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OCTEC Bazette

Our September Program: WEST COUNTY CONNECTORS

By Dennis Mak, Project Manager with Highway Programs at OCTA
& Ross Lew, Program Manager with Highway Programs at OCTA

Program:



Dennis Mak will present an update on the OCTA West County Connectors project, and Ross Lew will discuss the Transportation Management Plan for the project. The West County Connectors project is a joint partnership between OCTA and Caltrans linking high occupancy vehicle (HOV) lanes/carpool lanes on the San Diego Freeway (I-405) with those on the Garden Grove Freeway (SR-22) and San Gabriel River Freeway (I-605) to create a seamless HOV connection amongst the three freeways.

Project Improvements include:

- Constructing two direct carpool connectors
- Adding a second carpool lane in each direction on the I-405 between SR-22 and I-605
- Reconstructing on- and off-ramps
- Constructing sound walls and retaining walls
- Adding landscaping and enhancing aesthetic elements

Dennis Mak is the Project Manager with Highway Programs at OCTA. Dennis joined OCTA a year ago and is responsible for delivering interstate freeway projects. Currently, he is overseeing the construction phase of the West County Connectors project and the environmental phase of the I-5 central improvements project. Dennis is a graduate of Cal Poly Pomona and has 20 years of project management experience in the public as well as the private sector. He has successfully delivered public works projects in various disciplines including transportation, wastewater, water, and flood control.

Ross Lew is the Program Manager with Highway Programs at OCTA. Ross joined OCTA a year ago and is responsible for overseeing the construction phase of the OC Bridges Grade Separation Program and delivering freeway projects. Ross is a graduate of the University of California, Irvine and has 23 years of management and project delivery experience in the transportation industry. He has been in the lead role on multiple complex projects in various phases of project implementation from planning through construction, working in partnership with many public agencies.

SEPTEMBER MEETING

Join us:

Orange Hill Restaurant
September 26, 2013
11:30 AM – 1:00 PM

6410 East Chapman Avenue
Orange, CA 92869
714/997.2910

Student Members: \$15
Members: \$20
Non-Members: \$25
\$30 at the door without an RSVP for all attendees

Please go to: [https://
octecseptember2013.eventbrite.com/](https://octecseptember2013.eventbrite.com/)

If you have questions, please contact
[Keith Rand](#)

THIS MONTH'S LUNCH IS SPONSORED BY:

LSA

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FROM THE PRESIDENT

Dear OCTEC Members and Friends:

Welcome back to another amazing year of the Orange County Traffic Engineering Council! We are very proud of the momentum and growth that our organization has experienced in recent years. On behalf of the Board of Directors, we are committed to continuing this upward trend and filling the 2013/2014 year with valuable learning and networking opportunities for all of you. A few highlights of the coming year:

INFORMATIVE speakers at eight luncheons, starting with Dennis Mak and Ross Lew from OCTA who will discuss the West County Connectors project.

SOCIAL Mixers – the first of which is right around the corner! (see below) – these events have been well attended and are a great way to relax and spend some quality time with your partners and peers (special thanks to Ed Alegre for initiating, organizing and continuing this new tradition!)

ACTIVITIES! In keeping with old traditions, our joint OCTEC/ITE tournament will be held again in May

GIVING – OCTEC will again provide scholarships to local engineering schools on student night – join us in May to experience the passion and excitement of our industry's next generation.

YOUR INPUT is important! If you haven't already, please take 3 minutes to respond to our [survey](#) – tell us what topics you want to hear about and anything else that's on your mind.

As always, the strength of our great organization comes from your involvement. Thank you for your attendance, interest, sponsorships, and contributions that have continued to keep OCTEC at the apex of professional organizations in our industry.

Sincerely,



Melissa Hewitt, P.E.

President



OCTEC FALL SOCIAL MIXER!

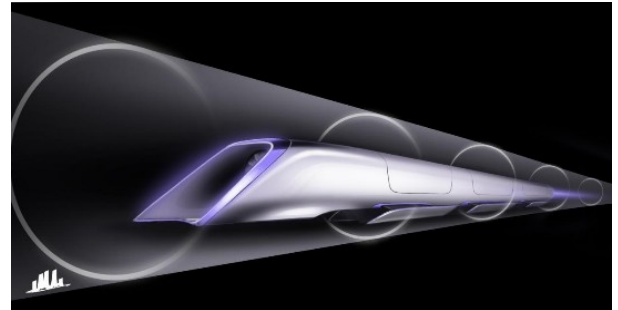
Our first social of the 2013-2014 year will be held at
Dave and Busters at The Block in Orange
on **October 10 from 5:30 PM – 8:30 PM**

Cost is only \$7 with RSVP (link below) or \$10 at the door. Price includes entry, 1 drink, appetizers, 1 raffle ticket and free pool and shuffle board. Bring a potential new member and receive 2 additional raffle tickets. Raffle tickets will also be sold for \$1 each at the door. Special thanks to the sponsors: Econolite, KOA Corporation, FPL and Associates, Inc., and OCTEC. Thanks also to our raffle prize donors: Albert Grover & Associates, Kunzman Associates, W.G. Zimmerman Engineering, and OCTEC. Look forward to seeing you there!

