

# SM 101 MANAGED LANES PROJECT



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San Mateo County Transportation Authority Meeting  
August 2, 2018

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- **Managed Lane owner decision needed**
- San Mateo County's options
- Understanding revenues & costs
- Pros & cons of County's options
- Proposed next steps



## • Facility Owner (an Agency)

- Owns tolling equipment and related highway infrastructure
- Sets tolling policy and rates; manages associated relationships
- Budgets and pays for the operation and maintenance of the facility
- Responsible for liability associated with owned facility
- Responds to facility specific user inquiries and addresses public concerns that are not addressed at the customer service center or operator level
- Participates as a member of the Bay Area Express Lanes owners group and the California Toll Operations Committee
- Distributes revenues

## • Facility Operator (an Agency)

- Manages the day to day operation of the facility on behalf of owner
- Provides customer trip information to the FasTrak® Customer Service Center
- Ensures that the system is maintained



- **The reason the ownership decision is needed now**
  - The owner determines the operator
  - The operator's input is needed during the design of the facility
  - The preliminary design of the 101 MLP is progressing rapidly
- **Decide on the Owner from:**
  - San Mateo County agency to be formed
  - Bay Area Infrastructure Finance Authority [MTC]
- **Based upon the Owner, the Operator will be:**
  - San Mateo County agency as owner, then VTA will operate under contract
  - MTC as owner, MTC will operate



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## Santa Clara Valley Transportation Agency (VTA)

- SB 595, signed in October 2017, provides the VTA the authority to “conduct, administer and operate” (operator) a US 101 express lane facility in San Mateo County in coordination with the CCAG and SMCTA
- VTA has operated 11 miles of SR 237 since 2012
- VTA plans to implement express lanes on US 101 in Santa Clara County in 2021; provides continuity for users when managed lanes are operational in San Mateo and Santa Clara counties



## Metropolitan Transportation Commission (MTC)

- Authorized by the California Transportation Commission to own and operate express lanes on select Bay Area corridors
- The Bay Area Infrastructure Financing Authority, or BAIFA, is joint powers authority between MTC and the Bay Area Toll Authority assigned to manage the express lanes network
- BAIFA is a six-member, expandable committee overseeing the planning, financing, construction and operation of express lanes
- BAIFA membership currently includes Alameda, Contra Costa, and Solano county commissioners
- MTC operates I-680; started in 2017



## San Mateo Agency to be Owner/Operator

- CCAG and TA would need to agree on how to form a partnership to own the facility
- Secure a State sponsor and seek legislation to provide authority to the joint partnership to own/operate the facility
- Process will take a year or more, assuming legislation will pass
- Will need to secure contracts for a system manager and a system integrator
- Timing is the biggest challenge



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## • Basis of revenue estimate

- Traffic forecasts from the County-wide Travel Demand model
- Value of time from the County-wide Travel Demand model
- Typically based upon owner objectives and policies
- Toll owners implement policies that impact a facility's revenue opportunity - minimum and maximum toll rates; repricing intervals; enforcement; exemptions; toll technology; toll zones; toll rate setting algorithms; etc.
- Revenue model used: Toll Optimization Model (TOM) from ECONorthwest

## • Credibility of TOM forecasts

- Used for I-680 over Sunol Grade, by MTC for the Express Lanes network
- Under contract with FHWA
- I-95 in Miami

# SM 101 MANAGED LANES PROJECT

## TOM ASSUMPTIONS FOR 101



Without tolling policies set by the owner, the 101 MLP revenue was forecast with this set of assumptions:

- HOV 3+ vehicles will use the lane for free
- HOV 2 and Clean Air Vehicles (CAVs) will be half-priced
- The facility will operate from 5 a.m. to 8 p.m.
- The maximum toll rate will be set at \$3/mile
- The model will account for peak spreading due to patrons changing their travel time to take advantage of the Lane.

