APPENDIX F

CMP TRAVEL MODEL ANALYSIS

The congestion management analysis for the 2040 RTP will use the post-model adjustments described below to measure the impacts of various Transportation System Management (TSM) and Transportation Demand Management (TDM) strategies. These adjustments will be applied to a special travel model scenario and the result will be designated as the Congestion Management Process (CMP) scenario.

The CMP assignment will be based on the 2015 committed highway network, the 2030 transit network (with improved headways), and the 2040 travel demand. The transit headway improvements will be a 50% reduction in peak period bus headways to a minimum of 10 minutes, and a 50% reduction in light rail and commuter rail peak period headways to a minimum of 15 minutes.

The results of the CMP assignment will be compared to a 2040 No-Build assignment. The 2040 "No-Build" assignment will be the 2015 committed highway network, the 2015 transit network, and the 2040 travel demand. The level of service will be determined for each of these two assignments based on V/C ratios for freeways and speed for arterials. A single map showing where LOS "D" or "E" conditions from the 2040 No-Build assignment are improved to LOS "C" or "D" (or better) in the CMP assignment will be produced.

TABLE F-1

TSM MODEL VARIATIONS AND POST PROCESS ADJUSTMENTS

Strategy	Condition	Preferred Model Method
Freeways		
Incident Management		Included in model capacity*
Intelligent Transportation Systems (ITS)		Included in model capacity*
Ramp Metering		Included in model capacity*
Arterials		
Signal Coordination	- if FT is principle arterial or minor arterial - and if LOS "D" or "E" based on PM congested speed	Post process - Increase PM speed 5% on select arterials for traffic in the direction with the highest PM volume
Access Management	- if FT is principle arterial or minor arterial - and if LOS "D" or "E" based on PM congested speed	Post process - Increase PM speed 10% on select arterials for traffic in the direction with the highest PM volume
**These strategies do not improve capacity or speed beyond assumed model levels.*		

TABLE F-2
TDM MODEL VARIATIONS AND POST PROCESS ADJUSTMENTS

Strategy	Condition	Preferred Model Method
Freeways		
HOV/HOT Lanes		No model adjustment available at this time.
Note: The HOV strategy required a new trip distribution to properly account for the changes in freeway capacity. Results from this modeling effort were contrary to expectations. {Large volumes of traffic were forced to the arterial streets}. This strategy was eliminated from the CMP model. Much of I-15, the best HOV candidate facility, will have HOV lanes anyway.		
Arterials		
Ped/Bicycle	- if FT is minor arterial or collector	Post process - Reduce PM volume on select arterials by 0.99875 then recalculate speed, i.e.: - Multiply total PM volume by 25% (HBW percentage) - Multiply HBW volume by 0.5% (mode share)
Regional		
Park & Ride		No model adjustment available at this time.
Transit (CR, LRT, & bus)	If H > 10, H = min(10,H/2) where H is headway	**Model variation** - CMS scenario will improve headways on 2030 transit network: - PM period bus headways greater than 10 minutes will be reduced by 50% but not less than 10 minutes - PM period LRT and Commuter Rail headways greater than 15 minutes will be reduced by 50% but not less than 15 minutes
Rideshare		Included in mode choice*
Flextime Telecommuting Growth Management	All links	Post process - Reduce PM volume on all facility types by 0.9975 then recalculate speed, i.e.: - Multiply total PM volume by 25% (HBW percentage) - Multiply HBW volume by 1.0% (reduction)
**These strategies do not improve capacity or speed beyond assumed model levels.*		