RSVP now for the Social mixer: <https://fall2013social.eventbrite.com>

NEWS...**Elon Musk's Hyperloop**

Chief Executive Officer (CEO) of Telsa Motors (TSLA) and SpaceX, Elon Musk, revealed the details for his new solar-powered, city-to-city elevated transit system that could take passengers and cars from Los Angeles to San Francisco in 30 minutes, the Hyperloop. This design is a result of his disappointment of the approved and on-going "high speed" rail project. For more information, visit <http://www.teslamotors.com/blog/hyperloop>

**Push for Connected Vehicles**

On July 25, 2013, the National Transportation Safety Board (NTSB) recommended that the federal government mandate that all new vehicles come equipped with connected-vehicle technology. Chairwoman Deborah Hersman stated that this "technology, more than anything else, holds the promise to save lives and prevent injuries." For the complete Politico news story visit <http://www.politico.com/story/2013/07/ntsb-transportation-technology-94707.html>

2013 TIGER Grants Announced

U.S. Transportation Secretary Anthony Foxx announced that 52 transportation projects in 37 states will receive a total of approximately \$474 million from the U.S. Department of Transportation's (DOT) Transportation Investment Generating Economic Recovery (TIGER) 2013 discretionary grant program. Among these, 25 projects funded at \$123.4 million will be designated for projects in rural areas of the country. Learn more at <http://www.dot.gov/tiger/>

CALTRANS Proposes 2014-2016 DBE Goals

The California Department of Transportation (Caltrans) is seeking public input for proposed three year Disadvantaged Business Enterprise (DBE) goals for the period covering Federal Fiscal years 2014 through 2016. In the past, Caltrans has used various methods to achieve DBE goals. This includes business outreach to existing DBEs, technical assistance and training, improving the contract process, and data collection, monitoring, and reporting of DBEs. The comment period is currently open. All comments should be emailed to michael.lange@dot.ca.gov or mailed to PO Box 942874 M.S. 39, Sacramento, California 94274-0001. For more information visit <http://orangecountysbdc.blogspot.com/2013/08/caltrans-proposes-2014-2016-dbe-goals.html>

The San Francisco-Oakland Bay Bridge

Though not local news, a noteworthy event this month is the new \$6.4 million eastern span of the Bay Bridge, which opened on Monday, September 2, 2013. The cantilever portion of the bridge was replaced with a new self-anchored suspension bridge and viaduct. Not only is it a piece of art that is currently slowing down traffic during all hours of day (especially in the evenings), it is also engineered to withstand the largest earthquake expected over a 1500 year period and last at least 150 years. For more details visit <http://baybridgeinfo.org/>

Caltrans Policy Directives

Attached at the end of this newsletter are the new Caltrans approved Traffic Operations Policy Directive #13-02, Intersection Control Evaluation (ICE TOPD). Each Caltrans District Office has or will arrange policy roll-out workshops to provide an overview and opportunity for dialogue on the updated intersection control evaluation process. If you have any questions, please contact your District Local Assistance Engineer (DLAE), or Jerry Champa of the HQ Division of Traffic Operations at 916.712.5881.

RANDOM TRANSPORTATION ENGINEERING ITEMS

Washington State Department of Transportation (WSDOT) has their own Avalanche Control System along US 2 Stevens Pass. Per WSDOT's website, the "Old Faithful" avalanche zone just west of the Stevens Pass summit requires the most frequent control. The Stevens Pass crew uses trams and two surplus military tanks (sample below) to fire shells into the top of twelve avalanche paths.



Thank you to those who submitted the following signs and posts from the field or web:



Still searching for a job? Visit the OCTEC website: <http://www.iterisprojects.com/octec/jobs.html>

HAPPENINGS...**2013 VENDOR SHOW AND SOCIAL NIGHT****When: Tuesday – September 24, 2013 @ Mile Square Golf Course**

Time: Social & Vendor Show - 4:00PM till 8:00PM

LA / OC Traffic Signal Association

It's time for our annual TSA Vendor Show and Social Event!

THANKS TO OCTEC FOR SPONSORING THE FOOD!!

