



Memorandum
March 13, 2014

To: Rongsheng Luo, Program Manager of Air Quality and Conformity
Southern California Association of Governments

for
From: Grace Alvarez, Planning and Programming Manager
Riverside County Transportation Commission (RCTC)

RE: Clarification for Stand-Alone HOV Metered Ramps

Eight Riverside County carry-over interchange improvements in the proposed 2015 FTIP plan to implement stand alone HOV preferential metered ramps; however, there is no mainline HOV connectivity to the system. While RCTC realizes that HOV preferential metered ramps are elements of the TCM type projects, a stand-alone HOV preferential metered ramp ranging from 950' to 2,500' would not carry enough HOV traffic to be visible in the model nor change the traffic on either end in the model. The emission reduction benefits from the HOV preferential metered ramps would most likely be minimal, if any. If the HOV preferential metered ramp was to have HOV connectivity to the mainline, I would strongly agree that the project is a TCM with quantifiable air quality emission benefits.

It is also important to note that ramp meters are a requirement of Caltrans. According to the most recent Caltrans Ramp Metering Development Plan, District 8 (covering Riverside and San Bernardino counties) has 228 existing ramp meters and 213 planned ramp meters for a projected total of 441 ramp meters for the ten-year period covered by the Ramp Metering Development Plan (RMDP). Based on the state of congestion, ramp meters are placed at locations that mitigate congestion issues in the urban network. Ramp meters are also added to all new and reconstructed interchanges even in locations that are not yet urbanized.

RCTC is requesting clarification from the Transportation Conformity Working Group as whether these stand alone HOV metered ramps should be considered non-exempt projects and/or non-reportable Transportation Control Measures.

Enclosure: 1) 2015 FTIP Interchange Improvements with Stand-Alone HOV Preferential Ramps
2) Excerpt from the 2015 FTIP Guidelines for TCM Project Categories for the SCAB and SCCAB
3) District 8 RMDP

RCTC - 2015 FTIP UPDATE - INTERCHANGE IMPROVEMENTS WITH STAND ALONE HOV RAMP PREFERENTIAL

FTIP ID	AGENCY	LOCATION	CURRENT CONST COST	STATUS	HOV on Mainline
RIV011232	RIVERSIDE CO	AT I-215/SCOTT RD IC: RECONSTRUCT/WIDEN FROM 2 TO 6 THROUGH LANES BTWN E/O ANTELOPE RD & HAUN RD. RECONSTRUCT/WIDEN RAMPS - NB EXIT 2 TO 3 LNS, NB ENTRY 1 TO 3 LNS, SB EXIT 2 TO 4 LNS, SB ENTRY 1 TO 2 LNS, ADD NB EXIT LOOP RAMP (2 LNS) & SB ENTRY RAMP (3 LNS), ENTRY RAMPS INCLUDE HOV LN, RAMPS INCLUDE EXTENDED ACCELERATION/DECELERATION LNS, ADD EXTENDED RIGHT-TURN LNS (EA: 0A020)	\$ 39,000,000	PS&E/RW Acquisition	No
RIV050534	RIVERSIDE CO	AT I-215/NEWPORT RD IC: RECONSTRUCT/WIDEN FROM 4 TO 6 THROUGH LANES BETWEEN HAUN RD AND ANTELOPE RD, RELOCATE NB AND SB EXIT RAMPS (3 LANES), RECONFIGURE NB & SB ENTRY RAMPS TO INCLUDE HOV LANE, ADD NEW NB AND SB LOOP ENTRY RAMPS (2 LANES), INCLUDE EXTENDED RAMP ACCELERATION/DECELERATION LANES, ADD EXTENDED DEDICATED RIGHT-TURN LANES (EA: 0J440)	\$ 32,500,000	CONS IN FY 14/15	No
RIV050533	MORENO VALLEY	AT I-215/CACTUS AVE IC: WIDEN IC FROM 3 TO 6 THRU LNS (EB FROM 2 TO 3 BTWN W/O BNSF RR TO 1300' E/O VETERANS WAY, ADD 4TH EB LANE FROM NB EXIT RAMP TO E/O ELSWORTH ST, WIDEN WB FROM 1&2 TO 3 THRU LNS FROM COMMERCE CENTER DR TO BNSF RR), WIDEN RAMPS 1 TO 2&3 LNS (ENTRY RAMPS INCL HOV), EXTEND NB AUX LN BTWN ALESSANDRO BLVD SOUTH TO CACTUS AVE NB ENTRY LOOP RAMP & ADD DEDICATED RT-TURN LNS (EA0E760)	\$ 47,300,000	PA&ED	No
RIV080903	MORENO VALLEY	AT SR-60/GILMAN SPRINGS RD IC - REALIGN GILMAN SPRINGS RD/REMOVE EXISTING EB/WB RAMPS; WIDEN OC FROM 2 TO 6 THRU LANES; WB EXIT IS 1 LANE WIDENING TO 2 LANES THEN TO 3 LANES AT ARTERIAL, WB LOOP & EB ENTRY RAMPS FROM 1 LANE TO 2 LANES W/ HOV; WIDEN EB EXIT RAMPS FROM 1 LANE TO 2 LANES AT EXIT AND 3 LANES AT ARTERIAL; ADD AUX LANES TO WEST OF IC 1200' EB AND 2200' WB	\$ 49,000,000	No project activity - PA&ED starts in 2016	No
RIV080904	MORENO VALLEY	AT SR-60/THEODORE ST IC: WIDEN OC FROM 2 TO 6 THRU LANES; WIDEN WB EXIT/ENTRY RAMPS FROM 1 LN TO 2 LNS AT EXIT/ENTRY, 3 LNS AT ART. W/ HOV AT ENTRY; WIDEN EB EXIT RAMP FROM 1 LN TO 2 LNS AT EXIT AND 3 LNS AT ART.; WIDEN EB ENTRY RAMP FROM 1 LN TO 2 LNS W/HOV; ADD EB LOOP ENTRY WITH 2 LNS AT ART. AND 1 LN AT ENTRY; ADD AUX LNS 1700' EACH DIR WEST OF IC & 1200' EB AND 2200' WB EAST OF IC -RTP 3M0801	\$ 40,000,000	PA&ED	No

