input type="checkbox"/>
a. Does it include projects that will maintain or improve the traffic LOS on the CMPHS or adjacent facilities which benefit the CMPHS?	<input type="checkbox"/>	<input type="checkbox"/>
b. Are maintenance, rehabilitation, and reconstruction projects excluded for CMP purposes?	<input type="checkbox"/>	<input type="checkbox"/>
c. Was the CIP Development Program, distributed with the Measure M eligibility package, used to prepare the CMP CIP?	<input type="checkbox"/>	<input type="checkbox"/>
e. Have projects included as part of a deficiency plan been identified as such in the CIP?	<input type="checkbox"/>	<input type="checkbox"/>

**CMP MONITORING CHECKLIST  
DEFICIENCY PLANS**

Responsibility:        Cities, County

**2009 CMP CHECKLIST**

	YES	NO*
1.     After adjustments, were any locations on the CMPHS identified as failing to meet the LOS standard through the data collection and calculation process?	<input type="checkbox"/>	<input type="checkbox"/>
a.     If so, which?		

**NOTE: Only those agencies which answered question #1 affirmatively need to answer the remaining questions.**

2.     Will the deficiencies at these locations be corrected by improvements scheduled for completion during the next 18 months?	<input type="checkbox"/>	<input type="checkbox"/>
3.     Has a deficiency plan or a schedule for preparing a deficiency plan been submitted to OCTA?	<input type="checkbox"/>	<input type="checkbox"/>
4.     Does the deficiency plan fulfill the statutory requirements:		
a.     include an analysis of the causes of the deficiency?	<input type="checkbox"/>	<input type="checkbox"/>
b.     include a list of improvements necessary to maintain minimum LOS standards on the CMPHS and the estimated costs of the improvements?	<input type="checkbox"/>	<input type="checkbox"/>

		YES	NO*
c.	include a list of improvements, programs, or actions, and estimates of their costs, that will improve LOS on the CMPHS and improve air quality?	<input type="checkbox"/>	<input type="checkbox"/>
1)	do the improvements, programs, or actions meet the criteria established by SCAQMD (see the CMP Preparation Manual)?	<input type="checkbox"/>	<input type="checkbox"/>
d.	include an action plan and implementation schedule?	<input type="checkbox"/>	<input type="checkbox"/>
5.	Are the capital improvements identified in the deficiency plan programmed in your seven-year CMP CIP?	<input type="checkbox"/>	<input type="checkbox"/>
6.	Does the deficiency plan include a monitoring program that will ensure its implementation?	<input type="checkbox"/>	<input type="checkbox"/>
7.	Does the deficiency plan include a process to allow some level of development to proceed pending correction of the deficiency?	<input type="checkbox"/>	<input type="checkbox"/>
8.	Has necessary inter-jurisdictional coordination occurred?	<input type="checkbox"/>	<input type="checkbox"/>
9.	Please describe any innovative programs included in the deficiency plan:		
	_____		
	_____		
	_____		

\* Submitting jurisdiction is encouraged to provide a brief explanation of those questions answered "No."

**CMP MONITORING CHECKLIST  
LAND USE COORDINATION**

Responsibility:        Cities, County

**2009 CMP CHECKLIST**

	YES	NO*
CMP Traffic Impact Analysis:		
1.    Have you changed the CMP traffic impact analysis (TIA) process you selected for the 2007 CMP?	<input type="checkbox"/>	<input type="checkbox"/>
2.    If you answered "Yes" to the above question, have you submitted documentation of the revised TIA approach and methodology used to OCTA?	<input type="checkbox"/>	<input type="checkbox"/>
3.    Was your CMP TIA process applied to applicable development projects filed and approved by the local jurisdiction between July 1, 2007 and June 30, 2009?	<input type="checkbox"/>	<input type="checkbox"/>
a.    How many approved development projects were required to conduct a CMP TIA?		
b.    Did the TIA process identify whether any CMPHS links/intersections would exceed their established LOS standard as a result of project related traffic?	<input type="checkbox"/>	<input type="checkbox"/>
c.    If so, which CMPHS links/intersections?		
	_____	
	_____	
	_____	
d.    Which, if any, of these impacted CMPHS links/intersections are located outside the boundaries of your jurisdiction?		
	_____	
	_____	
	_____	

---

	YES	NO*
e. Did your agency participate in inter-jurisdictional discussions with other affected jurisdictions to develop a mitigation strategy for each impacted link/intersection?	<input type="checkbox"/>	<input type="checkbox"/>
4. Did you use, or do you anticipate using, a local model for your traffic impact analysis on any projects initiated between July 1, 2007 and June 30, 2009?	<input type="checkbox"/>	<input type="checkbox"/>
5. If you answered "Yes" to the above question, did you follow the modeling consistency process outlined in Attachment 1?	<input type="checkbox"/>	<input type="checkbox"/>

\* Submitting jurisdiction is encouraged to provide a brief explanation of those questions answered "No" (with the exception of questions 1 and 4).

**Attachment 1**  
**(under separate cover)**

**CMP MONITORING CHECKLIST  
LEVEL OF SERVICE**

Responsibility:      Cities, County

**2009 CMP CHECKLIST**

	YES	NO*
1.      In your jurisdiction, are all of the intersections on the CMPHS operating at LOS E (or the baseline level, if worse than E) or better?	<input type="checkbox"/>	<input type="checkbox"/>
a.      If not, have the impacts of traffic which are categorically exempt under the CMP legislation (interregional travel, traffic generated by the provision of low and very low income housing, construction rehabilitation or maintenance of facilities that impact the system, freeway ramp metering, or traffic signal coordination) been factored out of the LOS traffic counts?	<input type="checkbox"/>	<input type="checkbox"/>
2.      After adjustments have been included, which intersections, if any, are operating below LOS E (or the baseline level, if worse than E)?	<input type="checkbox"/>	<input type="checkbox"/>
<hr/> <hr/> <hr/>		
3.      Will the LOS at those intersections be improved by mitigation measures which will be implemented in the next 18 months or improvements programmed in the first year of any FY 2009/2010 funding program (i.e., local agency CIP, CMP CIP, Measure M CIP)?	<input type="checkbox"/>	<input type="checkbox"/>
a.      If not, has a deficiency plan been developed for each intersection which will be operating below LOS E (or the baseline level, if worse than E)?	<input type="checkbox"/>	<input type="checkbox"/>

\* Submitting jurisdiction is encouraged to provide a brief explanation of those questions answered "No."

<b>CMP MONITORING CHECKLIST TDM ORDINANCE</b>
---

Responsibility:      Cities, County

**2009 CMP CHECKLIST**

	YES	NO
1.    Have you made revisions to the TDM ordinance used to satisfy the TDM requirements of the last CMP reporting cycle (i.e. 2007)?	<input type="checkbox"/>	<input type="checkbox"/>
a.    If so, please attach a copy of the revised ordinance and adopting resolution.		
2.    Have you applied your TDM ordinance to development projects?	<input type="checkbox"/>	<input type="checkbox"/>
a.    If not, please provide a brief explanation.		

**APPENDIX E: Capital Improvement Programs**  
(Under Separate Cover)

## **APPENDIX F: Orange County Subarea Modeling Guidelines**

(Under Separate Cover)





**October 19, 2009**

**To:** Highways Committee

**From:** Will Kempton, Chief Executive Officer

**Subject:** Cooperative Agreement with the City of Fullerton for the Railroad Grade Separation Projects

**Overview**

The Orange County Transportation Authority proposes to enter into a cooperative agreement with the City of Fullerton to establish roles, responsibilities, and processes for the design, right-of-way, and construction of the railroad grade separation projects located at Raymond Avenue and State College Boulevard. This agreement also commits Renewed Measure M funding to the City of Fullerton for the two projects.

**Recommendation**

Authorize the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-9-0576 with the City of Fullerton for the implementation of the railroad grade separation projects located at Raymond Avenue and State College Boulevard.

**Discussion**

The Orange County Transportation Authority (Authority) and City of Fullerton (City) have mutually agreed to execute a cooperative agreement where the City will serve as the implementing agency for the design, right-of-way (ROW), construction, and construction administration of the two railroad grade separation projects at Raymond Avenue and State College Boulevard.

The City is responsible for entering into a construction and maintenance agreement with the Burlington Northern Santa Fe Railway (BNSF) to establish the rights and obligation of each party relating to the construction and maintenance of the subject at-grade crossings. In addition, the City is responsible for the schedule and budget performance of these projects and must conform to the requirements of the Trade Corridor Improvement Fund (TCIF) Program as established by the California Transportation Commission (CTC). The Authority will serve as the

sponsoring agency and oversee the City's efforts and coordinate the schedules of these projects with the development of the remaining five grade separation projects in the City.

The proposed cooperative agreement also identifies the funding sources, amounts of each funding source, fiscal year (FY) availability of funds, and subsequent approvals required for use of the funds (Attachment A). The funding allocation plan for the railroad grade separation projects at Raymond Avenue and State College Boulevard consist of five funding sources, and each funding source must adhere to eligibility guidelines, programming requirements, and timely use of fund provisions. The proposed cooperative agreement includes the following sources and fund availability schedule:

Funding Source	Phase	FY Funding Availability	Funding Amount
Renewed Measure M (M2), Project O	Design, ROW, and Construction	FY 2009-10, FY 2012-13	\$50,982,000
TCIF	Construction	FY 2012-13	\$43,488,000
Regional Surface Transportation Program (RSTP)	ROW and Construction	FY 2010-11, FY 2012-13	\$7,922,000
Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU)	ROW	FY 2010-11	\$12,800,000
Local (City)	ROW	FY 2010-11, FY 2012-13	\$10,630,000
<b>Total</b>			<b>\$125,822,000</b>

The M2 funds come from the Regional Capacity Program and will fund the initial stages of the design phase currently underway with the City for FY 2009-10. The remaining M2 fund allocation will be budgeted and available in subsequent years to align with the project delivery schedule.

TCIF funds are available for construction and are subject to CTC allocation and bond sales by the Pooled Money Investment Board. TCIF funds should be expended or encumbered prior to July 1, 2013, otherwise the legislature could reallocate the funds to any other railroad grade separation project in the state.

The RSTP funds and SAFETEA-LU funds are currently programmed in the 2008 Federal Transportation Improvement Program. The RSTP funds are

available in FY 2010-11 and FY 2012-13, and the SAFETEA-LU funds are available in FY 2010-11. Additionally, the City is required to provide matching funds for the design, ROW, and construction of the projects. The City is the direct recipient of the TCIF, RSTP, and SAFETEA-LU funds and is also responsible for maintaining the approved project budget of \$125,822,000 for the projects.

Additionally, the Authority and the City acknowledge that development of the projects is in a preliminary stage at the time of this cooperative agreement and that costs related to requirements of BNSF (construction of a railroad shoofly and related work) are unknown and may add significant costs to the projects.

The M2 funds for the projects are committed by the Authority for a not-to-exceed amount of \$50,982,000. This amount is a grant to the City under the M2 Regional Capacity Program. Funds will be released on a periodic basis based on the project needs as requested by the City and approved by the Authority.

#### **Fiscal Impact**

The M2 funding for the design services is included in the Authority's FY 2009-10 Budget, Development Division, Account 0017-7831-SO202-QKC, and by funds transfer from Account 0017-7831-SO202-QKD, Contributions to Other Agencies. The remaining amount of M2 funds will be budgeted in subsequent years to align with the project delivery schedule.