Questions? Comments? Contact Dan Eichmann at 714.321.7513 or dan@ddltraffic.com**19TH ANNUAL CONFERENCE AND EXHIBITION**

Sept 30 to Oct 2, 2013 @ San Diego Marriott Mission Valley

“Beyond the Border: How ITS is Leading the Way”Register here or ta the door: <http://www.itscalifornia.org/> Alternately, public sector staff have FREE access to the exhibit hall—come down for the day and learn about the latest in products and services in the industry.Questions? Contact Jane White at 626-300-2020 or jwhite@dpw.lacounty.gov**ACTIVE TRANSPORTATION FORUM****When: Friday, October 18, 2013 @ The University Club (UCI)**Questions? Comments? Contact Michele Martinez at 714-380-4339 or Michele@ochealthalliance.org**HIGH SPEED RAIL CONFERENCE****When: November 5-7, 2013 @ Los Angeles Metro Headquarters****\$6 Billion CA High Speed Rail Phase 1 Moving Forward****US High Speed Rail Association**Register EARLY and SAVE: <http://www.ushsr.com/>Questions? Comments? Contact David Schwegel at 425-466-5677 or DavidMSchwegel@aol.com

This month's newsletter is brought to you by:



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URS is a single-source provider of transportation planning, traffic engineering and intelligent transportation systems services; able to meet the increasingly complex needs of our clients, and successful in anticipating and adapting to changes in the engineering industry.

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213.996.2200

Long Beach
310 Golden Shore
Suite 100
Long Beach, CA 90802
562.308.2300

Ontario
3500 Porsche Way
Suite 300
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909.980.4000

Thank you for making OCTEC a success!

OCTEC would like to give a special thanks to all of our generous 2013/2014 sponsors!

Newsletter Sponsors

Meeting Sponsors

September 26, 2013

Hartzog & Crabill
URS Corporation

October 24, 2013

Albert Grover & Associates
DDL Traffic



November 2013

No meeting, no newsletter

n/a

December 2013

No meeting, no newsletter

n/a

January 23, 2014

Econolite
RBF Consulting A Baker Company



February 27, 2014

ADVANTEC Consulting Engineers
W.G. Zimmerman Engineering



March 27, 2014

FPL and Associates
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April 24, 2014

Iteris, Inc.
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May 9, 2014

OCTEC/ITE Golf Tournament

Sponsorship opportunities available

May 21, 2014

OCTEC/ITE Joint Meeting—Student Night

n/a

June 26, 2014

Kunzman Associates
National Data & Surveying Services



July 2014

No meeting, no newsletter

n/a

August 2014

No meeting, no newsletter

n/a

For more information and sponsorship opportunities, please contact Keith Rand, Sponsorship/Membership Coordinator, (714) 433-7665 keith.rand@urs.com

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Memorandum

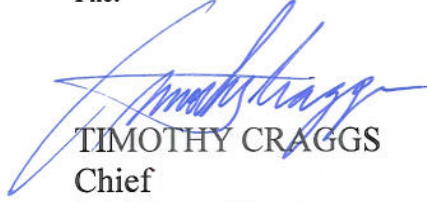
*Flex your power!
Be energy efficient!*

To: DISTRICT DIRECTORS
DEPUTY DISTRICT DIRECTORS
DIVISION CHIEFS

Date: August 23, 2013

File:

From: 
DENNIS T. AGAR
Chief
Division of Traffic Operations


TIMOTHY CRAGGS
Chief
Division of Design

Subject: INTERSECTION CONTROL EVALUATION (ICE) AND DESIGN GUIDANCE

This memorandum adopts interim engineering policy, guidance and process updates, and establishes the ICE Technical Assistance Program to guide and support investment proposals and decisions affecting access to and from State highways, as described below:

- Traffic Operations Policy Directive (TOPD) #13-02 establishes a context and performance-based evaluation process to identify viable and practical access alternatives; produce engineering recommendations on intersection traffic control strategies and geometric configurations for location-specific needs and conditions.
- The TOPD supplements the California MUTCD warrant and engineering study requirements pertaining to the use of traffic signals and multi-way stop control, and adds yield control to the menu of intersection control options.
- Roundabout intersection proposals no longer require Conceptual Approval by the Headquarters Traffic Operations Liaison and Design Coordinator as specified in section 5.1 of Design Information Bulletin (DIB) 80-01 dated October 3, 2003. Step one of the ICE process will constitute Conceptual Approval. In addition, roundabout intersection proposals shall be planned, developed, and evaluated in accordance with the National Cooperative Highway Research Program (NCHRP) Report 672 entitled "Roundabouts: An Informational Guide, 2nd Edition," which superseded the Federal Highway Administration (FHWA) Roundabout Informational Guide published in 2000 and referenced in DIB 80-01. Roundabout proposals are still subject to headquarters approval of all non-conforming geometric and operational features as set forth in section 5.2 of DIB 80-01. A soon to be released Highway Design Manual update will supersede DIB 80-01.
- Single Point Interchanges no longer require the Conceptual Approval of the Headquarters Division Chiefs of Traffic Operation and Design as specified in the memorandum dated June 15, 2001. The screening criteria established in the ICE TOPD will constitute the Conceptual Approval. The Planning, Design, and Operations Guidelines provided in that memorandum are still in effect.

DISTRICT DIRECTOR, et al.

July 1, 2013

Page 2 of 3

The multi-functional ICE Technical Assistance Program will support the evaluation and design of complex and innovative access proposals, especially those involving non-conforming design and operational features. When required or desired, technical assistance may be arranged through the district ICE Coordinator or the responsible-charge engineer may contact the ICE Technical Assistance Program directly. For contact and additional information on the above resources, please visit the Intersection Control Evaluation TOPD website at <<http://onramp/hq/traffops/ICE.html>>.