ON I-10/SINGLETON RD IC: RECONSTRUCT/WIDEN 2 TO 4 THROUGH LANES (WOODHOUSE TO CALIMESA BLVD), RECONSTRUCT/WIDEN RAMPS - EB ENTRY 1 TO 2 LNS W/ HOV PREFERENTIAL LN, WB EXIT 1 TO 3 LNS, ADD EB EXIT RAMP (3 LNS), WB ENTRY RAMP (2 LNS W/ HOV PREFERENTIAL LN), INCLUDE EXTENDED RAMP ACCEL/DECEL LNS, RELOCATE CALIMESA BLVD/SINGLETON RD INTERSECTION, ADD SB EXTENDED DEDICATED RIGHT-TURN LN (EA: 0F980)

\$ 31,400,000 MAY RECONFIGURE TO ROUNDABOUT IC No

RIV060117 CALIMESA

ON SR60 BTWN JACK RABBIT TR & SR60/I-10 JCT: PH1-CONST. NEW POTRERO 6 LN OC (3 LNS EACH DIR) W/TEMP CONNECT TO WESTERN KNOLLS (EA34141/34143). PH2: NEW IC ON/OFF RAMPS. CONST. WB/EB EXIT & ENTRY RAMPS (2 LNS) & WB/EB LOOP ENTRY RAMPS (2 LNS) (ENTRY RAMPS INCL HOV LANE), INCL EB/WB AUX LNS AT EXIT RAMPS, REALIGN WESTERN KNOLLS AVE, AND REMOVE WESTERN KNOLLS AVE CONNECTION TO SR60 (EA34142/34143).

\$ 65,946,000 PH I CONST STARTS IN FY 14/15 No

RIV050535 BEAUMONT

AT I-10/OAK VALLEY PKWY IC: RECONSTRUCT/WIDEN IC FROM 2 TO 6 THROUGH LANES FROM APPROX 500 FT. W/O DESERT LAWN DR TO GOLF CLUB DR, WIDEN RAMPS - EB ENTRY 1 TO 2 LANES, EB & WB EXIT 1 TO 4 LANES, WB ENTRY 1 TO 3 LANES, , ADD NEW EB/WB ENTRY LOOP RAMPS (2 LANES) , ENTRY RAMPS INCLUDE HOV PREFERENTIAL LANE, AND RAMPS INCLUDE EXTENDED ACCELERATION/DECELERATION LANE (EA: 0G280).