#### **Summary**

Staff is seeking Board of Directors approval for the Chief Executive Officer to negotiate and execute Cooperative Agreement No. C-9-0576 with the City to establish roles, responsibilities, and processes for the implementation of the railroad grade separation projects at Raymond Avenue and State College Boulevard. An amount of \$50,982,000 is committed under this agreement from the M2 Regional Capacity Program. The funding allocations are subject to CTC approval. The total project cost shall not exceed \$125,822,000.

***Attachment***

- A. Draft Cooperative Agreement No. C-9-0576 Between Orange County  
Transportation Authority and City of Fullerton

**Prepared by:**



M. Joseph Toolson  
Program Manager  
714-560-5406

**Approved by:**



Kia Mortazavi  
Executive Director, Development  
714-560-5741



Virginia Abadessa  
Director, Contracts Administration &  
Materials Management  
714-560-5623

**COOPERATIVE AGREEMENT NO. C-9-0576**

**BETWEEN**

**ORANGE COUNTY TRANSPORTATION AUTHORITY**

**AND**

**CITY OF FULLERTON**

**THIS AGREEMENT**, is effective this \_\_\_\_\_ day of \_\_\_\_\_, 2009, by and between the Orange County Transportation Authority, 550 South Main Street, P.O. Box 14184, Orange, California 92863-1584, a public corporation of the State of California (hereinafter referred to as "AUTHORITY"), and the City of Fullerton, 303 W. Commonwealth, Fullerton, CA 92832, a municipal corporation (hereinafter referred to as "CITY"), which are sometimes individually referred to as "Party", as collectively referred to as "Parties".

**RECITALS:**

**WHEREAS**, AUTHORITY and CITY desire to enter into a Cooperative Agreement (Agreement) to define the roles and responsibilities related to the funding between the AUTHORITY and CITY for environmental, final design, right-of-way acquisition, and construction of the two grade separation projects (hereinafter referred to as "PROJECTS") to alleviate the potential traffic impacts and enhance safety at existing at-grade rail crossings located at Raymond Avenue as shown in Exhibit A and State College Boulevard as shown in Exhibit B; and

**WHEREAS**, on April 10, 2008, the California Transportation Commission (CTC) adopted the Trade Corridors Improvement Fund (TCIF) program of projects, which included the two projects in CITY, in the amount of \$43.5 million; and

**WHEREAS**, CITY agrees to act as the lead agency for environmental, design, right-of-way acquisition, construction management, and construction of PROJECTS; and

**WHEREAS**, CITY will, prior to allocation of any construction funding or commencement of any construction activity, enter into a separate Construction and Maintenance Agreement

1 (C&M Agreement) with Burlington Northern Santa Fe (BNSF), establishing the rights and  
2 obligations of each party for the construction and maintenance of PROJECTS; and

3 **WHEREAS**, AUTHORITY and CITY agree that the CTC's approval is required for  
4 AUTHORITY's programming request to amend and allocate the TCIF funds for performance  
5 under this Agreement; and

6 **WHEREAS**, AUTHORITY shall, subject to AUTHORITY's Board of Directors approval,  
7 seek alternative funding sources to replace TCIF funds that may be reallocated by the  
8 Legislature, and;

9 **WHEREAS**, AUTHORITY has agreed to designate CITY as the direct recipient for the  
10 TCIF, Regional Surface Transportation Program (RSTP), and Safe, Accountable, Flexible,  
11 Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) funds; and

12 **WHEREAS**, AUTHORITY and CITY agree that the full funding for Raymond Avenue  
13 including environmental, design, right-of-way acquisition, construction management, and  
14 construction shall be Sixty Three Million and Seven Hundred Thirty Nine Thousand Dollars  
15 (\$63,739,000) in accordance with the funding schedule shown in Exhibit C, and for State  
16 College Boulevard including design, right-of-way acquisition, construction management, and  
17 construction shall be Sixty Two Million and Eighty Three Thousand Dollars (\$62,083,000) in  
18 accordance with the funding schedule shown in Exhibit D, for a total funding of One Hundred  
19 Twenty Five Million and Eight Hundred Twenty Two Thousand Dollars (\$125,822,000); and

20 **WHEREAS**, CITY will maintain, at its own cost and expense those portions of the  
21 PROJECTS lying within CITY right-of-way; and

22 **WHEREAS**, this Cooperative Agreement defines the specific terms, conditions and  
23 funding responsibilities between the AUTHORITY and CITY for the completion of PROJECTS;  
24 and

25 **WHEREAS**, the AUTHORITY's Board of Directors approved this Agreement on  
26 October 26, 2009;

1           **NOW, THEREFORE**, it is mutually understood and agreed by AUTHORITY and CITY  
2 as follows:

3           **ARTICLE 1. COMPLETE AGREEMENT**

4           This Agreement, including all exhibits and documents incorporated herein and made  
5 applicable by reference, constitutes the complete and exclusive statement of the terms and  
6 conditions of the Agreement between AUTHORITY and CITY and supersedes all prior  
7 representations, understandings and communications. The invalidity in whole or in part of any  
8 term or condition of this Agreement shall not affect the validity of other terms or conditions.

9           **ARTICLE 2. RESPONSIBILITES OF AUTHORITY**

10          AUTHORITY agrees to the following responsibilities:

11          A. AUTHORITY shall act as the sponsoring agency and provide oversight for  
12 PROJECTS, ensuring that all standards and requirements set forth by the CITY, BNSF, and  
13 CTC Baseline Agreements are adhered to.

14          B. AUTHORITY shall coordinate with BNSF and CITY to cooperate with AUTHORITY  
15 in the development and construction of PROJECTS.

16          C. AUTHORITY shall formally request on behalf of CITY to CTC to support an  
17 allocation request for construction funds for PROJECTS in or prior to fiscal year (FY) 2012-13,  
18 whereby AUTHORITY's performance under this Agreement is contingent upon CTC approval.

19          D. AUTHORITY shall remit to CITY within thirty (30) days of receipt of an acceptable  
20 invoice, reimbursement for environmental, design, right-of-way, and construction of eligible  
21 Renewed Measure M (M2) project costs in accordance with funding schedule shown in  
22 Exhibit C. Funds will be released on a periodic basis based on the project needs as requested  
23 by CITY and approved by AUTHORITY. Only Raymond Avenue related costs are eligible for  
24 reimbursement. Such project costs shall not exceed the sum of Fifty Million and Nine Hundred  
25 Eighty Two Thousand Dollars (\$50,982,000) of M2 funds without an amendment to this  
26 Agreement.

1 E. AUTHORITY shall seek alternative funding sources to replace the TCIF funds that  
2 may be reallocated by the Legislature, and subject to AUTHORITY's Board of Directors  
3 approval.

4 F. AUTHORITY agrees to provide CITY with necessary assistance in requesting the  
5 allocation of TCIF funds from CTC and the obligation of RSTP and SAFTEA-LU funds from the  
6 Department of Transportation (Caltrans)/Federal Highways Administration (FHWA).

7 G. AUTHORITY shall process any required Regional Transportation Improvement  
8 Program (RTIP) amendments.

9 H. AUTHORITY shall process any required amendments through the CTC.

10 I. AUTHORITY shall process any documents through the CTC that AUTHORITY would  
11 be required to process as the Regional Transportation Planning Agency.

12 J. AUTHORITY shall immediately notify CITY in writing of any changes that would  
13 jeopardize the full funding of PROJECTS.

14 K. AUTHORITY shall coordinate the TCIF funding allocation request with CITY's  
15 procurement schedule and submit the TCIF funding requests to the CTC which will include the  
16 request to designate CITY as the recipient for these funds.

17 **ARTICLE 3. RESPONSIBILITIES OF CITY**

18 CITY agrees to the following responsibilities for PROJECTS:

19 A. CITY shall act as the lead agency for environmental, design, right-of-way acquisition,  
20 solicitation and award, construction, and construction management of PROJECTS, and adhere  
21 to all standards and requirements set forth by CITY, BNSF, the approved environmental  
22 documents, and the CTC baseline agreements.

23 B. CITY shall be the designated recipient for TCIF, RSTP, and SAFETEA-LU funds.

24 C. CITY shall be responsible for completing PROJECTS in accordance with the funding  
25 schedules (Exhibits C and D), timely use of funds requirements, and to abide by all TCIF,  
26 RSTP, and SAFETEA-LU programming guidelines and any and all other requirements of the

1 federal, state, Caltrans, and the CTC related to these funding programs.

2 D. CITY shall collaborate and cooperate with the AUTHORITY staff, its consultants,  
3 employees, agents, and contractors during design and construction of PROJECTS, including  
4 CITY staff participation in PROJECTS and hold monthly steering committee meetings with  
5 AUTHORITY.

6 E. CITY shall provide all staff, employees, agents, consultants, and contractors deemed  
7 necessary and appropriate by CITY to manage, administer, coordinate, and oversee  
8 environmental, engineering design, right-of-way, and construction management of  
9 PROJECTS.

10 F. CITY shall process the allocation request for TCIF funds through the AUTHORITY  
11 and the CTC in order to receive a TCIF allocation no later than the 2012 CTC meeting.  
12 Performance of this Agreement is subject to CTC approval and bond sales by the state Pooled  
13 Money Investment Board.

14 G. CITY shall immediately notify AUTHORITY in writing of any changes to PROJECTS  
15 schedules that would jeopardize funding of PROJECTS.

16 H. CITY agrees that the budget for Raymond Avenue is a not-to-exceed amount of  
17 Sixty Three Million and Seven Hundred Thirty Nine Thousand Dollars (\$63,739,000) and State  
18 College Boulevard is a not-to-exceed amount of Sixty Two Million and Eighty Three Thousand  
19 Dollars (\$62,083,000), for a total overall budget of One Hundred Twenty Five Million and Eight  
20 Hundred Twenty Two Thousand Dollars (\$125,822,000); contingent upon full funding from  
21 AUTHORITY.

22 I. CITY shall coordinate with AUTHORITY for all work to be done on the BNSF right-of-  
23 way.

24 J. CITY agrees that the programmed amounts for the TCIF, M2, and RSTP funds shall  
25 not be exceeded without a written amendment to this Agreement.

26 K. CITY shall provide PROJECTS closeout activities, including walk-through, punch list,

1 as-built records and final payment accounting.

2 L. CITY shall provide all necessary permits to construct PROJECTS. All other  
3 regulatory permits shall be included as part of PROJECTS costs.

4 M. CITY agrees to report online to the CTC on a quarterly basis on the progress made  
5 toward the implementations of PROJECTS, including scope, cost, and schedule.

6 N. CITY shall notify AUTHORITY of all significant changes related to PROJECTS and  
7 obtain approval from AUTHORITY on all contract change orders over fifty thousand dollars  
8 (\$50,000), prior to implementation, except when necessary for the safety of motorists and/or  
9 pedestrians or where immediate approval by CITY will avoid construction delay claims.

10 O. CITY shall be responsible for the schedule and budget performance of PROJECTS  
11 and to conform to all requirements of the TCIF program.

12 P. CITY shall provide AUTHORITY with a monthly progress report relative to scope,  
13 cost, schedule and all related issues of PROJECTS no later than the 10<sup>th</sup> day of the month  
14 following the reporting period. AUTHORITY may request additional information to supplement  
15 AUTHORITY's reporting requirement.