The above listed updates are effective on August 30, 2013. Traffic Operations Policy Directive #13-02, implementation guidance, and related documents are available at the aforementioned website.

If you have any questions, please contact Jerry Champa, Traffic Engineering Liaison, Division of Traffic Operations, by phone at (916) 712-5881, Kevin Herritt, Chief, Office of Geometric Design Standards, Division of Design, by phone at (916) 653-0253, or your district ICE Coordinator.

- c: Maiser Khaled, Director of National Programs, Federal Highway Administration, California Division
Steve Takigawa, Deputy Director, Maintenance & Operations
Karla Sutliff, Chief Engineer

DISTRICT DIRECTOR, et al.

July 1, 2013

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bc: Division of Traffic Operations Chron File
Dennis T. Agar, Chief, Division of Traffic Operations
Tim Craggs, Chief, Division of Design
Kris Kuhl, Assistant Chief, Division of Traffic Operations
Janice Benton, Acting Assistant Chief, Division of Design
Traffic Operations Office Chiefs
Kevin Herritt, Chief, Office of Geometric Design Standards, Division of Design
Jerry Champa, Traffic Engineering Liaison, Division of Traffic Operations
Design Coordinators

jc/nb


Memorandum

*Flex your power!
Be energy efficient!*

To: DISTRICT DIRECTORS
DEPUTY DISTRICT DIRECTORS, TRAFFIC OPERATIONS
DEPUTY DISTRICT DIRECTORS, DESIGN
DEPUTY DISTRICT DIRECTORS, TRANSPORTATION
PLANNING
DEPUTY DISTRICT DIRECTORS, PROJECT
MANAGEMENT
DIVISION CHIEF, DESIGN
DIVISION CHIEF, PLANNING
DIVISION CHIEF, PROJECT MANAGEMENT
DIVISION CHIEF, LOCAL ASSISTANCE
CHIEF COUNSEL, LEGAL DIVISION

Date: August 30, 2013

File:

From: 
DENNIS T. AGAR
Chief
Division of Traffic Operations

Subject: ICE TOPD IMPLEMENTATION

I am pleased to announce the approval and issuance of Traffic Operations Policy Directive 13-02, Intersection Control Evaluation (ICE TOPD).

Accordingly, all proposals affecting access to/from the state highway system will be evaluated in consideration of the additional access strategies, new analytical tools, and process changes outlined in the TOPD. In particular, Intersection Control Evaluation (ICE) emphasizes the need to consider yield-controlled roundabouts whenever signal or multi-way stop control are contemplated at state highway intersections. ICE also promotes consideration of other proven but under-utilized access strategies, including innovative interchange configurations, such as the diverging diamond or double-crossover interchange.

ICE supports and enhances decision-making during transportation planning, project identification and initiation processes by emphasizing the consideration of life-cycle costs and the unique system performance benefits and impacts of each access alternative. This allows project sponsors and project development teams to consider performance outcomes, future resource expenditures, and the cost-effectiveness of their decisions.

The ICE TOPD is effective as of today, but Districts 7, 8, 9, 11, and 12 may elect to request a postponement of the effective date to October 31st (or sooner) to allow for the completion of implementation activities, including outreach workshops and training. The ICE Technical Assistance Program (including District ICE Coordinators) is available to support implementation.

DISTRICT DIRECTORS, et al.

August 30, 2013

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The TOPD and joint Division transmittal and delegation memorandum can be found on the Division of Traffic Operations intranet homepage. The new ICE web page <<http://onramp.dot.ca.gov/hq/traffops/ice.html>> also provides links to various resources, including the multi-functional and multi-agency ICE Technical Assistance Program.

I'd like to acknowledge and thank the FHWA, the Strategic Highway Safety coalition, the Project Delivery and Transportation Planning Programs, the Executive Board and the Executive Directors of numerous regional transportation agencies for their support and endorsement of the TOPD.

Please share this message with your internal and external partners and encourage their participation in the TOPD outreach workshops that the District ICE Coordinators have been asked to schedule.

If you have any questions, please contact the District ICE Coordinators (see list on ICE web page) or Jerry Champa, HQ Division of Traffic Operations at (916) 712-5881.

DISTRICT DIRECTORS, et al.