# SM 101 MANAGED LANES PROJECT

## GROSS REVENUE RANGE



- **Low end estimate of gross revenue:** **\$41M**
  - keeps costs as low as possible for all drivers
  - maintains Express Lane speeds above 45 mph
  - keeps the Express Lane as full as possible without breakdown
  
- **High end estimate of gross revenue:** **\$49M**
  - determines the toll rates based upon users' value of time
  - estimates travel time savings at the point of decision
  - allows the toll rate to increase based upon demand and does not optimize use of the lane
  
- **Average gross revenue:** **\$45M**

# SM 101 MANAGED LANES PROJECT

## FORECASTED TOLL RATES

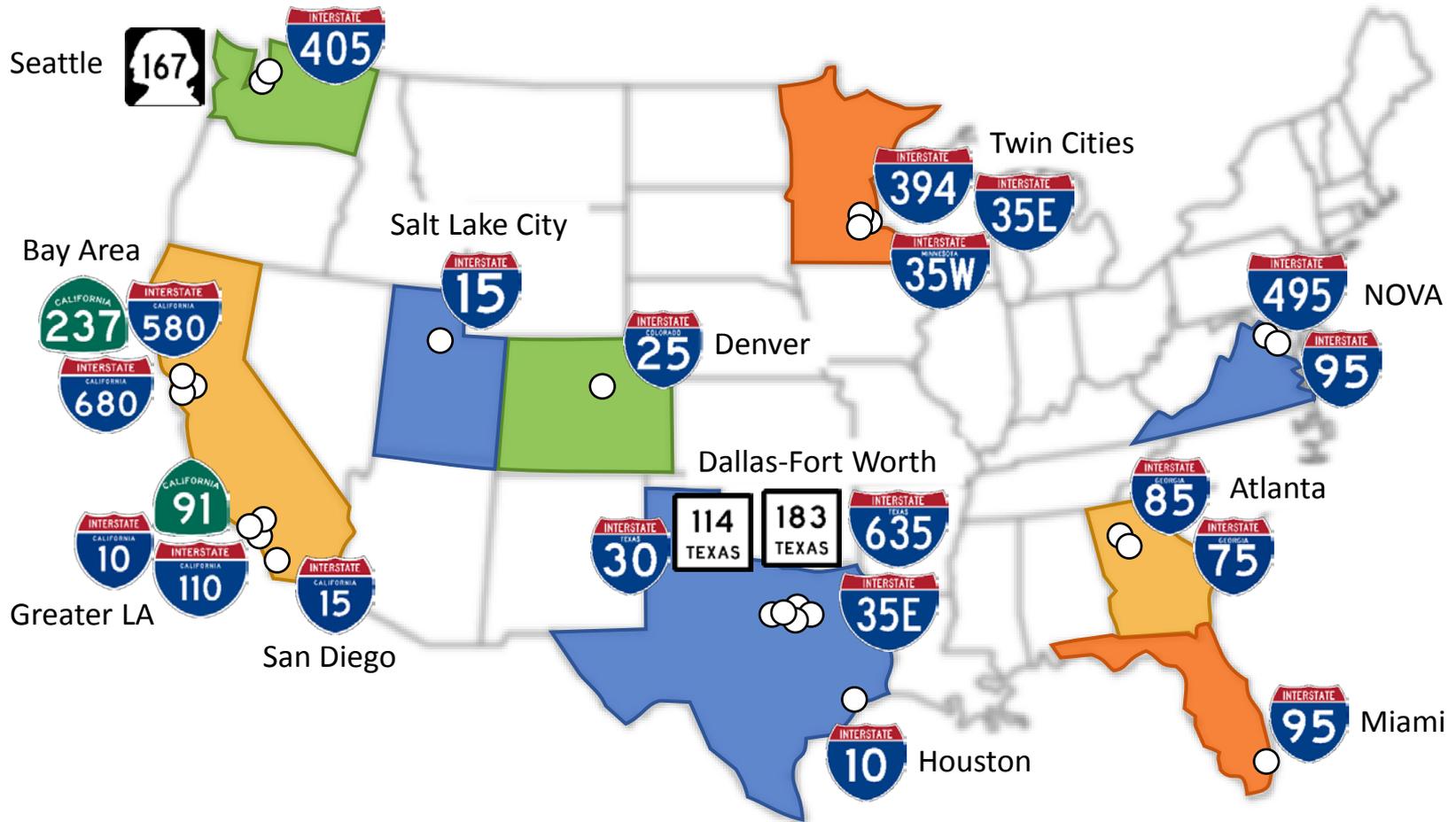


Average Toll Rate/mile	SB 101		NB 101	
	Low end	High end	Low end	High end
AM Peak (5 a.m. to 9 a.m.)	\$0.48	\$0.96	\$0.44	\$0.98
Midday (9 a.m. to 3 p.m.)	\$0.23	\$0.64	\$0.13	\$0.42
PM Peak (3 p.m. to 7 p.m.)	\$0.31	\$0.79	\$0.57	\$1.19

2016 Tolls	I-680	I-580		SR 237	
	SB	EB	WB	EB	WB
Max. Toll/mi	\$0.55	\$0.82	\$0.93	\$1.33	\$1.06

# SM 101 MANAGED LANES PROJECT

25 U.S. EXPRESS LANE LOCATIONS



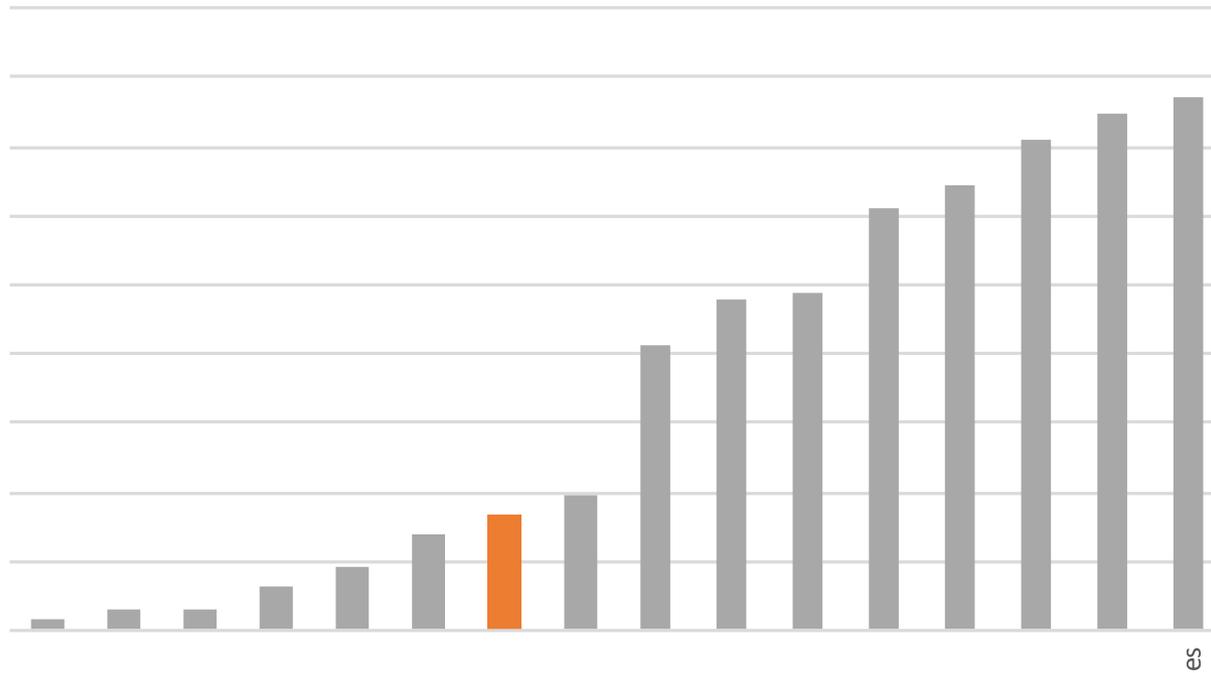
# SM 101 MANAGED LANES PROJECT

## EXPRESS LANE TOLL COMPARISON



Toll per mile (average)