16 Q. CITY shall process the obligation request for federal funds through Caltrans/FHWA.

17 R. CITY shall provide Public Outreach to inform public of PROJECTS status and to  
18 maintain good public relation throughout design and construction of PROJECTS. This shall  
19 include keeping the Authority Public Outreach staff informed on all key project elements.

20 S. CITY shall be responsible for, and coordinate activities relating to right-of-way  
21 acquisition, temporary construction easements, and certification deemed necessary and  
22 appropriate by CITY, including eminent domain, if needed, necessary for the construction of  
23 PROJECTS.

24 T. CITY shall maintain and manage any excess land acquired as a result of  
25 PROJECTS until disposed of by CITY in a manner acceptable to AUTHORITY. If excess land  
26 is disposed of prior to the termination of this Agreement, net proceeds, after accounting for

1 CITY's expenses as well as closing costs paid through escrow, shall in their entirety, be  
2 returned to PROJECTS. After termination of this Agreement, remaining excess land shall be  
3 conveyed to the CITY, the net proceeds from any sale of excess land shall be returned to  
4 PROJECTS.

5 U. CITY shall report to the CTC on the progress, on a quarterly basis, and outcomes, at  
6 the end of the environmental phase, of the environmental process with regard to air quality  
7 impacts due to emissions from diesel or other particulates and related mitigation strategies.

8 V. CITY agrees to comply with all applicable federal and state third party contracting  
9 laws and regulations, and shall include all laws and regulations in any PROJECTS related  
10 contracts entered into by CITY.

11 W. CITY shall be responsible for the relocation, protection, and construction of all  
12 utilities, including any utilities that are the subject of franchise agreements, necessary for the  
13 construction of PROJECTS.

14 X. CITY shall be responsible for the investigation of potential hazardous material sites  
15 within and outside of PROJECTS limits. If CITY encounters hazardous material or  
16 contamination or protected cultural materials within PROJECTS limits during the said  
17 investigation or in the course construction, CITY shall notify the AUTHORITY and responsible  
18 control agencies of such discovery.

19 Y. CITY shall stop work in any area of PROJECTS where hazardous materials, cultural,  
20 archeological, paleontological, biological, or other protected resources are encountered during  
21 construction of PROJECTS, until a qualified professional evaluates the nature significance of  
22 the find and a plan is approved by both CITY and AUTHORITY for the removal or protection  
23 that contaminant or resource. The cost for any removal or protection shall be covered as  
24 PROJECTS cost.

25 Z. CITY shall develop record of survey, final maps and all necessary title transfers  
26 relative to PROJECTS.

1 AA. CITY shall, upon PROJECTS completion, own constructed work of PROJECTS  
2 and, at its sole cost and expense, maintain the roads and structures at PROJECTS locations  
3 within CITY boundaries.

4 **ARTICLE 4. PAYMENT**

5 A. Funds will be released on a periodic basis based on the project needs as requested  
6 by CITY and approved by AUTHORITY. Such project costs shall not exceed the sum of Fifty  
7 Million and Nine Hundred Eighty Two Thousand Dollars (\$50,982,000) of M2 funds for  
8 Raymond Avenue. CITY invoice shall be submitted in duplicate to AUTHORITY's Account  
9 Payable department, and include the following information:

- 10 a. Agreement Number C-9-0576;  
11 b. The time period covered by the invoice;  
12 c. Progress Report which includes a detailed description of the progress of  
13 PROJECTS;  
14 d. Total invoice amount; and  
15 e. Such other information as requested by AUTHORITY.

16 **ARTICLE 5. DELEGATED AUTHORITY**

17 The actions required to be taken by CITY in the implementation of this Agreement are  
18 delegated to its City Manager, or designee, and the actions required to be taken by  
19 AUTHORITY in the implementation of this Agreement are delegated to AUTHORITY's Chief  
20 Executive Officer or designee.

21 **ARTICLE 6. AUDIT AND INSPECTION**

22 AUTHORITY and CITY shall maintain a complete set of records in accordance with  
23 generally accepted accounting principles. Upon reasonable notice, AUTHORITY and CITY  
24 shall permit each Party's authorized representatives to inspect and audit all work, materials,  
25 payroll, books, accounts, and other data and records of the other Party for a period of four (4)  
26 years after final payment, or until any on-going audit is completed. For purposes of audit, the

1 date of completion of this Agreement shall be the date of AUTHORITY's payment of CITY's  
2 final billing (so noted on the invoice) under this Agreement. Each Party shall have the right to  
3 reproduce any such books, records, and accounts of the other Party relative to PROJECTS.  
4 The above provision with respect to audits shall extend to and/or be included in contracts with  
5 CITY's contractors, including BNSF and its contractors.

6 **ARTICLE 7. INDEMNIFICATION**

7 A. AUTHORITY shall defend, indemnify and hold harmless CITY and CITY's officers,  
8 agents, elected officials and agents, and employees, from all liability, claims, losses and  
9 demands, including defense costs and reasonable attorneys' fees, whether resulting from  
10 court action or otherwise, arising out of the acts or omissions of AUTHORITY, its officers,  
11 agents, or employees, in the performance of this Agreement, excepting acts or omissions  
12 directed by CITY, officers, agents, or employees, acting within the scope of their employment,  
13 for which the CITY agrees to defend and indemnify AUTHORITY in a like manner. This  
14 indemnity shall survive even after the termination of this Agreement.

15 B. CITY shall defend, indemnify and hold harmless AUTHORITY and AUTHORITY's  
16 officers, agents, elected officials and agents, and employees, from all liability, claims, losses  
17 and demands, including defense costs and reasonable attorneys' fees, whether resulting from  
18 court action or otherwise, arising out of the acts or omissions of CITY, officers, agents, or  
19 employees, in the performance of this Agreement, excepting acts or omissions directed by  
20 AUTHORITY, officers, agents, or employees, acting within the scope of their employment, for  
21 which the AUTHORITY agrees to defend and indemnify CITY in a like manner. This indemnity  
22 shall survive even after the termination of this Agreement.

23 **ARTICLE 8. ADDITIONAL PROVISIONS**

24 AUTHORITY and CITY agree to the following mutual responsibilities for PROJECTS:

25 A. CITY will form a Steering Committee (COMMITTEE) that consists of a senior staff  
26 member from the AUTHORITY, BNSF, and other impacted agencies (*Raymond Avenue*

1 *only*). COMMITTEE will provide guidance and input on the following:

- 2 • Major design elements within CITY's jurisdiction.
- 3 • Estimated traffic volumes and traffic management plans and studies.
- 4 • Construction staging and phasing plans, construction detour plans and sequencing,  
5 including sequencing of construction and monitoring contractor's compliance with  
6 the schedule to minimize impacts to CITY.
- 7 • Visual aesthetics and landscaping.
- 8 • Railroad temporary track (shoofly) design.
- 9 • Right of way acquisition and relocation assistance plans.
- 10 • Community involvement and outreach, including business outreach.
- 11 • Responsibilities for relocation or modification of CITY-owned facilities or utilities.

12 The COMMITTEE will serve as a forum to resolve any issues regarding the impact of  
13 PROJECTS construction on CITY facilities, businesses, and residences, including CITY street  
14 closures during construction. The COMMITTEE members will negotiate in good faith to  
15 resolve the issues, allow affected members to express their interests and concerns, and  
16 ensure consistency with CITY standards to reach understanding and agreement on such  
17 issues. COMMITTEE will meet as requested by CITY to review the status of PROJECTS and  
18 discuss and resolve policy issues affecting PROJECTS. COMMITTEE members agree to  
19 participate in COMMITTEE meetings and maintain a good record of attendance.

20 B. If CITY chooses to form an underground utility district for the purpose of removing  
21 overhead facilities within the project limits, CITY and AUTHORITY shall jointly agree on the  
22 incremental increase in the cost of undergrounding that will be the responsibility of CITY. In  
23 addition, if AUTHORITY believes that the formation and execution of an underground program  
24 shall have a significant adverse affect on the overall project schedule and cost, AUTHORITY  
25 shall so notify CITY and the PROJECTS shall proceed without formation of an underground  
26 utility district.

1 C. Project development, implementation and close out shall conform to the provisions  
2 of the Renewed Measure M Regional Capacity Program Manual.

3 D. AUTHORITY and CITY acknowledge that development of PROJECTS is in a  
4 preliminary stage at the time of this Agreement and that costs related to requirements of BNSF  
5 (construction of a railroad shoofly and related work) are unknown and may add significant  
6 costs to PROJECTS.

7 E. This Agreement shall continue in full force and effect through final acceptance of  
8 PROJECTS by AUTHORITY or August 1, 2016, whichever is later. This Agreement may be  
9 extended upon mutual written agreement by both Parties.

10 F. This Agreement may be amended in writing at any time by the mutual consent of  
11 both Parties. No amendment shall have any force or effect unless executed in writing by both  
12 Parties.

13 G. The persons executing this Agreement on behalf of the Parties hereto warrant that  
14 they are duly authorized to execute this Agreement on behalf of said Parties and that, by so  
15 executing this Agreement, the Parties hereto are formally bound to the provisions of this  
16 Agreement.

17 H. All notices hereunder and communications regarding this Agreement, shall be  
18 effected by delivery of said notices in person or by depositing said notices in the U.S. mail,  
19 registered or certified mail, and addressed as follows:

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<p>To CITY:</p> <p>City of Fullerton</p> <p>303 W. Commonwealth Avenue</p> <p>Fullerton, CA 92832-1775</p> <p>Attention: Donald K. Hoppe</p> <p>Director of Engineering</p> <p>714-738-6864</p> <p>e-mail: DonH@ci.fullerton.ca.us</p>	<p>To AUTHORITY:</p> <p>Orange County Transportation Authority</p> <p>P. O. Box 14184</p> <p>Orange, CA 92863-1584</p> <p>Attention: Reem Hashem</p> <p>Principal Contract Administrator</p> <p>714-560-5446</p> <p>e-mail: rhashem@octa.net</p>
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H. The headings of all sections of this Agreement are inserted solely for the convenience of reference and are not part of and not intended to govern, limit or aid in the construction or interpretation of any terms or provision thereof.

I. The provisions of this Agreement shall bind and inure to the benefit of each of the Parties hereto and all successors or assigns of the Parties hereto.

J. If any term, provision, covenant or condition of this Agreement is held to be invalid, void or otherwise unenforceable, to any extent, by any court of competent jurisdiction, the remainder to this Agreement shall not be affected thereby, and each term, provision, covenant or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

K. This Agreement may be executed and delivered in any number of counterparts, each of which, when executed and delivered shall be deemed an original, and all of which together shall constitute the same Agreement. Facsimile signatures will not be permitted.

L. Each Party shall promptly notify the other Party in writing of any legal impediment, change of circumstance, pending litigation, or any other event, occurrence, or condition that may adversely affect such party's ability to carry out and perform any of the duties, services, and/or obligations under the Agreement.

1 M. The terms of this Agreement are intended to confer benefits only on the Parties to  
2 this Agreement and to their successors and/or assigns. No rights of action shall accrue to any  
3 other persons or entities under this Agreement.

4 N. Neither AUTHORITY nor CITY shall delegate or assign its rights or otherwise  
5 transfer its obligations, in whole or in part, under this Agreement to any other person or entity  
6 without the prior written consent of the other Party.

