

Express Lanes Tolling Policy

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| <u>Item One:</u> | High Occupancy Vehicle (HOV) Policy |
| <u>Description:</u> | Establishes HOV requirements for free travel within the Express Lanes. |
| <u>2013 Traffic and Revenue (T&R) Assumption:</u> | HOV 2+ travel free until 2024; HOV 3+ travel free 2024 and beyond. |
| <u>Discussion:</u> | <p>Traffic and Revenue (T&R) modeling indicates that HOV 2+ free would not be financially viable. From a capacity standpoint, two Express Lanes in each direction could support HOV 2+ free, but there would be little excess capacity to sell to Single Occupant Vehicles (SOVs). Therefore, funds would not be available to construct the second lane.</p> <p>Under the assumed HOV 3+ policy, approximately 15 to 20% of the vehicles would be traveling free in 2030. Shifting from HOV 3+ to HOV 2+ free during off-peak hours would reduce toll revenue by 20 to 25%, possibly more in the early years. Off-peak is defined as 9:30 a.m. to 3:30 p.m. and 7:30 p.m. to 6:30 a.m.</p> <p>Note I: A single-lane HOV 2+ addition would be degraded within 10 years of opening, and would provide no relief for existing HOV 2+ congestion between the Los Angeles County line and Haven Avenue.</p> <p>Note II: The 2013 Traffic and Revenue (T&R) assumed HOV 2+ would travel free during the initial I-10 segment opening from Los Angeles County Line to I-15 in 2022 and 2023, which includes the portion of existing HOV lanes from LA County Line to Haven that would be converted to Express Lanes. This segment would be converted to HOV 3+ in 2024, which is when the remaining I-10 segments are scheduled to be completed. On 12/11/14, the Express Lanes Ad Hoc Committee recommended that this HOV2+ to HOV3+ transition be eliminated, and that all Express Lanes segments open as HOV3+.</p> <p>Note III: Vehicles would be required to have a transponder in order to obtain the HOV 3+ credit, as the geometric design does not contain HOV 3+ declaration lanes.</p> <p>Note IV: For the time period from July through October 2014, OCTA data from the 91 Express Lanes indicates approximately 21% of trips were HOV 3+.</p> |
| <u>Recommendation:</u> | Implement free travel for HOV 3+ for all Express Lanes segments, including the initial I-10 segment opening in 2022. |

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| <u>Item Two:</u> | Minimum Toll Rate / Hours of Operation |
| <u>Description:</u> | Establishes minimum toll for entry into the Express Lanes. |
| <u>2013 T&R Assumption:</u> | 24-hour tolling, with a minimum toll for entry into the Express Lanes of \$0.05 per mile from point of entry to the end of a segment or \$0.50 per segment, whichever is greater. |
| <u>Discussion:</u> | <p>Tolls in an Express Lanes Facility can be collected either during peak-hours only, or 24 hours a day.</p> <p>Peak-hour only tolling would allow access to all passenger vehicles during off-peak hours, which is defined as volumes in the Express Lanes below 1,200 vehicles per hour per lane. Under 24 hour tolling, a minimum toll rate would be charged during off-peak hours.</p> <p>Traffic and Revenue models indicate that the off-peak hours would run from approximately 9:30 a.m. to 3:30 p.m. and 7:30 p.m. to 6:30 a.m. for the I-10 corridor in 2030. Eliminating minimum toll during off-peak hours would reduce toll revenue by at least 15 to 25% prior to 2030; 15% in 2030; and 2-5% in 2046, based on the off-peak hours specified above.</p> <p>Establishing a minimum toll rate minimizes weaving in and out of Express Lanes, which can caused congestion and reduce throughput in both the Express Lanes and General Purpose lanes.</p> <p>24-hour tolling is consistent with neighboring Riverside, Orange and Los Angeles counties. Off-peak only tolling could create confusion at county lines as well additional complexity for users as to when to expect free travel.</p> <p>Note I: For the I-10 project, the minimum toll rate is estimated at \$2.15 for the 33-mile trip in 2030 (expressed in 2012 dollars). For the I-15 project, the minimum toll rate is estimated at \$2.30 for the 33-mile trip in 2030 (expressed in 2012 dollars).</p> <p>Note II: For comparison, the minimum toll rate for the 10-mile trip on the OCTA 91 Express Lanes is currently \$1.45, which would be even higher if based on 2030 volumes.</p> |
| <u>Recommendation:</u> | Maintain 24-hour tolling with a minimum toll rate of \$0.50 per zone in order to maximize efficient and safe operation of Express Lanes and General Purpose lanes, and to maintain financial feasibility of the Express Lanes project. |