\$/mile



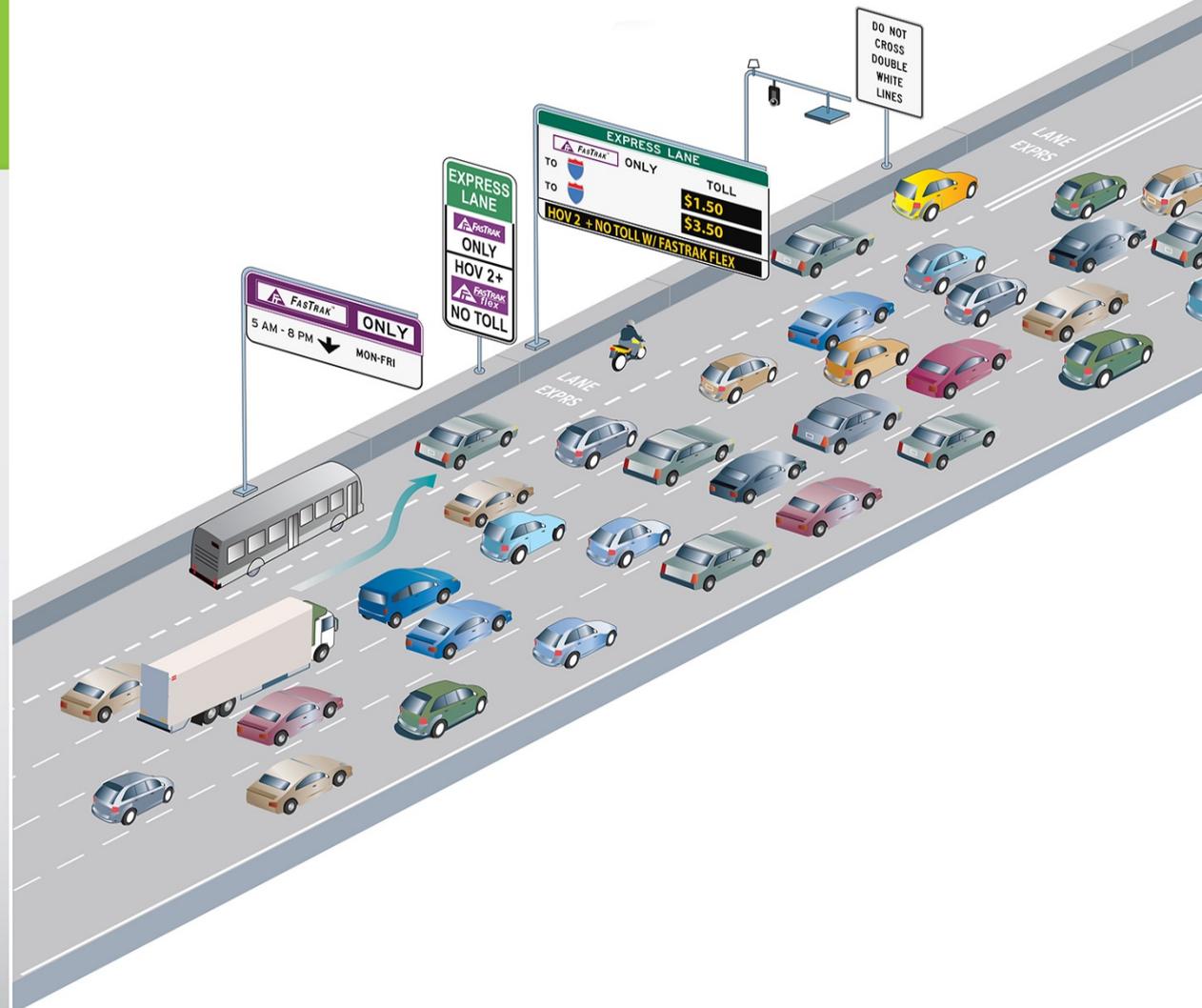
# SM 101 MANAGED LANES PROJECT

## EXPRESS LANE COMPONENTS



## WHAT IS AN EXPRESS LANE?

- Carpools, buses, motorcycles and eligible clean air vehicles free
- Other drivers can choose to pay
- Electronic toll collection
- Dynamic tolls (congestion pricing) keep lane free flowing



# SM 101 MANAGED LANES PROJECT COLLECTING TOLLS



## Fastrak<sup>®</sup> Requirement

- Tolls must be paid with Fastrak 
- Toll free travel for carpools, buses, vanpools, motorcycles and eligible clean air vehicles, with Fastrak Flex 



**1**  **One Person**

**2**  **Two Person**

**3** **Three or more people,  
Motorcycles and Eligible  
Clean Air Vehicles**

# SM 101 MANAGED LANES PROJECT

## DEFINITIONS



- **Gross Revenue:** projected total revenue from the express lanes
- **Post-processing Adjustments:** adjustments to the gross revenue that reflect violators using the lane, unknown toll policies, clean air vehicles, and other factors
- **Operation and Maintenance (O&M) Costs:** estimate of costs to operate and maintain an express lane
- **Net Revenue:** amount of money remaining after accounting for post-processing adjustments, debt service, O&M costs, and rehabilitation

# SM 101 MANAGED LANES PROJECT

## ANNUAL NET REVENUE ESTIMATES



	Low Level Loss (In annual \$M)	High Level Loss (In annual \$M)
<b>Average Gross Revenue of TOM runs</b>	\$45.0	\$45.0
<b>Post-processing adjustment range</b>		
Toll violation/uncollected revenue	(\$2.3)	(\$4.5)
HOV-only mode losses	(\$2.3)	(\$9.0)