7 O. In addition to any other rights or remedies, either Party may take legal action, in law  
8 or in equity, to cure, correct or remedy any default, to recover damages for any default, to  
9 compel specific performance of this Agreement, to obtain injunctive relief, a declaratory  
10 judgment or any other remedy consistent with the purposes of this Agreement.

11 P. This Agreement shall be governed and construed in accordance with the laws of the  
12 State of California. In the event of any legal action to enforce or interpret this Agreement, the  
13 sole and exclusive venue shall be a court of competent jurisdiction located in Orange County,  
14 California, and the Parties hereto agree to and do hereby submit to the jurisdiction of such  
15 court, notwithstanding Code of Civil Procedure Section 394.

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This Agreement shall be made effective upon execution by both Parties.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement No.C-9-0576 to be executed on the date first above written.

**CITY OF FULLERTON**

**ORANGE COUNTY TRANSPORTATION AUTHORITY**

By: \_\_\_\_\_

By: \_\_\_\_\_

Chris Meyer  
City Manager

Will Kempton  
Chief Executive Officer

**ATTEST:**

**APPROVED AS TO FORM:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Beverley White  
City Clerk

Kennard R. Smart, Jr.  
General Counsel

**APPROVED AS TO FORM:**

**APPROVAL RECOMMENDED:**

By: \_\_\_\_\_

By: \_\_\_\_\_

Richard D. Jones  
City Attorney

Kia Mortazavi  
Executive Director, Development

Dated: \_\_\_\_\_

**ATTACHMENTS**

Exhibit A – Project Location Map – Raymond Avenue Undercrossing

Exhibit B – Project Location Map – State College Boulevard Undercrossing

Exhibit C - Raymond Avenue Funding Schedule

Exhibit D – State College Boulevard Funding Schedule

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Project Location Map  
Raymond Avenue Undercrossing





Project Location Map  
State College Boulevard Undercrossing





**Funding Schedule**

Raymond Avenue

<b>Funding Source</b>	<b>Fiscal Year (FY) Funding Available</b>	<b>Funding Amount</b>	<b>Phase</b>	<b>State and Federal Funds Recipient</b>
TCIF (State) <sup>1</sup>	FY 2012-13	\$12,757,000	Construction	City direct recipient
Renewed Measure M (OCTA)	FY 2009-10 and FY 2012-13	\$50,982,000	Environmental, Design, ROW, and Construction	
<b>Total</b>		<b>\$63,739,000</b>		

1. Construction funding subject to CTC allocation, funds expire 2013

**Funding Schedule**  
State College Boulevard

<b>Funding Source</b>	<b>Fiscal Year (FY) Funding Available</b>	<b>Funding Amount</b>	<b>Phase</b>	<b>State and Federal Funds Recipient</b>
TCIF (State) <sup>1</sup>	FY 2012-13	\$30,731,000	Construction	City direct recipient
RSTP (Federal) <sup>2</sup>	FY 2010-11 and FY 2012-13	\$7,922,000	ROW	City direct recipient
SAFETEA-LU (Federal) <sup>3</sup>	2012-13	\$12,800,000	Construction	City direct recipient
Local (CITY) <sup>4</sup>	FY 2007-08, FY 2010-11, and FY 2012-13	\$10,630,000	Environmental, Design, ROW, and Construction	
<b>Total</b>		<b>\$62,083,000</b>		

1. Construction funding subject to CTC allocation, funds expire 2013
2. Subject to federal appropriations
3. Subject to federal appropriations
4. City funds





**October 19, 2009**

**To:** Highways Committee  
**From:** Will Kempton <sup>WR JML</sup> Chief Executive Officer  
**Subject:** Selection of Firms for On-Call Utility Coordination and Support Services

**Overview**

As part of the Orange County Transportation Authority's Fiscal Year 2009-10 Budget, the Board of Directors approved the procurement of on-call utilities coordination and support services. Proposals were solicited in accordance with the Orange County Transportation Authority's procurement procedures for professional and technical services.

**Recommendation**

Authorize the Chief Executive Officer to execute the following on-call agreements in an aggregate amount not to exceed \$900,000:

- Agreement No. C-9-0453 between the Orange County Transportation Authority and Stantec Consulting, Inc.
- Agreement No. C-9-0750 between the Orange County Transportation Authority and Spec Services
- Agreement No. C-9-0751 between the Orange County Transportation Authority and Utility Specialists California, Inc.
- Agreement No. C-9-0752 between the Orange County Transportation Authority and APA Engineering, Inc.
- Agreement No. C-9-0753 between the Orange County Transportation Authority and Berg & Associates, Inc.

***Discussion***

The Orange County Transportation Authority (Authority) has a need for on-call consultants to perform various utility coordination and support services for highway, transit, and railroad facilities in which the Authority is involved. Services will include research, surveys, evaluation of relocation alternatives, acquisition and relocation assistance, coordination among owners and stakeholders, general project/program management, and other related services as required.

***Procurement Approach***

This procurement was handled in accordance with the Authority's procedures for professional and technical services, and in accordance with both federal and state law. Award is recommended to the firms with the highest qualifications to perform the services, considering factors such as staffing, subcontractor team, prior experience with similar projects, approach to the work, technical expertise in the field, and a fair and reasonable pricing structure.

The awarded contracts will have a three-year initial term with two one-year options. Specific work assignments will be carried out under contract task orders (CTOs). Technical and price proposals will be solicited competitively from the selected on-call firms, and CTOs will be awarded based upon a firm's technical capabilities, understanding of the work assignment, and price.

On July 1, 2009, Request for Proposals (RFP) 9-0453 was released and sent electronically to 1,285 firms registered on CAMM NET. The project was advertised on July 7 and 14, 2009, in a newspaper of general circulation. A pre-proposal conference was held on July 14, 2009, with 36 attendees representing 26 firms. Addendum No. 1 was issued to transmit the pre-proposal conference attendee list. Addendum No. 2 was issued to transmit responses to questions. Addendum No. 3 was issued to clarify and correct the RFP documents.

On August 4, 2009, 19 proposals were received. An evaluation committee consisting of staff from the Authority's Highway Project Delivery, Contracts Administration and Materials Management, Rail Programs, and an external member from the Los Angeles County Metropolitan Transportation Authority's Third Party Administration Department met to review all proposals submitted. The proposals were evaluated based on the following evaluation criteria and weights:

## Selection of Firms for On-Call Utility Coordination and Support Services Page 3

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- Qualifications of Firm 30 percent
- Staffing and Project Organization 30 percent
- Work Plan 20 percent
- Cost/Price 20 percent

The standard 25 percent weighting for each criterion was not used for this procurement. For on-call services, the qualifications of the firm and the staffing and project organization are the most important factors. Therefore, each was weighted at 30 percent. Qualifications of the firm is important because an offeror's corporate past experience in specific types of heavy infrastructure utility coordination and relocation is essential to effective performance of the services. Staffing and project organization is also of significance for the following reasons: (1) key managerial and technical staff need to be very familiar and capable in heavy infrastructure utility coordination and relocation; (2) such staff must be available to perform task orders in a timely and effective manner; and (3) the combination of prime consultant staff and sub-consultants needs to make up a versatile and complete team to perform the full range of on-call services.

The evaluation committee reviewed all proposals based on the evaluation criteria and determined seven firms to be most qualified for the work. The most qualified firms are listed in alphabetical order:

### Firm and Location

APA Engineering, Inc.  
Laguna Hills, California

Berg & Associates, Inc.  
San Pedro, California

Epic Land Solutions, Inc.  
Torrance, California

Spec Services  
Fountain Valley, California

Stantec Consulting, Inc.  
Irvine, California

Utility Specialists California, Inc.  
Lake Forest, California

W. G. Zimmerman Engineering, Inc.  
Seal Beach, California

On September 15, 2009, the evaluation committee interviewed the seven firms. Questions were asked relative to the firms proposed staffing and approach to the scope of work. Based on the combined appraisal of written proposals and the interview, Epic Land Solutions, Inc. and W. G. Zimmerman Engineering, Inc. were determined to be less qualified to perform the services than the other short-listed firms and were not carried forward for recommendation. For the recommended firms, the following assessments were made:

#### Qualifications of Firm

The five recommended firms have the most relevant experience with utility coordination and relocation for heavy infrastructure-type projects, including transit, highway, and railroad projects, particularly grade separations, which is highly advantageous to the work on the program. All firms identified adequate staff resources and logistical capabilities to support on-call services effectively. All firms were responsive to the Underutilized Disadvantaged Business Enterprise requirements.

#### Staffing and Project Organization

Key staff of the five recommended firms has the highest qualifications and experience with heavy infrastructure utility coordination and relocation. The firms have demonstrated experience working with public agencies and understand the requirements for timely work. Prime consultants retain a logical core of the work and are sufficiently knowledgeable in the field to manage the scope of work effectively. The subcontractors strengthen the various teams by bringing specialized skills and knowledge. Interviews with the firms further validated experience.

#### Work Plan

The work plan proposed by the five short-listed firms conformed to the written scope of work identified in the RFP. All five firms presented a sound understanding of the work requirements and demonstrated the ability to perform the various types of services. The firms noted familiarity with the technical issues and discussed potential strategies to mitigate the same.

#### Cost and Price

Pricing scores were assigned based on a formula which assigns the highest weight to the lowest price and weights the other proposal prices based in relation to the lowest price. The recommended firms' blended hourly rates are

considered to be consistent with the market for these services. As these are CTO-based contracts, each CTO will be competed and awarded based on work plan, technical approach and price.

#### Summary

All five firms have the experience with utility coordination and relocation for heavy infrastructure projects, especially grade separations. The firms have assembled teams that are highly qualified and experienced in the relevant field. All firms have shown complete understanding for the requirements of the RFP and are fully capable of supporting the Authority's needs over the next three to five years.

Based on the proposal evaluation and interviews, staff recommends the following five firms, as the highest ranked firms, to provide on-call utility coordination and support services to the Authority: APA Engineering, Inc., Berg & Associates, Inc., Spec Services., Stantec Consulting, Inc., and Utility Specialists California, Inc.

#### Fiscal Impact

The project was approved in the Authority's Fiscal Year 2009-10 Budget, Development Division, accounts 0010-7514-T0001-P4S, 0010-7514-F1110-KQS, 0017-7514-M0201-QDB, 0017-7514-M0201-QDC, and is funded through Measure M and Renewed Measure M funds.