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| <u>Item Three:</u> | Toll Collection Methodology |
| <u>Description:</u> | Establishes toll collection methodology for the Express Lanes Facility |
| <u>2013 T&R Assumption:</u> | Switchable RFID Transponders and License Plate Recognition |
| <u>Discussion:</u> | <p>Toll collection methodology varies across the country, and includes cash collection, Radio-Frequency Identification (RFID) transponders, switchable RFID transponders and license plate recognition (LPR).</p> <p>Cash collection introduces additional operations cost, traveler delay and requires a larger geometric footprint, and is largely being phased out across the country.</p> <p>All-Electronic Tolling, which includes the use of transponders and LPR, allows tolling without the need to stop at a cash collection booth.</p> <p>Transponder-only facilities provide the lowest administrative cost of the toll collection methods, but restricts use of the Express Lanes to those with a transponder. Switchable transponders provide the added benefit of declaring vehicle occupancy, thereby eliminating the need for declaration lanes for qualifying HOV vehicles.</p> <p>LPR has a higher administrative cost than transponder-only, but allows access to a much broader range of users than transponder-only facilities. For example, visitors or infrequent users can still use the facility and pay the toll via the web. LPR users would be charged a surcharge to offset the higher administrative cost.</p> <p>Note I: Transponders issued in California are required by law to be interoperable, e.g. an OCTA transponder works on a Metro Express Lanes facility, and this requirement will soon be in effect nationwide.</p> <p>Note II: As tolling technology continues to evolve, there is the potential that transponders would no longer be required by the time of construction. This issue will be monitored further during future Concept of Operations development.</p> |
| <u>Recommendation:</u> | Utilize switchable RFID Transponders and License Plate Recognition for toll collection. |

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| <u>Item Four:</u> | Toll Pricing Process |
| <u>Description:</u> | Establishes the tolling concept for the Express Lanes |
| <u>2013 T&R Assumption:</u> | Dynamic Pricing with Pricing by Segment |
| <u>Discussion:</u> | <p>The I-10 and I-15 Express Lanes would utilize dynamic pricing, which maximizes the ability to manage traffic demand by adjusting pricing based on real-time traffic demand. Actual pricing can be based on a per-mile basis or a per-segment basis.</p> <p>Per-mile pricing would charge users based on the distance covered within the Express Lane facility, with the per-mile rate varying based on demand.</p> <p>Under segment pricing, per-mile toll rates are converted into toll charges for each segment by multiplying the per-mile rate by the longest distance covered by each tolling segment.</p> <p>Segment-based pricing tends to increase the share of long-distance trips, i.e. minimizes weaving, due to a relatively higher price for trips using only a short portion of a tolling segment. Shorter trips lead to increased weaving in and out of the Express Lanes, which may cause operational issues leading to increased congestion and reduced corridor throughput.</p> <p>Utilizing per-mile pricing on a long corridor with multiple ingress-egress points introduces signage complexity, with a wide range of total trip distance scenarios available upon entry into the facility. Segment pricing simplifies signage by indicating cost for using the initial segment, followed by cost to the end of the facility.</p> <p>Note I: Tolls that are displayed on signage are guaranteed upon entry.</p> |
| <u>Recommendation:</u> | Utilize Dynamic Pricing with Pricing by Segment |

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| <u>Item Five:</u> | Clean Air Vehicle Policy |
| <u>Description:</u> | Establishes policy for free or discounted travel for Clean Air Vehicles in the Express Lanes facility. |
| <u>2013 T&R Assumption:</u> | No discount or free travel for Clean Air Vehicles |
| <u>Discussion:</u> | <p>Current State policy, which expires in 2019, provides free travel for qualifying Clean Air vehicles in many managed lanes facilities.</p> <p>Tolling Clean Air Vehicles has a positive financial impact; however, actual impact has not been quantified as it was a core assumption in the 2013 Traffic and Revenue Forecast.</p> <p>Tolling Clean Air Vehicles reduces incentive for Clean Air Vehicle use, which is a potential air quality issue.</p> <p>SCAG is moving towards a blanket exemption for Clean Air Vehicles priority usage of managed lanes, i.e. no discount or free travel for Clean Vehicles.</p> |
| <u>Recommendation:</u> | Consistent with law anticipated at the start of tolling in 2022, maintain normal toll pricing for Clean Air Vehicles |