August 30, 2013

Page 3 of 3

- c: Karla Sutliff, Deputy Director, Project Delivery
- Steve Takigawa, Deputy Director, Maintenance and Operations
- Maiser Khaled, National Programs/Infrastructure Director, Federal Highway Administration
- Jeff Holm, Traffic Ops/Design Engineer, Federal Highway Administration
- District ICE Coordinators

POLICY DIRECTIVE

TR-0011 (REV 9/2006)

TRAFFIC OPERATIONS POLICY DIRECTIVE	NUMBER: 13-02	PAGE: 1 of 10
DENNIS T. AGAR, Chief Division of Traffic Operations 	DATE ISSUED: August 23, 2013	EFFECTIVE DATE: August 30, 2013
SUBJECT: Intersection Control Evaluation (ICE)	DISTRIBUTION <input checked="" type="checkbox"/> All District Directors <input checked="" type="checkbox"/> All Deputy District Directors - Traffic Operations <input checked="" type="checkbox"/> All Deputy District Directors - Maintenance <input checked="" type="checkbox"/> All Deputy District Directors - Construction <input checked="" type="checkbox"/> All Deputy District Directors - Design <input checked="" type="checkbox"/> All Deputy District Directors - Transportation Planning <input type="checkbox"/> Chief, Division of Engineering Services <input checked="" type="checkbox"/> Chief Counsel, Legal Division <input checked="" type="checkbox"/> Publications (California MUTCD Website) www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/ca_mutcd.htm <input type="checkbox"/> Headquarters Division Chiefs for:	
DOES THIS DIRECTIVE AFFECT OR SUPERSEDE ANOTHER DOCUMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, DESCRIBE: Design Information Bulletin 80-01 and California MUTCD	
WILL THIS DIRECTIVE BE INCORPORATED IN THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	IF YES, DESCRIBE: After formal evaluation (within 3 years)	

DIRECTIVE

This directive updates the evaluation procedures used to:

- Justify the installation of traffic signal systems, yield-control (roundabouts), and multi-way stop control at state highway intersections and interchanges.
- Identify effective intersection traffic control strategies and alternative treatments, strategies and configurations for particular conditions.
- Estimate the relative effectiveness, impacts and utility of specific control strategies.

The engineer must evaluate impacts to all intersection traffic. In order to identify the most effective and comprehensive access alternatives, the engineer must consider various strategies, treatments, configurations and countermeasures. The fundamental objective is to balance the needs of all modes and users with system performance goals and the highway facility context.

POLICY DIRECTIVE

The need for, use of, and form of intersection traffic control shall be, as follows:

- Determined in consideration of the technical findings and recommendations generated by the evaluation procedures and engineering studies required or referenced by this directive.
- Determined in consideration of project development process input, and the technical advice provided through consultations with the District ICE Coordinator, District functional unit personnel, and ICE Technical Assistance Program (TAP) personnel. The RESOURCES section and Appendix B provide information on the roles of the District ICE Coordinator and ICE TAP.
- Approved or concurred in writing by the District Traffic Operations functional manager responsible for operating and managing the performance of specific State highway segments, corridors and intersections.

Appendix A illustrates the intersection traffic control evaluation (ICE) framework, process steps, activities and outcomes that will guide and support performance-based engineering and investment decisions. Appendix A also outlines the general sequence of evaluation activities and how they are integral to the broader transportation planning, project identification and project development processes.

IMPLEMENTATION

This directive shall be applied to access-related investment proposals initiated after the effective date, unless the sponsor of an ongoing project elects to apply some or all of the updated evaluation process to their project.

The procedural and engineering study requirements, recommendations, guidance and references specified in this directive apply to all processes that identify or propose highway infrastructure investment proposals. These include, but are not limited to:

- Local community planning.
- Local development review.
- State highway corridor planning.
- The traffic investigation function.
- Project initiation processes.

This directive applies to:

- Encroachment permit proposals to construct new, or expand existing intersections.
- Project identification and initiation efforts proposing:
 - a. New highway facilities.
 - b. New intersections and interchanges on existing highways.
 - c. Existing intersection and interchange capacity expansion.
 - d. New or expanded access to mitigate traffic impacts generated by development.
- Traffic signal, multi-way stop control, and yield-controlled roundabout proposals.
- Expansion or modification proposals for existing signalized intersections, roundabouts and traffic circles.

KEY PROCESS CHANGES AND REQUIREMENTS

1. Proposals to employ full control at state highway intersections (i.e. to control all approaching traffic via use of signal, stop or yield control) must consider all three intersection control strategies and the supporting design configurations during the ICE screening process.
2. Engineering recommendations must consider the safety performance characteristics of intersection control strategies, and safety performance analysis findings for specific proposals.
3. The districts are authorized to implement yield-controlled roundabouts and single point interchanges as specified herein.

EVALUATION AND STUDY PROCEDURES

As illustrated in Appendix A, a two-step evaluation process supports the timely and efficient selection of intersection traffic control strategies and access configurations for particular intersections.

STEP ONE: Access Strategy and Configuration Assessment/Screening

The objective of Step One evaluation activities is to identify access solution concepts meriting further consideration. This approach focuses the expenditure of engineering resources on access strategies and configurations that should meet the transportation purpose and need consistent with system performance goals, the project context (including the needs and values of local communities), and financial constraints.