***Attachments***

- A. RFP 9-0453, "On-Call Utility Coordination and Support Services," Review of Proposals, Presented to Highways Committee - October 19, 2009
- B. RFP 9-0453, "On-Call Utility Coordination and Support Services," Proposal Evaluation Criteria Matrix for Shortlisted and Selected Firms
- C. Contract History for the Past Two Years, RFP 9-0453, "On-Call Utility Coordination and Support Services"

**Prepared by:**

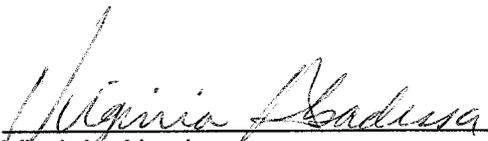


Tom Bogard  
Director, Highway Project Delivery  
(714) 560-5918

**Approved by:**



Kia Mortazavi  
Executive Director, Development  
(714) 560-5741



Virginia Abadessa  
Director, Contracts Administration &  
Materials Management  
(714) 560-5623

RFP 9-0453, "On-Call Utility Coordination and Support Services"  
 REVIEW OF PROPOSALS  
 Presented to Highways Committee - October 19, 2009

19 proposals were received, 7 firms were interviewed, 5 firms were selected

Overall Ranking	Proposal Score	Firm and Location	Sub-Contractors	Evaluation Committee Comments	Blended Hourly Rates
1	81	Stantec Consulting, Inc. Irvine, California	RGI Consulting, Inc. Safe-r-Dig Utility Services, Inc. KDM Meridian	Extensive background in utility coordination and relocation Experience includes highways and rail grade separations Key staff experienced in both wet and dry utilities Very good understanding of scope of work requirements	\$172 Project Management \$139 Technical/Professional
2	81	Spec Services Fountain Valley, California	Southwest Geophysics, Inc. Cal Pacific Land Services, Inc. Underground Solutions, Inc.	Utility experience includes major highway projects Extensive utility coordination with rail grade separations Key staff well qualified Good understanding of scope of work requirements	\$170 Project Management \$133 Technical/Professional
3	80	Utility Specialists California, Inc. Lake Forest, California	RMC, Inc. Overland, Pacific & Cutler, Inc. TDKA Underground Solutions, Inc.	Background in utility coordination and relocation Experience includes highways and railroads Key staff experience is sound Good understanding of scope of work requirements	\$158 Project Management \$141 Technical/Professional
4	79	APA Engineering, Inc. Laguna Hills, California	RGI Consulting, Inc. Safe-r-Dig Utility Services, Inc.	Public agency and heavy infrastructure utility experience Strongest in design and management, less in coordination Staff appropriately experienced with public agencies Very good comprehension of scope of work requirements	\$139 Project Management \$117 Technical/Professional
5	77	Berg & Associates, Inc. San Pedro, California	Spectrum Land Services, Inc.	Heavy infrastructure utility experience includes rail Key staff have good utility heavy infrastructure experience Good comprehension of scope of work requirements	\$150 Project Management \$118 Technical/Professional
6	74	W.G. Zimmerman Engineering, Inc. Seal Beach, California	Coast Surveying Land Consulting and Management Moran Utility Services, Inc. Athayle Consulting Eng. Svcs., Inc. Kantex Industries	Strong experience in traffic engineering Utility experience with municipalities Qualified staff, but heavy reliance on subcontractors Good understanding of scope of work requirements	\$180 Project Management \$115 Technical/Professional
7	71	Epic Land Solutions, Inc. Torrance, California	TKE Engineering Stewart Title Underground Solutions, Inc.	Experienced with utilities in infrastructure Staff stronger with acquisition rights Less experience with in-field utilities Understanding of work scope not always convincing	\$115 Project Management \$63 Technical/Professional

Evaluation Panel	Criteria	Weight Factor
Contract Administration and Materials Management (1)	Qualifications of Firm	30%
Highway Project Delivery (2)	Staffing and Project Organization	30%
Rail Programs (1)	Work Plan	20%
External (1)	Cost and Price	20%



<b>RFP 9-0453, "On-Call Utility Coordination and Support Services"</b>							
<b>Proposal Evaluation Matrix for Shortlisted and Selected Firms</b>							
						<b>Weights</b>	<b>Overall Score</b>
<b>Stantec Consulting, Inc.</b>							
<b>Evaluator Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Qualifications of Firm</b>	4.0	4.0	4.0	4.0	4.5	6	24.6
<b>Staffing and Project Organization</b>	4.5	4.5	4.0	4.0	4.0	6	25.5
<b>Work Plan</b>	4.5	4.5	4.0	4.0	4.0	4	17.0
<b>Cost and Price</b>	3.5	3.5	3.5	3.5	3.5	4	14.0
<b>Overall Score (Max = 100)</b>	83.0	83.0	78.0	78.0	81.0		81
						<b>Weights</b>	<b>Overall Score</b>
<b>Spec Services</b>							
<b>Evaluator Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Qualifications of Firm</b>	4.0	5.0	3.5	4.5	4.0	6	25.2
<b>Staffing and Project Organization</b>	4.0	5.0	4.0	4.5	4.0	6	26.3
<b>Work Plan</b>	3.5	4.5	3.5	3.5	4.0	4	15.0
<b>Cost and Price</b>	3.5	3.5	3.5	3.5	3.5	4	14.0
<b>Overall Score (Max = 100)</b>	76.0	92.0	73.0	82.0	78.0		81
						<b>Weights</b>	<b>Overall Score</b>
<b>Utility Specialists California, Inc.</b>							
<b>Evaluator Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Qualifications of Firm</b>	4.0	4.0	4.0	4.0	4.5	6	24.6
<b>Staffing and Project Organization</b>	4.5	4.0	4.0	3.5	4.0	6	24.0
<b>Work Plan</b>	4.5	4.5	3.5	4.5	4.0	4	17.0
<b>Cost and Price</b>	3.5	3.5	3.5	3.5	3.5	4	14.0
<b>Overall Score (Max = 100)</b>	83.0	80.0	76.0	77.0	81.0		80
						<b>Weights</b>	<b>Overall Score</b>
<b>APA Engineering, Inc.</b>							
<b>Evaluator Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Qualifications of Firm</b>	3.5	4.0	3.5	3.0	3.5	6	21.0
<b>Staffing and Project Organization</b>	4.5	4.5	3.5	3.0	3.5	6	23.3
<b>Work Plan</b>	4.5	4.5	4.0	3.5	4.0	4	16.5
<b>Cost and Price</b>	4.5	4.5	4.5	4.5	4.5	4	18.0
<b>Overall Score (Max = 100)</b>	84.0	87.0	76.0	68.0	76.0		79
						<b>Weights</b>	<b>Overall Score</b>
<b>Berg &amp; Associates, Inc.</b>							
<b>Evaluator Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Qualifications of Firm</b>	4.0	4.0	3.5	3.0	3.0	6	21.0
<b>Staffing and Project Organization</b>	4.0	4.0	3.5	3.5	3.5	6	22.5
<b>Work Plan</b>	4.0	3.5	4.0	3.5	3.5	4	15.0
<b>Cost and Price</b>	4.5	4.5	4.5	4.5	4.5	4	18.0
<b>Overall Score (Max = 100)</b>	82.0	80.0	76.0	71.0	71.0		77
						<b>Weights</b>	<b>Overall Score</b>

<b>RFP 9-0453, "On-Call Utility Coordination and Support Services"</b>							
<b>Proposal Evaluation Matrix for Shortlisted and Selected Firms</b>							
<b>W.G. Zimmerman Engineering, Inc.</b>							
<b>Evaluator Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Qualifications of Firm</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>3.0</b>	<b>3.5</b>	<b>6</b>	<b>22.2</b>
<b>Staffing and Project Organization</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>3.0</b>	<b>3.5</b>	<b>6</b>	<b>22.2</b>
<b>Work Plan</b>	<b>4.0</b>	<b>4.0</b>	<b>4.0</b>	<b>3.0</b>	<b>4.0</b>	<b>4</b>	<b>15.2</b>
<b>Cost and Price</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>3.5</b>	<b>4</b>	<b>14.0</b>
<b>Overall Score (Max = 100)</b>	<b>78.0</b>	<b>78.0</b>	<b>78.0</b>	<b>62.0</b>	<b>72.0</b>		<b>74</b>
						<b>Weights</b>	<b>Overall Score</b>
<b>Epic Land Solutions, Inc.</b>							
<b>Evaluator Number</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>		
<b>Qualifications of Firm</b>	<b>3.0</b>	<b>3.0</b>	<b>3.5</b>	<b>3.0</b>	<b>3.0</b>	<b>6</b>	<b>18.6</b>
<b>Staffing and Project Organization</b>	<b>3.0</b>	<b>3.0</b>	<b>3.5</b>	<b>2.5</b>	<b>3.0</b>	<b>6</b>	<b>18.0</b>
<b>Work Plan</b>	<b>4.0</b>	<b>4.0</b>	<b>3.5</b>	<b>3.0</b>	<b>3.5</b>	<b>4</b>	<b>14.4</b>
<b>Cost and Price</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>5.0</b>	<b>4</b>	<b>20.0</b>
<b>Overall Score (Max = 100)</b>	<b>72.0</b>	<b>72.0</b>	<b>76.0</b>	<b>65.0</b>	<b>70.0</b>		<b>71</b>
						<b>Weights</b>	<b>Overall Score</b>
<b>Range of scores for non-shortlisted firms was 48 to 69</b>							

**CONTRACT HISTORY FOR THE PAST TWO YEARS  
RFP 9-0453 - "On-Call Utility Coordination and Support Services"**

<b>Prime Firm (Alphabetical)</b>	<b>Contract No.</b>	<b>Description</b>	<b>Contract Start Date</b>	<b>Contract Completion Date</b>	<b>Contract Amount</b>
APA Engineering, Inc.	None	No contracts awarded	N/A	N/A	\$0
<b>Sub Total</b>					<b>\$0</b>
Berg & Associates, Inc.	None	No contracts awarded	N/A	N/A	\$0
<b>Sub Total</b>					<b>\$0</b>
Epic Land Solutions, Inc.	C-8-1184	Right-of-way services for railroad grade crossing safety improvements	12/10/2008	11/30/2010	\$50,000
	C-8-1292	Right-of-way services for railroad grade separations (No CTO Issued)	12/22/2008	12/31/2010	\$0
<b>Sub Total</b>					<b>\$50,000</b>
Stantec Consulting, Inc.	C-7-0630	Traffic and revenue forecasting services	5/9/2007	6/30/2010	\$150,000
<b>Sub Total</b>					<b>\$150,000</b>
Spec Services	None	No contracts awarded	N/A	N/A	\$0
<b>Sub Total</b>					<b>\$0</b>
Utility Specialists California, Inc.	None	No contracts awarded	N/A	N/A	\$0
<b>Sub Total</b>					<b>\$0</b>
W.G. Zimmerman Engineering, Inc.	None	No contracts awarded	N/A	N/A	\$0
<b>Sub Total</b>					<b>\$0</b>





**October 19, 2009**

**To:** Highways Committee  
**From:** Will Kempton, <sup>for Will</sup> Chief Executive Officer  
**Subject:** Selection of Firms for On-Call Right-of-Way Services

**Overview**

As part of the Orange County Transportation Authority's Fiscal Year 2009-10 Budget, the Board of Directors approved the procurement of on-call right-of-way services. Proposals were solicited in accordance with the Orange County Transportation Authority's procurement procedures for professional and technical services.

**Recommendation**

Authorize the Chief Executive Officer to execute the following on-call agreements in the aggregate amount not to exceed \$1,000,000:

- Agreement No. C-9-0452 between the Orange County Transportation Authority and Epic Land Solutions, Inc.
- Agreement No. C-9-0747 between the Orange County Transportation Authority and HDR Engineering, Inc.
- Agreement No. C-9-0748 between the Orange County Transportation Authority and Overland, Pacific and Cutler, Inc.
- Agreement No. C-9-0749 between the Orange County Transportation Authority and Paragon Partners Ltd.

**Discussion**

The Orange County Transportation Authority (Authority) has a need for on-call consultants to perform various right-of-way (ROW) services for highway, transit, and railroad facilities in which the Authority is involved. Services will include acquisition and negotiation, including owner contact, informational and

offer letters, preparation of documents, development and maintenance of acquisition schedules, expert witness testimony, relocation assistance, utility relocation assistance, curative construction and repair, appraisals and appraisal reviews, surveys and ROW engineering, and security and management of acquired properties.