\$ 22,925,000 PA&ED No

RIV060115 BEAUMONT

\$ 328,071,000

TOTAL

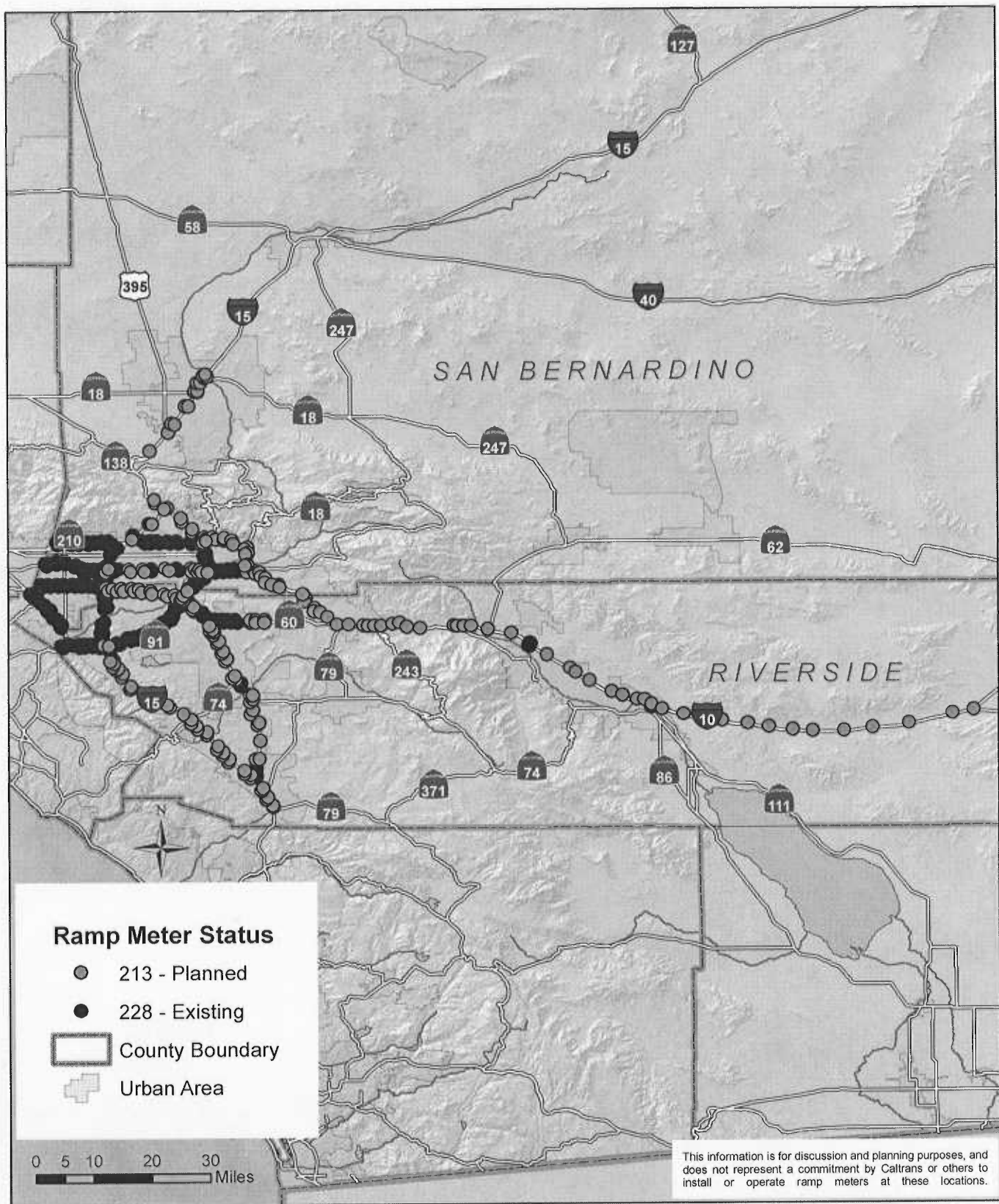
D. TCM Project Categories for the SCAB and SCCAB

Table IV-A below is a listing of program codes for different categories of TCM-type and committed TCM projects. The county transportation commissions need to accurately enter the program code associated with TCMs for each project in the TIP database.

