

STRATEGIES GENERALLY APPROPRIATE FOR FREEWAYS

Freeway System - Freeways are a subset of the urban area principal arterial system. The urban freeway system should serve the projected major centers of activity of a metropolitan area, the highest projected traffic volume corridors, and the longest projected trips. It should also carry a high proportion of the total projected urban area travel on a minimum of lane miles.

The freeway system should carry the major portion of forecasted trips entering and leaving the urban area, as well as the majority of through movements desiring to bypass the central city. In addition, forecasts of significant intra-area travel, such as between major inner-city communities, or between major suburban centers should be served by freeways. Finally, this system in urbanized areas should connect with all the major rural arterials which enter the urban area.

SYSTEM MANAGEMENT

Capacity Additions - New lanes or roads are particularly critical in high growth areas. Without proper demand and system management, the effectiveness of the new lanes or roads is compromised and congestion returns sooner than it otherwise would. Consequently the sponsor needs to implement all other reasonable strategies when capacity is added.

Access Management - Full access control on freeways is required to preserve their mobility function.

Intelligent Transportation Systems (ITS) - Since ITS is critical to preserving the design capacity of freeways, most ITS technologies are appropriate for this functional class. For example, well-placed variable messages signs and incident detection technology are cost effective strategies. The sponsor should interface as much as possible with the regional ATMS.

Incident Management - Because they should carry the highest volumes of traffic, freeways are very appropriate for incident management. In other words, incident management programs should be focused where they will be most cost effective. Limited access facilities are particularly critical because there are fewer "escape routes" for traffic affected by incidents. Adequate shoulder width must be included for stalled vehicles, etc.

Reversible Lanes - The purpose of reversible lanes is to enhance mobility. They are appropriate to consider for freeways when the directional split is greater than or equal to 60/40, there are right of way limitations, and there are at least two lanes in the direction considered.

Ramp Metering - Ramp metering applies to freeway interchanges. Ramp metering can have significant benefits for freeway flow, but care must be exercised in evaluating the effects of metering. The engineer also needs to assess how much backing will occur and whether the cross street has sufficient capacity to sustain it.

Improving Interchange Geometrics - Based on safety or congestion considerations, it may be appropriate to improve the geometrics of an interchange. If right-of-way is available or not excessively expensive, the sponsor needs to incorporate appropriate geometric improvements at the

interchange. These might address concerns such as the length of on-ramps or reducing weaving between interchanges. Rebuilding an interchange to a different design might also be considered. If plans exist for signal improvements, geometric modifications need to be coordinated with those improvements.

DEMAND MANAGEMENT

Rideshare Programs - Rideshare programs are particularly valid on freeways connecting residential development to major employment centers, because they carry high volumes of traffic to the same or nearby destinations, and because they serve longer trips. Regional programs are in place.

Staggered and Flexible Work Hours - The validity of this strategy is similar to that of rideshare promotion. Regional programs are in place.

Telecommuting - This strategy is regional in nature. The Regional Transportation Plan assumes that telecommuting will increase modestly in the future. However, no significant effect has been assumed.

Growth Management / Land Use Planning - This strategy is regional in nature. The Regional Transportation Plan assumes that growth management will increase modestly in the future. However, no significant effect has been assumed.

Transit Improvements - Transit improvements are sometimes regional in nature, and sometimes facility specific. Strategies that may be appropriate for freeways include express buses, park-and-ride lots, fixed guideway (rail or bus rapid transit) and new routes or frequency improvements. Sponsors need to coordinate with UTA for construction of planned transit facilities in the project section.

High Occupancy Vehicle (HOV) Lanes - The purpose of HOV lanes is to encourage carpooling, which is most likely to occur on longer trips. Hence, they are not appropriate for other functional classes, where trip lengths should not be as great. The higher number of turning movements on lower functional class facilities also makes HOV lanes impractical since they are intended for relatively high speed mobility. HOV lanes should be considered on freeways with three or more existing or planned lanes in the direction considered, and average trip length greater than ten miles.

Walk / Bicycle - Freeways are relatively high speed facilities with high volumes of traffic. Therefore, walk and bicycle modes are not appropriate because of safety issues. However, accommodation of these modes off the freeway, but in the corridor, may be appropriate.

Employer Commute / Trip Reduction Ordinances - Trip reduction ordinances would impact freeways. A regional plan is needed for this strategy, but has not yet been developed.

Congestion Pricing - There are presently no likely candidates for congestion pricing.

Increase Gas or Auto-Related Taxes / Fees - This strategy is regional in nature. The Transportation Plan for the area assumes that taxes and fees will continue to increase at historical rates.