### ***Procurement Approach***

This procurement was handled in accordance with the Authority's procedures for professional and technical services, and in accordance with both federal and state law. Award is recommended to the firms with the highest qualifications to perform the services, considering such factors as staffing, subcontractor team, prior experience with similar projects, approach to the work, technical expertise in the field, and competitive pricing.

The awarded contracts will have a three-year initial term with two one-year options. Specific work assignments will be awarded by contract task orders (CTOs). Technical and price proposals will be solicited competitively from the selected on-call firms, and CTOs will be awarded based upon a firm's technical capabilities, understanding of the work assignment, and price.

On June 12, 2009, Request for Proposals (RFP) 9-0452 was released and sent electronically to 661 firms registered on CAMM NET. The project was advertised on June 19 and June 26, 2009, in a newspaper of general circulation. A pre-proposal conference was held on June 23, 2009, with 23 attendees representing 17 firms. Addendum No. 1 was issued to transmit the pre-proposal conference attendee list. Addendum No. 2 was issued to transmit responses to questions, and to clarify or correct the RFP instructions.

On July 14, 2009, 13 proposals were received. An evaluation committee consisting of staff from the Highway Project Delivery Department, Contracts Administration and Materials Management Department, Transit Project Delivery Department, and Project Control Department met to review all proposals submitted. The proposals were evaluated based on the following evaluation criteria and weights:

- Qualifications of Firm 30 percent
- Staffing and Project Organization 30 percent
- Work Plan 20 percent
- Cost/Price 20 percent

## **Selection of Firm for On-Call Right-of-Way Services for Transit and Highway Projects** **Page 3**

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The standard 25 percent weighting for each criterion was not used for this procurement. For on-call services, the qualifications of the firm and the staffing and project organization are the most important factors. Therefore, each was weighted at 30 percent. Qualifications of firm is important because an offeror's corporate experience in a broad range of ROW functions is essential to effective performance of the services. Staffing and project organization is also of significance for the following reasons: (1) key managerial and technical staff need to be very familiar and capable in a broad range of ROW functions; (2) staff must be available to perform CTOs in a timely and effective manner; and (3) the combination of prime consultant staff and subconsultants needs to make up a versatile and complete team that can perform the full range of on-call services.

The evaluation committee reviewed all proposals based on the evaluation criteria and determined four firms to be most qualified for the work. These most qualified firms are listed in alphabetical order as follows:

### Firm and Location

Epic Land Solutions, Inc.  
Torrance, California

HDR Engineering, Inc.  
Irvine, California

Overland, Pacific and Cutler, Inc.  
Irvine, California

Paragon Partners  
Huntington Beach, California

On September 9, 2009, the evaluation committee interviewed the four firms. Questions were asked relative to the firms proposed staffing and approach to the scope of work. Based on the written proposal evaluation and interviews, the following assessments were made:

### Qualifications of Firm

All four firms have substantial and relevant experience in acquisition, relocation, appraisal management, and the other ROW functions described in the scope of work. This experience includes heavy infrastructure transit,

highway and railroad projects with public agencies, including local agencies. All firms have sufficient staff resources and logistical capabilities to support on-call services. All firms were responsive to the Underutilized Disadvantaged Business Enterprise requirements.

#### Staffing and Project Organization

All four firms proposed key staff that are appropriately credentialed and have experience in acquisition, relocation, appraisal management, and the other ROW functions described in the scope of work. Staff is familiar with the requirements of public agencies. Key staff members would be committed to the Authority's work. The prime consultant staff members and respective subcontractors demonstrate versatile and capable teams. Interviews with all firms validated experience and ability to support the Authority on a variety of projects.

#### Work Plan

The work plan proposed by all the short-listed firms conformed to the written scope of work identified in the RFP. All four selected firms presented a sound understanding of the work requirements and demonstrated that they have the ability to perform the various types of services. The firms noted familiarity with the technical issues and discussed potential solutions.

#### Cost and Price

Pricing scores were assigned based on a formula which assigns the highest weight to the lowest price and weights the other proposal prices based on its relation to the lowest price. The recommended firms blended hourly rates are considered consistent with the market for these services. As these are CTO-based contracts, each CTO will be competed and awarded based on work plan, technical approach, and price.

#### Summary

All four firms have the needed experience in acquisition, relocation, and appraisal management, and are capable of addressing the requirements of the RFP. The teams assembled by the firms represents staff that are well qualified and have prior experience with highway and transit projects, and have worked with public agencies. The firms reflect a sound and thorough understanding of the work plan and are capable of supporting the Authority's needs over the next three to five years.

**Fiscal Impact**

The project was approved in the Authority's Fiscal Year 2009-10 Budget, Development Division, accounts 0010-7514-T0001-P4S, 0010-7514-F1110-KQS, 0017-7514-M0201-QDB, 0017-7514-M0201-QDC, and is funded through Measure M and Renewed Measure M funds.

**Summary**

Staff recommends selection of Epic Land Solutions, Inc., HDR Engineering, Inc., Overland, Pacific and Cutler, Inc., and Paragon Partners Ltd. to provide on-call right-of-way services for transit and highway projects in an aggregate amount not to exceed \$1,000,000.

**Attachments**

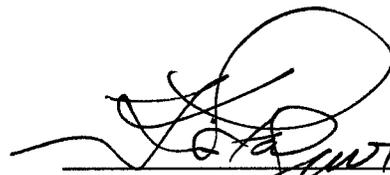
- A. RFP 9-0452 "On-Call Right-of-Way Services for Transit and Highway Projects," Review of Proposals, Presented to Highways Committee – October 19, 2009
- B. RFP 9-0452, "On-Call Right-of-Way Services for Transit and Highway Projects," Proposal Evaluation Criteria Matrix for Shortlisted and Selected Firms
- C. Contract History for the Past Two Years, RFP 9-0452 "On-Call Right-of-Way Services for Transit and Highway Projects"

**Prepared by:**

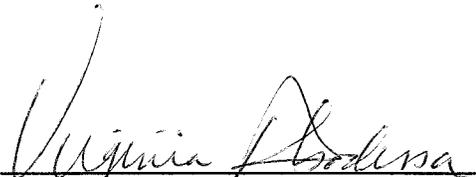
**Approved by:**



Tom Bogard  
Director, Highway Project Delivery  
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Kia Mortazavi  
Executive Director, Development  
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RFP 9-0452, "On-Call Right-of-Way Services for Transit and Highway Projects"  
 REVIEW OF PROPOSALS  
 Presented to Highways Committee - October 19, 2009

13 proposals were received, 4 firms were interviewed, 4 firms were selected

Overall Ranking	Proposal Score	Firm and Location	Sub-Contractors	Evaluation Committee Comments	Blended Rates	Hourly Rates
1	85	Overland, Pacific and Cutler, Inc. Irvine, California	Aztec Engineering Coast Surveying, Inc. Desmond, Marcello & Amster Donahue Appraisal Associates Gates Development Hennessey & Hennessey, LLC J&I Coastal Keith Settle and Company The Kiley Company Leighton Group, Inc. Lidgard and Associates Psomas RBF Consulting SCE Engineering Thomas Land Clearing	Extensive experience in right-of-way field Extensive public agency client list Key personnel very well qualified in field Key personnel familiar with local public agencies Approach to work well thought out Strong understanding of scope of work requirements	Project Management \$132 Technical/Professional \$104	
2	82	Paragon Partners Huntington Beach, California	Del Richardson & Associates, Inc. Desmond, Marcello & Amster, LLC Eco & Associates, Inc. Emac Construction, Inc. Floor Plans Const. & Dev. Inc. GKC Engineering Corporation Hodges, Lacey & Associates, Inc. Lawyers Title Ins. Corporation Lidgard and Associates, Inc. Psomas S.O.S. Security SafeProbe, Inc. Simplex Const. Management, Inc. Stewart Title of California TEC Management Consultants, Inc. Towill, Inc. Von Klug and Associates, Inc.	Extensive experience in right-of-way field Extensive local public agency experience Key personnel highly experienced in field Key personnel experienced in public agencies Approach to work thorough Good understanding of scope of work requirements	Project Management \$223 Technical/Professional \$129	

**RFP 9-0452, "On-Call Right-of-Way Services for Transit and Highway Projects"**  
**REVIEW OF PROPOSALS**  
**Presented to Highways Committee - October 19, 2009**

**13 proposals were received, 4 firms were interviewed, 4 firms were selected**

3	75	Epic Land Solutions, Inc. Torrance, California	<p>AFI Valuation, Inc. Apex Companies Building Analytics Corp. Construction Solutions, Inc. Crockett &amp; Associates Donna Desmond Associates Hodges Lacey &amp; Associates Integra Ellis Group J&amp;G Industries Steward Title TKE Engineering Underground Solutions, Inc.</p>	<p>Experienced in right-of-way field Good local public agency experience Key highly experienced Project Manager has strong transit and railroad experience Good approach to work</p>	<p><b>\$168</b> Project Management <b>\$128</b> Technical/Professional</p>
4	74	HDR Engineering, Inc. Irvine, California	<p>Del Richardson &amp; Associates, Inc. The Bernard Johnson Group, Inc. Kiley Company Riggs &amp; Riggs, Inc. Coast Surveying, Inc. Simplex Const. Management, Inc. Lawyers Title Ins. Corporation</p>	<p>Sufficient experience in right-of-way functions Recent experience includes transit and railroads Well qualified project manager Other key personnel adequately qualified Approach to work well thought out Sound understanding of work requirements</p>	<p><b>\$157</b> Project Management <b>\$113</b> Technical/Professional</p>

Evaluation Panel

- Contract Administration and Materials Management (1)
- Highway Project Delivery (2)
- Project Controls (1)
- Transit Project Delivery (2)

Criteria

- Qualifications of Firm
- Staffing and Project Organization
- Work Plan
- Cost and Price

Weight Factor

- 30%
- 30%
- 20%
- 20%





CONTRACT HISTORY FOR THE PAST TWO YEARS  
RFP 9- 0452 "On-Call Right-of-Way Services for Transit and Highway Projects"

Prime Firm (Alphabetical)	Contract No.	Description	Contract Start Date	Contract Completion Date	Contract Amount
Epic Land Solutions, Inc.	C-8-1184	ROW services for railroad grade crossing safety improvements	12/10/2008	11/30/2010	\$50,000
	C-8-1292	ROW services for railroad grade separations (No CTO issued)	12/22/2008	12/31/2010	\$0
	<b>Sub Total</b>				<b>\$50,000</b>
HDR Engineering, Inc.	C-8-1236	ROW support for Placentia property	10/22/2008	9/30/2009	\$5,000
	C-8-1185	ROW services for railroad grade crossing safety improvements (No CTO issued)	12/5/2008	11/30/2010	\$0
	C-8-1291	ROW services for railroad grade separations (No CTO issued)	1/23/2009	12/31/2010	\$0
	C-8-1088	Geographic Information System-related desktop application, website development, database development, maintenance, and administration	10/28/2008	7/31/2011	\$99,953
	<b>Sub Total</b>				<b>\$104,953</b>
Overland, Pacific and Cutler, Inc.	C-8-0822	ROW services for West County Connector project. (No CTO issued)	10/23/2008	8/31/2010	\$0
	C-8-1096	ROW services for railroad grade separations	12/22/2008	12/31/2010	\$150,000
	C-8-0994	ROW services for railroad grade crossing safety improvements	11/21/2008	11/30/2010	\$1,135,849
<b>Sub Total</b>				<b>\$1,285,849</b>	
Paragon Partners	None	No contracts awarded	N/A	N/A	\$0
<b>Sub Total</b>					<b>\$0</b>





**October 19, 2009**

**To:** Highways Committee  
**From:** Will Kempton, Chief Executive Officer  
**Subject:** Change of Signage on the San Diego Freeway (Interstate 405)

**Overview**

In February 2009, the Board of Directors requested the California Department of Transportation change the destination signage for the southbound San Diego Freeway (Interstate 405) to indicate "Irvine/San Diego." To implement this request, a resolution is presented for Board of Directors' approval. Adoption of this resolution will start the signage change process with the California Department of Transportation, the Federal Highway Administration, and the American Association of State Highway Transportation Officials.