The assessment effort should produce a concept-level understanding of the highway infrastructure work needed for each intersection control strategy meeting the aforementioned screening objectives. This normally requires a planning-level capacity analysis to identify the preliminary size or footprint of the intersection. The footprint is usually based on the number and length of the approach lanes for a specific control strategy during the project design period or service life. The preliminary footprint evaluation determines if specific strategies are context-appropriate and practical to implement.

The assessment effort should rely upon the following:

- Consultation with project sponsor to understand the purpose and need for an access-related investment proposal.
- List of Access Strategies and Configurations presented in the ICE Process Informational Guide.
- General or planning-level traffic analysis.
- Application of the screening criteria presented in the ICE Process Informational Guide.
- Technical knowledge of intersection traffic control performance characteristics and applications.
- Engineering judgment based on knowledge and experience gained from the operation of state highway intersections.
- Technical consultations with and recommended by the District ICE Coordinator.

The technical findings and recommendations generated by assessment/screening activities shall be documented as outlined in the ICE Process Informational Guide. Recommendations should also be incorporated into the appropriate engineering documents (e.g., plans and/or reports).

STEP TWO: Engineering Analysis

The evaluation of access alternatives continues during the appropriate project development process phase (e.g. Project Approval and Environmental Document).

Step Two evaluation activities include, but are not limited to:

- Intersection traffic control warrant studies (if required pursuant to the CA MUTCD, and not performed during Step One).
- Project alternative capacity, operational and safety analysis.
- Design performance checks focused on accommodating the design vehicle, pedestrians and bicyclists.
- Economic analysis based on project cost estimates, including life-cycle cost considerations.
- Consultations with and recommended by the District ICE Coordinator, functional unit personnel, and ICE Technical Assistance Program (TAP) personnel.

The result of Step Two activities is an engineering estimate and comparison of the system performance impacts, benefits, and costs expected over the design or service life of each control strategy and the No Build or Control scenario. Traffic analysis will produce performance impacts and benefits estimates related to:

- Intersection control delay and/or highway segment travel time.
- Collision frequency and severity.

Prior to completing Step 2, the District ICE Coordinator and/or designated functional unit and ICE TAP personnel shall be consulted to evaluate:

- Complex, non-standard, or non-conforming features to identify potentially significant performance impacts that cannot be avoided or mitigated.
- Preliminary plan alternatives to ensure that critical design features and traffic elements are included, and that performance analysis findings reflect omitted or non-conforming features.
- Step Two recommendations and findings to ensure that decision-makers are advised of potential risks, performance deficiencies, mitigation strategies, and improvement concepts needed beyond the service life of specific alternatives.

The technical findings and recommendations generated by Step Two evaluation activities shall be documented as recommended in the ICE Process Information Guide. Recommendations should be incorporated into the appropriate engineering documents (e.g. reports and preliminary plan drawings).

Preliminary and/or intermediate consultations are encouraged for complex, innovative or non-conforming proposals to minimize the potential for significant or unexpected findings just prior to completing a project development phase or milestone.

POLICY DIRECTIVE

In some cases, a traffic sensitivity analysis may be required to estimate the service life of investment proposals that meet the project purpose and need, but do not require a 20-year design life. These include operational, safety and traffic impact mitigation proposals regardless of funding source. A service life estimate for each strategy is needed to facilitate life-cycle analyses to inform decision-makers of:

- Performance benefits.
- The ratio of benefits versus costs for the estimated service life.
- Costs associated with the safety and operational performance expected at and beyond the service life.
- The future improvement concept needed to extend the service life.

DELEGATION

The authority to recommend the use of the single point interchange and yield-controlled roundabouts for particular intersections and interchanges is hereby delegated from the HQ Traffic Operations Liaison Engineers to the District Traffic Operations engineers responsible for the operation and performance of specific state highways and intersections. This transfer of authority is conditioned upon compliance with the engineering study, consultation and documentation requirements contained in and referenced by this directive.

The HQ Conceptual Approval process for roundabouts is hereby replaced by the procedural requirements of this directive. In particular, the assessment/screening process (ICE Step One) will identify access strategies and configurations that are both viable and practical to implement, subject to further technical studies.

For additional information on roles and responsibilities, see Appendix B and/or contact the HQ Traffic Liaisons or District ICE Coordinators.

BACKGROUND

This directive establishes an integrated, systematic and performance-based approach to engineering and investment decisions affecting state highway intersections and interchanges, primarily through the consideration and evaluation of the following:

- Alternative intersection control practices, access configurations and management strategies.
- The context of the proposed project and highway facility, including the operating speed and speed differential among highway system users.
- The needs of drivers, pedestrians, bicyclists and commercial vehicle operators, including those with disabilities.
- The costs and cost savings related to project implementation, estimated system performance benefits and impacts, and life-cycle economic analysis.

All intersections and service interchanges are operated under some form of stop, signal or yield control.

