HIGH OCCUPANCY TOLL (HOT) LANES

Three agencies in the Sacramento Region (Placer County Transportation Planning Agency, Sacramento Area Council of Governments, and Caltrans District 3) are sponsoring a study of the concept of High Occupancy Toll (HOT) lanes on I-80, between I-5 and SR 65 (approximately 20 miles). There are currently High Occupancy Vehicle (HOV, or carpool) lanes in this corridor between Watt and Riverside.

GENERAL DESCRIPTION

High Occupancy Toll (HOT) lanes, similarly to carpool lanes, operate alongside regular lanes on the freeway – in median (or "fast") lane - and are available for buses, carpools, motorcycles, qualified hybrids, and emergency vehicles. The difference is that HOT lanes are also available for solo drivers who choose to pay a toll to use the lanes. HOT lanes are separated from the general purpose lanes by barriers or striped buffers, with specified entrances and exits usually spaced several miles apart.

WHY CONSIDER HOT LANES?

- HOV (carpool) lanes may be underutilized and have the capacity to accommodate more vehicles. By charging solo drivers to pay for access, more efficient use can be made of roadway capacity and improvements in travel time are experienced by drivers in all lanes.
- HOV/HOT lanes provide the option of a reliable trip time for drivers in corridors that experience periodic congestion.
- Revenue generation is another purpose, but has not been the primary purpose for implementing HOT lanes where they currently operate.

DYNAMIC PRICING

- With dynamic pricing, toll rates change according to level of congestion in the lane – lower rates for less congestion, higher rates for more congestion – maintaining a minimum rate of speed for all vehicles in the lane (for example 45 miles per hour).
- There is commonly a maximum and minimum toll rate, set by policy.
- How often the rate changes varies, but is typically every 5-15 minutes.
- Corridor drivers see the current toll rate on a dynamic message sign placed well ahead of the start of the lane ("look ahead pricing").
- The price doesn't change once a vehicle has entered the lane.

TOLL COLLECTION

- If dynamic pricing is used, toll collection is done with an electronic system (for example, FasTrak ™ used on Bay Area bridges).
- Electronic collection requires each user to place a transponder on their windshield and maintain a pre-paid toll account. When the lane is entered, the user is detected by an overhead receiver and hears a beep. There are no toll booths and slowing down is not necessary.
- Some HOT lanes use electronic toll collection but do not use dynamic pricing.
- For other HOT lanes, users set up a pre-paid account, are charged a flat monthly fee for unlimited use, and put a sticker on their cars.

OTHER VARIABLE FEATURES

- Eligibility requirements for carpool occupancy can be 2+, 3+, or more. In some examples, 2-person carpools pay a discounted toll, and 3+ or higher are free.
- Tolling can be operational 24/7 or only during peak hours.
- The lanes can be configured in different ways – 1-2 lanes in each direction, or reversible if barrier separated.

CAPITAL COSTS AND FUNDING

- Capital costs could include construction of additional lanes to the freeway where there are no existing HOV lanes, conversion of existing HOV lanes to HOT, and the electronic tolling system. Funding could come from bonding of anticipated toll revenue, federal, state, or local transportation funding, or a combination.
- Operating costs could include tolling operations, lane maintenance, and enforcement. Operating costs could be paid for by tolls.

REVENUE GENERATION AND USE OF REVENUE

- Revenues could be used to pay for any capital costs that are not covered by other funding, operations, and maintenance of the lanes.
- Beyond paying for the lanes' capital, operating, and enforcement costs, excess revenue is commonly assumed to go for "corridor improvements." Typically excess revenues are used for other highway or public transit improvements, but they could also be used for transportation demand management, intelligent transportation systems, or other improvements to corridor travel.

ENFORCEMENT

- Enforcement can be automated where there is an electronic toll collection system, but is also enforced by the California Highway Patrol using visual means and electronic devices.

EQUITY

- A Cal Poly San Luis Obispo study of the SR 91 express (HOT) lanes in Orange County found use to be more closely tied to current travel conditions and trip needs than to income.
- Generally, users tend to be only slightly more affluent on average than non-users.

GOVERNANCE

- There are numerous ways to establish governance and decision-making, from joint powers authorities to separate agencies, to public-private partnerships.

EXAMPLES

There are eight HOT lanes currently in operation in the U.S.:

- California: State Route 91 in Orange County and I-15 in San Diego
- Washington: SR 167 southeast of Seattle
- Utah: I-15 in Salt Lake City
- Minnesota: I-394 in Minneapolis
- Texas: Katy and Northwest Freeways in Houston
- Florida: Tampa and Miami

Nine others are in the process of implementation, four proposals are under consideration, and 16 feasibility studies are underway (including Sacramento). In the Bay Area, AB 744 (Torrico) authorized a Bay Area Express Lane Network that is currently in implementation. The first project will be on southbound I-680 between SR 84 and SR 237.

California: State Route 91 in Orange County

Minnesota: I-394 in Minneapolis

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