**Recommendation**

Adopt Resolution No. 2009-54 authorizing the Chief Executive Officer to transmit a request to the California Department of Transportation to initiate the process to designate the City of Irvine as a destination for the southbound San Diego Freeway (Interstate 405) and modify the overhead signage to indicate Irvine/San Diego.

**Background**

The San Diego Freeway (Interstate 405) was originally constructed as a bypass of the Santa Ana Freeway (Interstate 5) running along the western areas of the greater Los Angeles area to Irvine. Interstate 405 (I-405) has played a critical role in the development of business and residential centers in Orange County and I-405 traffic volumes are among the highest in the nation with daily weekday volumes exceeding 350,000 vehicles.

Overhead guide signing is provided on freeways to major destinations for long trip orientation. Any given route should have the same destinations or "control cities" to achieve continuity of signing for through traffic. There are circumstances, however, where more than one destination point may be

properly designated. This can occur when two destinations of similar importance, some distance apart, are served by the same route.

The California Department of Transportation (Caltrans) has established standards for guide signs and other traffic control devices through the *California Uniform Traffic Control Devices Manual*. To change a destination sign, the manual states that a major destination, such as Irvine, must be included in the "control cities" list prepared and approved by the American Association of State Highway Transportation Officials (AASHTO). AASHTO is a nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia, and Puerto Rico. Its primary goal is to foster the development, operation, and maintenance of an integrated national transportation system. The control cities list is a policy document that is periodically reviewed and approved by the AASHTO Board of Directors. The Federal Highway Administration (FHWA) must also approve sign installation on the interstate highway system and FHWA relies on AASHTO's recommendation concerning the designation of control cities for destination signing.

### ***Discussion***

Currently, the I-405 is not listed on the AASHTO control cities list since it was considered by FHWA as a bypass of Interstate 5 (I-5)<sup>1</sup>. Irvine is now a major destination given the city's employment opportunities, entertainment and recreation facilities, and academic institutions. As a result, the concept of I-405 as a bypass of the I-5 is outdated and current freeway signage policies need to be updated to reflect this fact.

Both the I-405 and any control cities, such as Irvine, would need to be added to the AASHTO list in order to allow the destination sign change process to proceed. States may submit requests for additions to the list of control cities to the AASHTO for consideration. Recommendations will be presented to the AASHTO Board of Directors for approval. After the final AASHTO approval, and with the concurrence of the FHWA, Caltrans would be notified of the action taken and implementation can then proceed.

Caltrans has identified 12 locations along the I-405 from the vicinity of the Long Beach Freeway (Interstate 710) to Irvine where overhead signs would have to be modified to accommodate the new Irvine/San Diego destination. If the sign modifications are limited to the southbound direction at the 12 locations, the total cost could range between \$240,000 to \$6 million, depending on replacing sign panels only (\$20,000 each) or replacing the sign

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<sup>1</sup> The designated control cities for I-5 in Southern California are: Los Angeles, Santa Ana, and San Diego.

structure to accommodate a larger sign (\$500,000 each). The design/cost issue is further discussed below.

In order to initiate the process for the I-405 overhead signing changes the following Orange County Transportation Authority (OCTA) actions should occur:

- Adopt a resolution supporting the signing changes
- Request the City of Irvine adopt a resolution requesting the signage changes
- Request Caltrans to submit an application to AASHTO and FHWA to approve the City of Irvine as a control city for the I-405 southbound
- Request Caltrans to develop a formal cost estimate for the proposed sign changes

Staff has developed a resolution for Board of Directors' (Board) approval (Attachment A). OCTA staff will also work with the City of Irvine to obtain a similar resolution. Finally, staff will continue to work with Caltrans to formally request AASHTO and FHWA to approve the signage changes, as well as refine costs and identify potential funding to pay for the sign changes once approval is obtained.

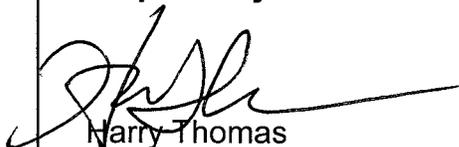
***Summary***

A resolution is presented for Board approval requesting Caltrans initiate the process change to the signage for the southbound I-405 destination to indicate Irvine/San Diego. FHWA and AASHTO approval is necessary to implement the change.

***Attachment***

- A. Resolution 2009-54

**Prepared by:**

  
Harry Thomas  
Project Manager  
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**Approved by:**

  
Kia Mortazavi  
Executive Director, Development  
(714) 560-5741



**RESOLUTION 2009-54**

A Resolution of the Board of Directors of the Orange County Transportation Authority requesting the California Department of Transportation to initiate the process to designate the City of Irvine as a destination for the southbound San Diego Freeway (Interstate 405) in Orange County and modify the overhead signing to indicate "Irvine/San Diego."

**WHEREAS**, the southbound San Diego Freeway (Interstate 405) terminates in the City of Irvine;

**WHEREAS**, there are no control cities designated specifically for the San Diego Freeway (Interstate 405);

**WHEREAS**, the City of Irvine is a major commercial and employment center in the Orange County;

**WHEREAS**, the only designated control cities in the Santa Ana Freeway (Interstate 5)/ San Diego Freeway (Interstate 405) corridor with destination signing in Orange County are Los Angeles, Santa Ana, and San Diego;

**WHEREAS**, control cities on freeway guide signs are selected by the states and are contained in the "List of Control Cities for use in Guide Signs on Interstate Highways," published by the American Association of State Highway Transportation Officials;

**WHEREAS**, the California Department of Transportation must initiate requests to change the list of control cities in California;

**WHEREAS**, requests to change the list of control cities must be approved by the Federal Highway Administration for Interstate Highways;

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Directors of the Orange County Transportation Authority;

1. Supports the request of the City of Irvine to be added as a destination on the overhead guide signs for the southbound San Diego Freeway (Interstate 405) in Orange County.

ADOPTED, SIGNED AND APPROVED this (\_\_\_\_\_) day of (\_\_\_\_\_), 2009.

AYES:

NOES:

ABSENT:

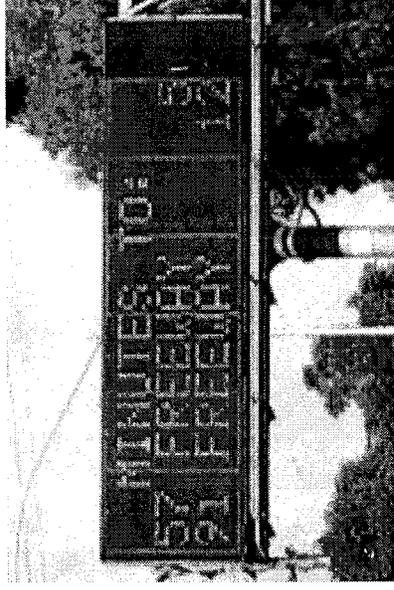
ATTEST:

\_\_\_\_\_  
Wendy Knowles  
Clerk of the Board

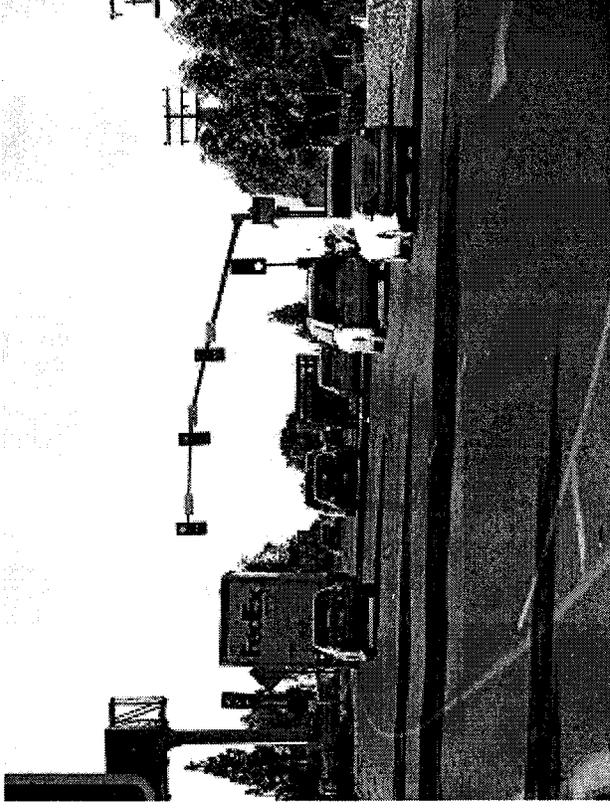
\_\_\_\_\_  
Peter Buffa, Chairman  
Orange County Transportation Authority



# Status Update Advanced Freeway Management Systems



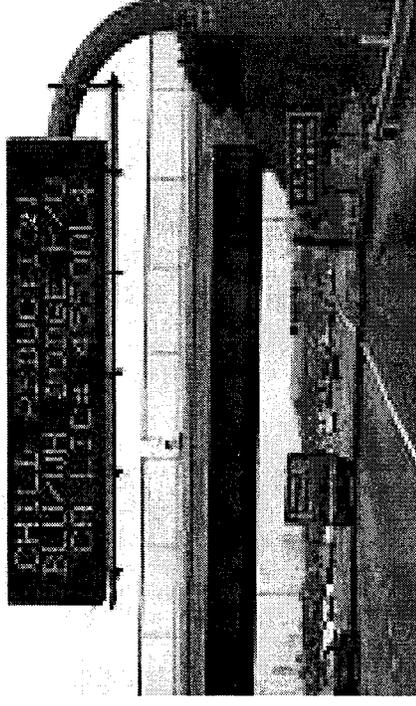
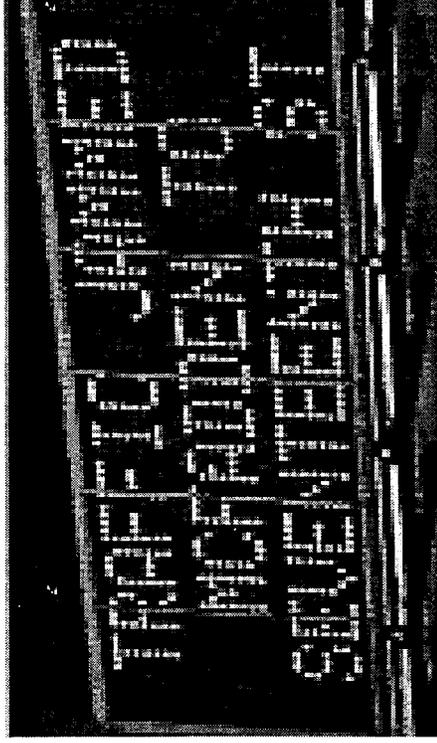
**James Pinheiro**  
**Caltrans District 12**