POLICY DIRECTIVE

Intersection investment decisions will be guided and supported by:

- Life-cycle cost analysis supporting highway infrastructure investment decisions (project development, capital, and maintenance and operations costs).
- Performance analysis tools capable of determining the viability and relative effectiveness of intersection traffic control and management strategies.
- Comparative analysis among viable intersection control strategies

Current traffic control policy requires warrant and engineering studies to justify the control of major through traffic movements at particular locations. The California Manual of Uniform Traffic Control Devices (CA MUTCD) emphasizes consideration of less restrictive measures or strategies before recommending the installation of a traffic signal system.

The decision to control or regulate the flow of through traffic movements:

- Requires initial and ongoing investments for the implementation, maintenance and operation of an intersection control device or system.
- Directly affects operational and safety performance in terms of changes to the level of intersection control delay, travel time, and collision frequency and severity.

Since multiple traffic control, management strategies and configurations may be appropriate for prevailing and/or expected traffic demands and operating conditions at particular locations, it is important to estimate the performance impacts and benefits for each strategy. These estimates should reflect the expected increase or reduction in control delay, travel time and collisions. These findings provide decision-makers with the expected return on investment or cost-effectiveness of each alternative strategy.

RESOURCES

Links to technical publications and websites containing technical and informational guidance, training material, and contact information for District ICE Coordinators and the ICE Technical Assistance Program can be found at the Intersection Control Evaluation (ICE) TOPD website, at <<http://onramp/hq/traffops/ICE.html>>.

DEFINITIONS:

When used in this Traffic Operations Policy Directive, the intent of the text is defined as follows:

- 1.) Procedural Requirement – a statement of required action. The text for all procedural requirements are indicated by the word “must” or “shall” and are enclosed within a box.

Example of a procedural requirement.

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- 2.) **Standard** – a statement of required, mandatory, or specifically prohibited practice. All standards text appears in **bold** type. The verb “**shall**” is typically used. Standards are sometimes modified by Options.
- 3.) Guidance – a statement of recommended, but not mandatory practice or procedure in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements text appears in underline type. The verb “should” is typically used. Guidance statements are sometimes modified by Options.
- 4.) **Option** – a statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a Standard or Guidance. All Option statements text appears in normal type. The verb “**may**” is typically used.
- 5.) **Support** – an informational statement that does not convey any degree of mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements text appears in normal type. The verbs “**shall**,” “**should**,” and “**may**” are not used in Support statements.

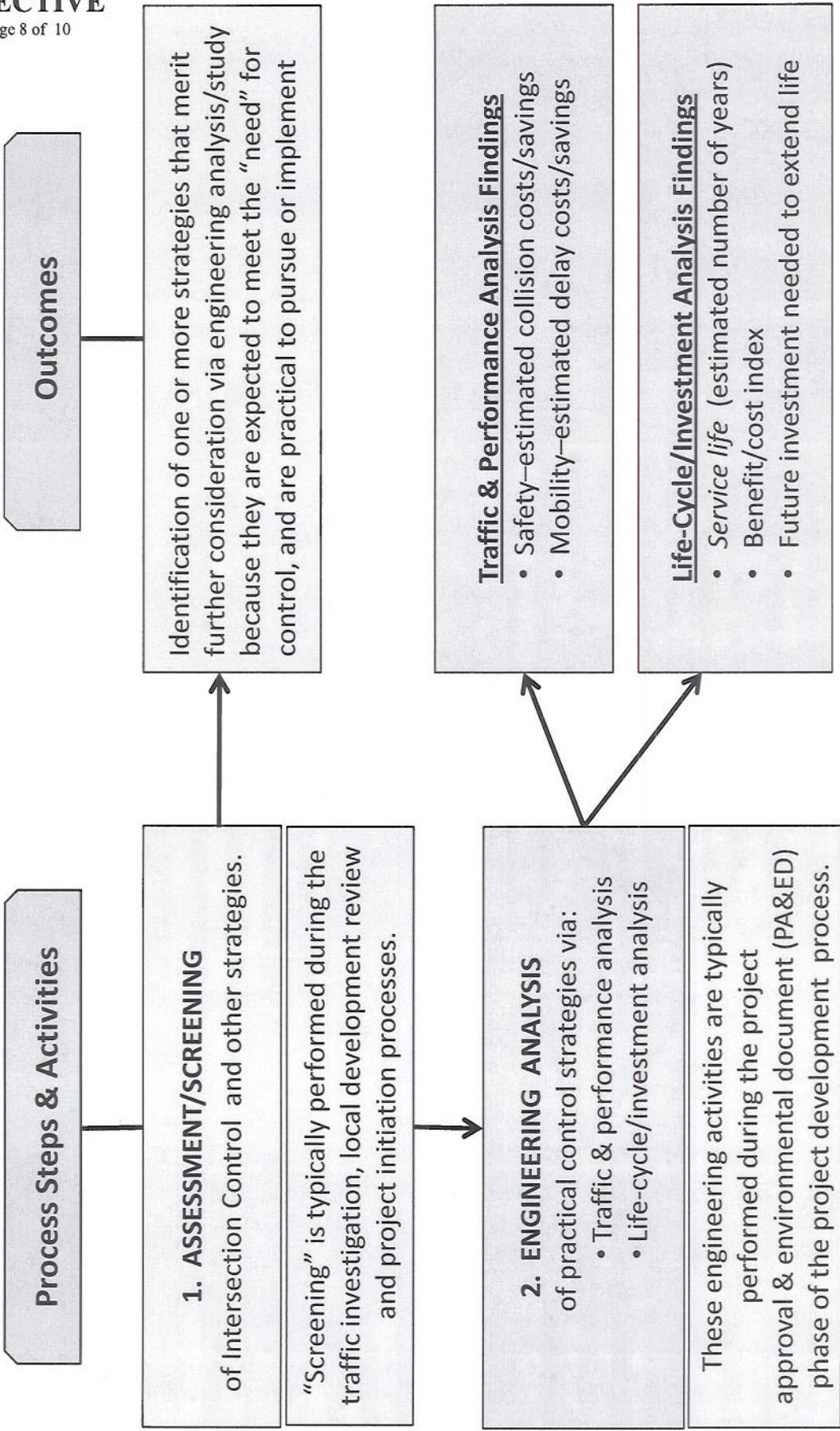
ATTACHMENTS:

