



**METROPOLITAN
TRANSPORTATION
COMMISSION**

Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700
TEL 510.817.5700
TDD/TTY 510.817.5769
FAX 510.817.7848
E-MAIL info@mtc.ca.gov
WEB www.mtc.ca.gov

Memorandum

TO: Planning Committee

DATE: September 5, 2008

FR: Executive Director

W. I.

RE: Transportation 2035: Performance Analysis Results for Selected Projects

Background

In conjunction with approval of the draft Financially Constrained Investment Plan in July, the Commission directed staff to provide additional performance data for the discretionary “uncommitted” investments (but not the committed investments) proposed by the Transportation and Land Use Coalition (TALC) for reevaluation. Specifically, the Commission asked for analysis of the projects listed below:

- (a) I-580 westbound truck climbing lane (Alameda)*
- (b) US 101 Marin-Sonoma Narrows
- (c) US 101 widening for HOV lanes: Old Redwood Highway to Pepper Road (Sonoma)
- (d) US 101 auxiliary lanes: between San Bruno Avenue and Grand Avenue and between Sierra Point and the San Mateo /San Francisco County line (San Mateo)
- (e) US 101 widening: Monterey Highway to State Route 25 (Santa Clara)

Staff had already analyzed each of these projects except the San Mateo US 101 auxiliary lanes as part of the project performance assessment conducted this spring. The auxiliary lanes were beyond the scope of the original assessment, which did not cover localized operational improvements. However, staff was able to replicate the project performance assessment for the San Mateo auxiliary lanes using analysis conducted this summer for the Freeway Performance Initiative Corridor studies.

Consistent with the original project performance assessment, the evaluation includes:

- Qualitative assessment of the Goals addressed by each project (Support Maintenance/Safety, Congestion Reduction, Emission Reduction, System Access)
- Quantitative assessment of benefits and costs with respect to the Performance Objectives:
 - Benefit-cost ratio reflecting reductions in congestion, collisions, particulate matter and carbon dioxide emissions, and vehicle operating costs
 - Cost per reduction in carbon dioxide emissions
 - Cost per reduction in vehicle miles traveled

* This project is not included in the July 23, 2008 Commission-adopted financially constrained investment program.

Results Summary

Qualitative Assessment – Support for Goals

These five projects are principally congestion relief projects so it is not surprising that they all address one to one and half of the four goals, with strong support for the Congestion Reduction Goal. HOV lanes also support the Access goal by improving transit service and facilitating ridesharing, both of which can reduce travel costs. The US 101 widening project between Monterey and Route 25 includes reconstruction of a major interchange and is judged to support the Maintenance Goal in addition to congestion reduction.

Quantitative Assessment – Benefits and Costs Relative to Performance Objectives

All of the projects have benefit-cost ratios greater than 1, and three of them rated in the second highest benefit-cost tier (B/C between 5 and 9). The high benefit-cost ratios reflect considerable congestion-reduction benefits. At the same time, all but one of the projects (US 101 widening from Monterey Highway to Route 25) would slightly increase carbon dioxide emissions and vehicle miles traveled. The projected increases range from 2,000 to 7,000 tons of carbon dioxide annually and 0.5 to 37 million vehicle miles traveled annually.

However, to put these results in perspective, an increase of 7,000 tons per year estimated for the Sonoma 101 HOV lane project represents about 0.02% of the total projected regional carbon dioxide emissions in 2035; an increase of 37 million vehicle miles traveled estimated for the Marin/Sonoma 101 HOV lane project also represents less than 0.06% of the total projected regional vehicle miles traveled in 2035. In addition, for VMT, carbon dioxide emissions for the region and other criteria pollutants, we conduct a regional analysis on the entire plan consistent with CEQA law for program EIRs and federal law for air quality conformity analyses. MTC's 2005 RTP (Transportation 2030) EIR investment plan (i.e. Project), when compared to the RTP No Project, reduced regional carbon dioxide and regional VMT by 3% and 1% respectively.

[Attachment A](#) presents detailed performance analysis results for these five projects. [Attachment B](#) presents detailed results for these projects in the context of all the projects in the quantitative evaluation.

Steve Heminger

SH:LK

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Attachment A: Summary of Project Performance Analysis for Selected Projects

Project	Number of Goals Supported	Benefit-Cost Ratio	Delay Reduced (hrs reduced/yr) [1]	Cost per ton CO₂ reduced (mill. 2007\$) [1]	Cost per VMT Reduced (mill. 2007\$) [1]
			tons CO₂ reduced/yr	mill. VMT reduced/yr	
(a) I-580 westbound truck climbing lane (Alameda) [2]	1	8	920,000 hrs	-\$800 -4,900 tons	-\$7.6 -0.5 mill. VMT
(b) US 101 Marin-Sonoma Narrows plus					
(c) US 101 widening for HOV lanes: Old Redwood Highway to Pepper Road (Sonoma) [3]	1.5	8	10,000,000 hrs	-\$24,000 -2,100 tons	-\$1.3 -36.6 mill. VMT
(c) US 101 widening for HOV lanes: Old Redwood Highway to Pepper Road (Sonoma) alone [4]	1.5	5	920,000 hrs	-\$980 -7,100 tons	-\$1.7 -4.2 mill. VMT
(d) US 101 auxiliary lanes: San Bruno Avenue to Grand Avenue and Sierra Point to the San Mateo/San Francisco County line (San Mateo) [5]	1	2	340,000 hrs	-\$620 -4,800 tons	-\$0.5 -5.9 mill. VMT
(e) US 101 widening: Monterey Highway to State Route 25 (Santa Clara)	1.5	2	780,000 hrs	\$1,600 7,500 tons	\$1.7 7.2 mill. VMT

[1] Negative number represents an increase in delay, VMT or CO₂.

[2] This project is not included in the draft Financially Constrained Investment Program adopted in July.

[3] The Marin-Sonoma Narrows was evaluated in conjunction with the Old Redwood to Pepper HOV lane, but not on its own.

[4] The Old Redwood to Pepper HOV lane was also evaluated on its own.

[5] Not included in initial RTP project performance evaluation, but results have been replicated using FPI corridor studies