Table IV-A: TCM Project Categories in the SCAB and the SCCAB

Project Description	Program Codes
A. High Occupancy Vehicle Measures	
▪ New HOV Lanes – Extensions and Additions to Existing Facilities	CAN69, CAX69, CAY69
▪ New HOV Lanes – With New Facility Projects	CAN69, CAX69, CAY69
▪ New HOV Lanes -- With Facility Improvement Projects	CAN69, CAX69, CAY69
▪ HOV Bypasses, Connectors, and New Interchanges with Ramp Meters	CAN69, CAX69, CAY69, CAN66, CAX66, CAY66, CAN71, CAX71, CAY71
▪ High Occupancy Toll (HOT) Lanes and Pricing Alternatives	CAN69, CAX69, CAY69
B. Transit and System Management Measures	
Transit	
▪ Rail Track – New Lines	TRN92, LRN92, RAN92
▪ Rail Track – Capacity Expansion of Existing Lines	TRN92, LRN92, RAN92, TRR14, TRN14
▪ New Rolling Stock Acquisition -- Rail Cars and/or Locomotives	CON94, CON93, COR17, COR16
▪ Bus Rapid Transit and Dedicated Bus Lanes - Express Busways	BU002
▪ Buses – Fleet Expansion (excluding fleet expansion with fewer than 5 buses)*	BUN94, BUN93
▪ Shuttles and Paratransit Vehicles – Fleet Expansion (excluding fleet expansion with fewer than 5 vehicles)*	PAN94, PAN93
Intermodal Transfer Facilities	
▪ Rail Stations - New	TRNH6
▪ Rail Stations - Expansion	TREH6
▪ Park & Ride Lots – New	TDN64
▪ Park & Ride Lots – Expansion	TDR64
▪ Bus Stations & Transfer Facilities – New (excluding bus stop improvement projects)	TRNH6
▪ Bus Stations & Transfer Facilities – Expansion (excluding bus stop improvement projects)	TREH6

DISTRICT 8



Ramp Meter Status

- 213 - Planned
- 228 - Existing
- ▭ County Boundary
- ⊕ Urban Area

0 5 10 20 30
Miles

This information is for discussion and planning purposes, and does not represent a commitment by Caltrans or others to install or operate ramp meters at these locations.



California Department of Transportation
Division of Traffic Operations GIS
2013

Ramp Metering Development Plan District 8

DISTRICT 8

District 8, located in Southern California, is comprised of Riverside and San Bernardino counties and includes 49 incorporated cities. Just east of the Los Angeles Metropolitan Area and Orange County, the southwest portion of the District is largely urbanized valleys surrounded by hills and high mountains. The greater portion of the District is comprised of rural expanses of desert and mountains. The land area of District 8 is the largest of the districts encompassing 28,650 square miles. It has a population of approximately 4.3 million and a population density of 136 people per square mile. District 8 manages 1,919 centerline miles and 6,719 lane-miles of highway.

Routes with Current or Planned Ramp Metering

I-10, I-15, I-215, SR 60, SR 71, SR 91, SR 210, SR 259

District 8 has 228 existing ramp meters and 213 planned ramp meters for a projected total of 441 ramp meters for the ten-year period covered by the RMDP. Ramp meter locations are illustrated in the District's map on the previous page.

Congestion Challenges

Highway congestion is a common occurrence in the District due to commute traffic within and between other urban areas of Southern California. Congestion is further exacerbated by large volumes of goods movement traffic mostly originating from local manufacturing and the ports of Los Angeles and Long Beach with destinations within District 8 and out of the District and the state. I-15 through the rural desert areas and the mountain routes experience congestion due to seasonal recreational uses and weekend travel to Las Vegas.

District Ramp Metering Strategies

District 8 is committed to using ramp metering as an effective traffic management strategy. In order to maximize freeway capacity and optimize mobility through the freeway system, ramp meters throughout the District 8 metropolitan area are operating in traffic-responsive mode to reduce congestion.

Ramp meters automatically turn on when traffic volume and density on mainline lanes reach a specific threshold and turn off when these conditions are no longer present. The variable ramp discharge rate is proportional to:

- ◆ Volumes in the main lanes
- ◆ Density of mainline traffic (collected using mainline detection)
- ◆ Weaving analysis and geometrics of the ramp location
- ◆ Traffic demands at the ramp

In District 8, the TMC, communication networks, and detection coverage are essential in determining the state of congestion across the managed corridors. Based on the state of

congestion, ramp meters are placed at locations that mitigate congestion issues in the urban network.

Ramp meters are also added to all new and reconstructed interchanges even in locations that are not yet urbanized. These ramp meters may not activate often if the congestion levels are low. However the real time data collected at these locations is transmitted to the central systems, Advanced Transportation Management System (ATMS) and Ramp Metering Information System (RMIS), for traffic analysis and traveler information.

The District works closely with local partners to minimize back up on city streets and to maximize coordination with city engineer, traffic signal engineer and ramp metering engineer on the management of the arterial system.

Supporting Documents

- ◆ District 8 TCRs, CSMPs, CPs, DSMP and other planning products:
<http://www.dot.ca.gov/dist8/>
- ◆ District/Deputy Directives: http://admin.dot.ca.gov/bfams/admin_svcs/sw_policy