Appendix A – Diagram of ICE Process Steps, Activities, and Outcomes

Appendix B – Roles and Responsibilities for Implementation of the ICE TOPD

POLICY DIRECTIVE

Appendix A: ICE Process Steps, Activities & Outcomes



APPENDIX B –Responsibilities for Implementation of the ICE TOPD

In general, the Division of Traffic Operations is responsible for operating the State Highway System, including intersections and interchanges. Therefore, intersection control evaluation procedures and engineering study for particular locations must be performed, coordinated and/or reviewed under the direction of the appropriate District Traffic Operations functional manager. These are usually the engineering managers who are responsible for the traffic investigation function; and, the performance of signal and multi-way stop control warrant analysis, and other intersection-related traffic studies.

When triggered by, and performed during the project planning process (that is, project initiation and/or project approval), the completion of ICE process steps and activities should be coordinated by the responsible-charge project engineer or manager.

A summary of the findings and recommendations from ICE process steps should be prepared by, or reviewed and concurred by the appropriate Division of Traffic Operations engineer. Other documentation (including calculation worksheets) should be incorporated into the project's Traffic Analysis Report. See the ICE Process Informational Guide for a sample template and information on how to present the summary of technical findings and recommendations.

The consistent and efficient implementation of this directive will be facilitated by the following individuals, activities, and services, as follows:

1. Each district will designate a Traffic Operations functional manager or engineering specialist to serve as the single point-of-contact and general resource to District, HQ, and external personnel who are responsible for implementing and supporting ICE and related activities. These District ICE Coordinators will perform and/or ensure that the following roles and services are provided upon request:
 - Resources—individuals who provide general information, guidance, and referrals on procedural and engineering study requirements.
 - Internal Consultants—individuals capable of providing technical recommendations and/or referrals to the appropriate functional managers and ICE Technical Assistance Program specialists on specific proposals and requests; see below for additional information.
 - Liaisons with HQ on various implementation, training, and policy evaluation activities.

The districts may designate various personnel to support and/or perform the above roles and services.

2. The HQ Divisions of Traffic Operations and Design will establish, maintain and manage an ICE TAP to perform the following services:

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- Provide, collect, and transfer technical information, knowledge and expertise on intersection traffic control strategies and access configurations as well as the application of ICE process steps, activities, and analytical tools to location-specific investment proposals.
- Support the evaluation of complex, non-conforming and innovative proposals through consultation and/or peer review by appropriately qualified personnel from around the state and nation (in collaboration with the Federal Highway Administration Peer-to-Peer Program for Intersections and/or Resource Center specialists).

The TAP manager(s) will schedule monthly meetings with the District ICE Coordinators to identify, discuss, and pursue process adjustments and technical training to address implementation issues and challenges.

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 653-3657 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS89, Sacramento, CA 95814.

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This year's show will start at 4:00PM and end with the gala prize raffle starting at about 7:00PM.
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When: Tuesday – Sept 24th, 2013

**Where: Mile Square Golf Course
10401 Warner Ave
Fountain Valley, Ca 92708
PH # 714-962-5541**

Time: Social & Vendor Show - 4:00PM till 8:00PM

Questions? Comments?

Contact Dan Eichmann at 714.321.7513

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Complete Streets and Active Living for Orange County!



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The University Club, University of California, Irvine

The forum aims to make connections between elected officials, planners, traffic engineers, bicycle and pedestrian advocates, non-profit organizations and health care leaders interested to identify challenges and opportunities, share best practices and develop priorities for Active Transportation as a region.

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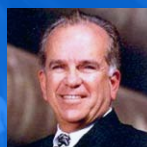
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CA HSR Authority



Malcolm Dougherty
California DOT



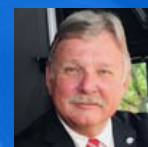
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