Zone-based toll implementation losses	(\$1.1)	(\$2.3)
<b>Subtotal</b>	\$39.4	\$29.3
<b>Operations and Maintenance costs</b>	(\$18.9)	(\$19.6)
Approximate Annual Net Revenue	\$20.5	\$9.7
Revenue ramp-up (3 to 4 months) loss	(\$9.0)	(\$9.0)
<b>Approximate Year 1 Net Revenue</b>	\$11.4	\$0.6



## *Complimentary Efforts*

### *US 101 Express Bus Feasibility Study*

*Provide a direct, fast, frequent and reliable choice of transportation utilizing the 101 Managed Lanes for long distance commute trips between San Francisco, San Mateo and Santa Clara counties.*



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## COMPARISON OF THE OPTIONS



	VTA	MTC	San Mateo
Governance Structure	SM Co. owns; VTA operates	BAIFA owns and operates	Potential joint powers agency (SMCTA & CCAG) owns and operates
Enabling Legislation/ Existing Authority	+	+	-
Experience of the owner	-	+	-
Experience of operator	+	+	-
Revenue decisions/Control	+	-	+
Operating & Toll Policies/ Control	+	-	+
Equipment Maintenance	+	+	-
Public Relations	-	+	-
Financial risks & bonding capacity	-	+	-



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## NEXT STEPS



- **July** – present background information to the C/CAG Board
- **August** – present background information to SMCTA Board
- **July & August** – continue to gather info from VTA & MTC on pros & cons of each
- **August/September** – Joint workshop between SMCTA & C/CAG boards
- **October** – staff to recommend the agency owner for decision by both the SMCTA and C/CAG Boards