Orange County Transportation Authority  
Highways Committee  
October 19, 2009

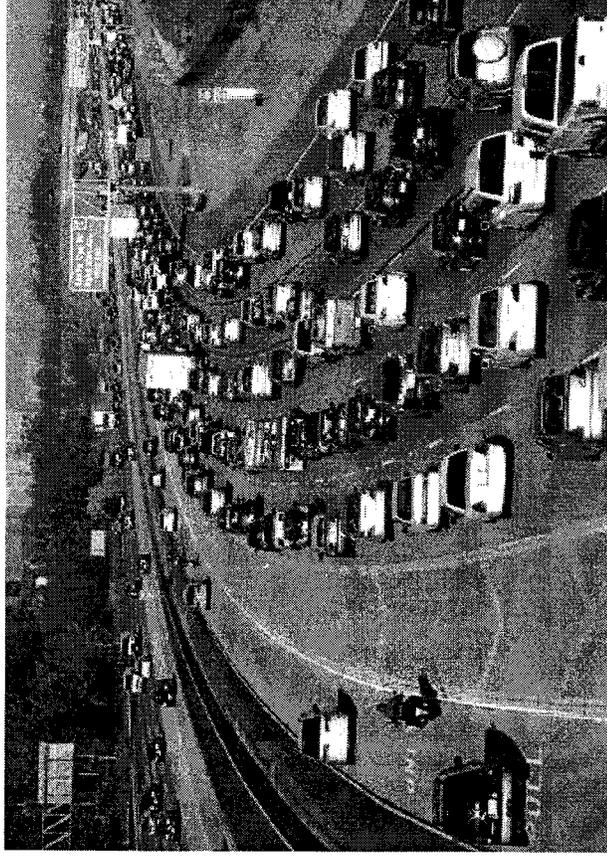
# Operational Objectives

- Improve safety and mobility
- Reduce congestion
- Provide information to motorists
- Share information with stakeholders



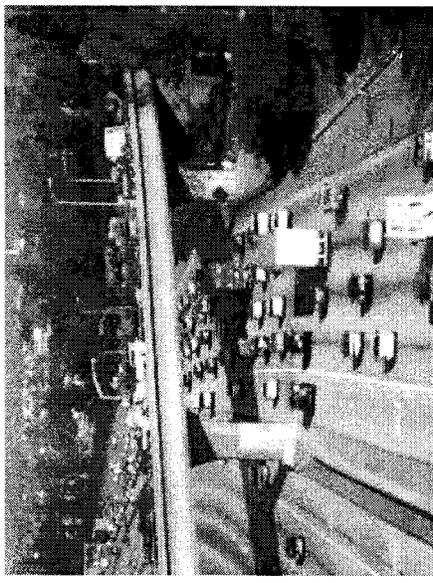
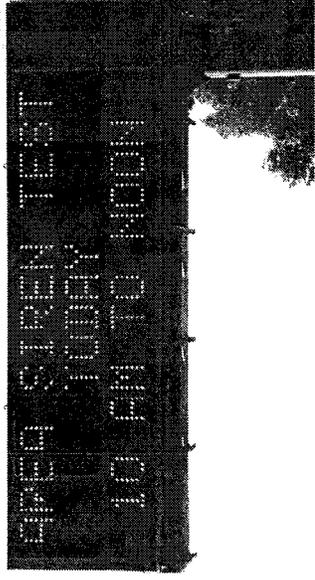
# Challenges of Meeting Objectives

- Congestion
- Growth in travel demand
- Daily delay
- Limited funding



# Utilizing ITS Technologies in Orange County

- Existing



- Near Future Opportunities

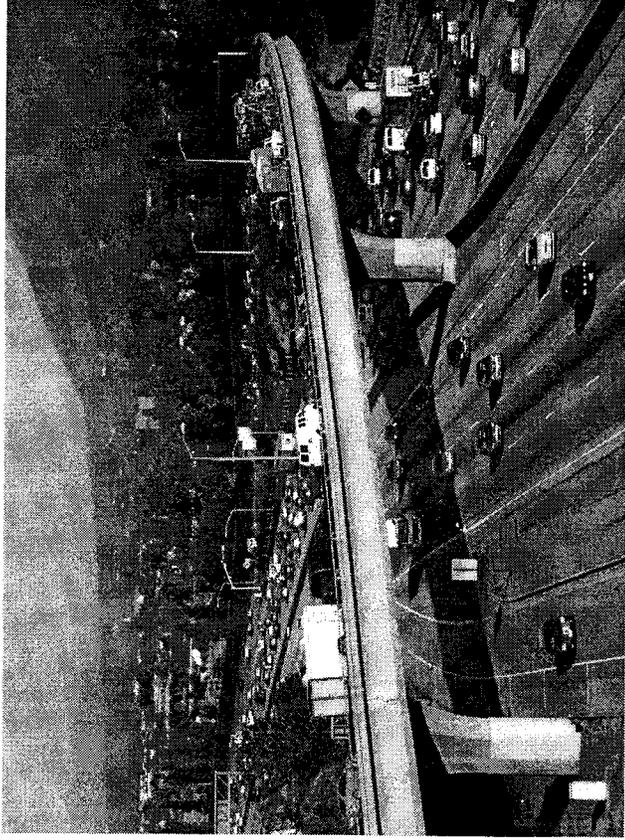


- Far Future Possibilities

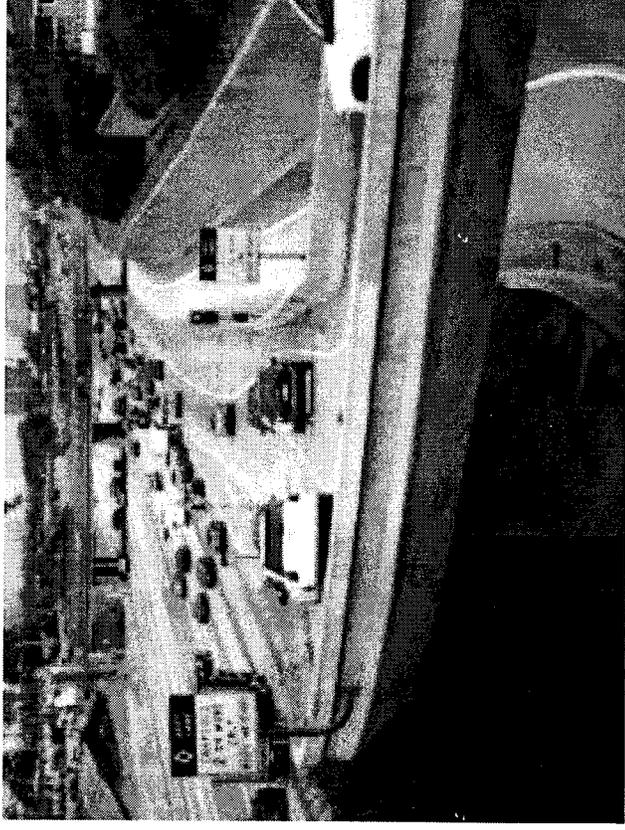
# Recent Testbed Projects

- Rte 210 Congestion Relief Project
- Variable Speed Limits in St Louis, Seattle, Orlando, and Texas

# Congestion Relief Project Rte-210 in LA County



Metered Fwy Connector



Metered On-Ramp HOV

# Project Description

- Implement Localized (Conventional) Metering and Systemwide Adaptive Metering
- Traffic Metered at all Ramps and Freeway Connectors
- Local Metering system Implemented at all On-Ramps and Connectors
- Systemwide Adaptive Metering Program was Used to Set Metering Rates

# Project Findings

- Mainline Traffic Volumes were Increased
- HOV Lane Volumes Stayed Consistent or Slightly Increased
- Duration of Congested Period was Reduced

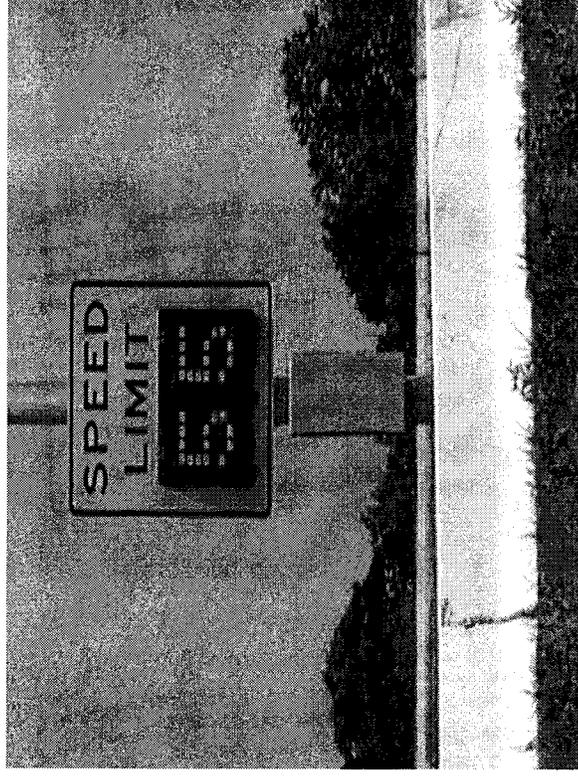
# Project Findings

## Continued

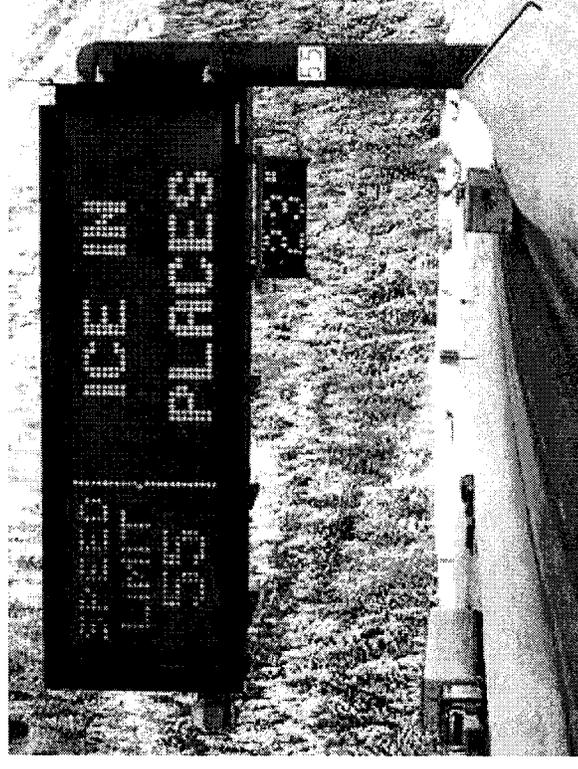
- Corridor Travel Times were Improved
- No Negative Impact on Travel Times for Parallel Arterials
- One Year Later, after Traffic Rebalancing, Traffic Performance Improved.

# Variable Speed Limits

## St. Louis and Seattle



St. Louis, Missouri



Seattle, Washington

# Variable Speed Limit Implementations

- I-270 in Saint Louis, Missouri
  - Traveling public does not support
  - Plan to terminate at end of test period
- I-90 in Seattle, Washington
  - Zero compliance from motorists
  - Difficult to enforce

# Next Steps for Orange County

- In partnership with OCTA, continue to assess the future application of ITS technologies:
  - Select Appropriate Technology
  - Identify Funding Source
  - Identify Appropriate Corridor

# Questions?