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| <u>Item Six:</u> | Low-Income Equity Program |
| <u>Description:</u> | Policy would establish a program to attract and facilitate usage of the Express Lanes facility by low-income users. |
| <u>2013 T&R Assumption:</u> | Not modeled |
| <u>Discussion:</u> | <p>Policy would be modeled after Metro Express Lanes Equity Program, which provides \$25 credit for account set-up and waives the monthly account fee</p> <p>Primary recommendation from the Equity Study Report; financial impact to be quantified.</p> <p>Note I: Metro annual cost is approximately \$54,000 in toll credits.</p> <p>Note II: Participation in the Low Income Equity Program requires registration and issuance of a transponder. The requirement of a transponder will be further reviewed during Concept of Operations development, as toll collection technology is evolving rapidly.</p> |
| <u>Recommendation:</u> | Recommend including Equity Program for San Bernardino County residents; financial impact to be verified during Investment Grade Traffic and Revenue analysis. |

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| <u>Item Seven:</u> | Incident Management |
| <u>Description:</u> | Establish policy to allow or not allow General Purpose lane traffic to be rerouted into Express Lanes toll-free in event of traffic incident in General Purpose lanes |
| <u>2013 T&R Assumption:</u> | Not modeled |
| <u>Discussion:</u> | <p>In the event of a significant incident in the General Purpose lanes, the flexibility to reroute General Purpose lane traffic into the Express Lanes could serve to alleviate congestion associated with the incident, benefitting the General Purpose lane users of the Corridor.</p> <p>The drawbacks include the lack of choice for a “guaranteed” travel time in the Express Lanes facility during severe General Purpose lane incidents, and the drop in Express Lane throughput due to congestion resulting from the influx of General Purpose Lane traffic.</p> <p>Note I: If General Purpose lane traffic is rerouted into the Express Lanes due to an incident, a tolling reversal (credit) would be issued to the Express Lane users. Similarly, if the Express Lanes become congested due to an incident in the Express Lanes, traffic would be rerouted into the General Purpose lanes and a tolling reversal (credit) would be issued.</p> <p>Note II: Specific language would need to be drafted specifying the conditions under which CHP could reroute traffic into the Express Lanes facility.</p> |
| <u>Recommendation:</u> | Develop specific language, coordinated with CHP, to enable CHP to reroute General Purpose lane traffic into the Express Lanes in the event of a severe incident in the General Purpose lanes. Financial impact would need to be reflected during development of the Investment Grade Traffic and Revenue Forecast. |

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| <u>Item Eight:</u> | Tolling during Super-Peak Traffic Hours |
| <u>Description:</u> | Policy would charge 3+ vehicles at a full or discounted rate rather than free during weekend and Holiday Super-Peak periods. |
| <u>2013 T&R Assumption:</u> | HOV 3+ vehicles travel free 24 hours a day, 365 days per year. |
| <u>Discussion:</u> | <p>Peak hours are defined as the hours during which traffic volumes reach a point near which the traffic flow become unstable. Since the capacity of the Express Lanes facility is limited, pricing is used to manage the demand to keep traffic flowing at optimal levels during peak hours.</p> <p>“Super-Peak” hours are defined as the hours during which demand greatly outstrips capacity (supply), resulting in high toll prices to manage the demand. Super-Peak demand is typically directional in nature. For example, the demand on the I-15 northbound is typically highest on a Friday night, particularly in the Cajon Pass area, and I-15 southbound is typically highest on a Sunday night.</p> <p>For the I-10 and the I-15 corridors, the super-peak events typically coincide with the weekends and holidays, i.e. recreational traffic. Much of the recreational traffic is HOV 3+, meaning it takes a higher percentage of the Express Lanes capacity without paying a toll. Additionally, much of the recreational traffic is coming from outside San Bernardino County.</p> <p>Charging HOV 3+ a partial toll during super-peak events provide an overall positive financial impact. Additionally, it captures revenue from HOV 3+ traffic emanating from outside San Bernardino County.</p> <p>Note: The OCTA 91 Express Lanes charge HOV 3+ one half of the posted toll rate Monday through Friday from 4:00 p.m. to 6:00 p.m in the eastbound direction only.</p> |
| <u>Recommendation:</u> | Evaluate tolling HOV 3+ at a discounted rate (as opposed to free) during super-peak events in the next phase of Traffic and Revenue forecasting. |