



METROPOLITAN  
TRANSPORTATION  
COMMISSION

**Agenda Item 8b**

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## *Memorandum*

TO: Planning Committee

DATE: February 2, 2018

FR: Executive Director

RE: MTC Resolution No. 4244: Goods Movement Investment Strategy

Last month, staff presented a near-term (10 year) goods movement investment strategy, a collaborative regional effort focused on implementation of the adopted 2016 Regional Goods Movement Plan. During the discussion, the committee made two requests of staff: 1) describe the agency's planning efforts regarding the potential impacts of automated vehicles on the freight sector; 2) provide an update on recent efforts by partner agencies, including Alameda County Transportation Commission (ACTC), Capitol Corridor, and ACE to coordinate passenger and freight rail improvements, including discussions with Union Pacific Railroad (UPRR). Staff now returns with follow-up information and next steps and to request the Committee to forward MTC Resolution No. 4244: Goods Movement Investment Strategy to the Commission for approval.

### **Automated Vehicles and Freight**

The automation of vehicles, including connected technologies such as platooning, has the potential to change the goods movement industry in a substantial way. Freight is expected to be an early adopter of automated vehicle (AV) technology due to the potential for lower labor costs, safety improvements, and increased fuel efficiency. While a substantial penetration of fully automated Level 5 trucks is not expected for at least 20 years, it is important for the region to stay informed about the state of the technology and prioritize strategy and policy interventions to capture the potential opportunities and mitigate the potential costs.

As part of the upcoming *Futures* effort, MTC/ABAG will conduct several deep policy analyses of emerging focus areas. The primary objective of each analysis will be to identify high-impact policies related to that topic area that support the region's guiding principles. Staff has proposed that the first effort will focus on Automated Vehicles and Future Mobility. This effort will include a summary of the technological and policy context, a needs assessment, and a description of priority strategies for the Bay Area to proactively address challenges and embrace opportunities that autonomous vehicles are likely to introduce. Staff proposes to present this work at your June meeting. Further, staff has added a 5-year review to the Goods Movement Investment Strategy to ensure that the funding and projects are kept current with evolving technologies and financial changes.

### **Regional Passenger and Freight Coordination**

The goods movement investment strategy includes a \$1.2 billion package of investment to increase the economic competitiveness of the Port of Oakland while addressing increasingly pressing tradeoffs between freight and passenger rail. A number of the improvements focus on connectivity and capacity enhancements to the Oakland, Niles, and Coast subdivisions in southern Alameda county- these investments hold promise for improving not only freight rail but also Capitol Corridor and ACE. These investments will require a shared partnership between the State, MTC, ACTC, Port of Oakland, Capitol Corridor, ACE, and UPRR. This partnership will require agreement on roles and responsibilities, including a delivery implementation approach, schedule, and other commitments. To date, ACTC has taken the lead in developing an overall strategy for initiating these efforts. Staff proposes to invite these partners to brief members of the Commission, the Sacramento Area Council of Governments (SACOG), and the San Joaquin Council of Governments (SJCOG) on these efforts at a future Planning Committee meeting, coordinated if possible with a megaregional working group meeting, anticipated to be held in late spring.

### **Goods Movement Investment Strategy- Background**

As a reminder, the goods movement sector supports nearly one-third of related industries in the Bay Area and is a key component of the region's economic strategy for increasing access to living-wage jobs that have low educational barriers to entry. The industry is also growing – today's almost \$1 trillion in freight flows in Northern California are projected to double by 2040. The Bay Area is home to major goods movement infrastructure that has local, regional, statewide and national significance, including highways designated as part of the National Primary Freight Network, two Class 1 railroads, and the Port of Oakland.

MTC and the Alameda County Transportation Commission (ACTC) adopted goods movement plans in 2016. Subsequently, a regional goods movement executive team— including MTC, ACTC, Port of Oakland, the Bay Area Air Quality Management District, Santa Clara Valley Transportation Authority, Solano Transportation Authority, Contra Costa Transportation Authority, and the East Bay Economic Development Authority— worked to develop a near-term (10 year) investment strategy to implement these plans. An investment strategy will help the region in the following ways:

1. *Deliver projects that can improve mobility and economic vitality.* The strategy will help implement projects and programs crucial to achieving Plan Bay Area 2040's performance targets, including reducing delay on the regional freight network, increasing middle-wage jobs, and reducing per capita GHG emissions.
2. *Address community and environmental concerns of freight.* The strategy also sets forth a commitment to reduce impacts of pollution on communities, mitigate emissions from existing technologies, and adopt cleaner technologies. These efforts would be led by the Bay Area Air Quality Management District, in coordination with MTC, ACTC, Port of Oakland, and public health and environmental groups.

3. *Enable the region to coordinate and compete for state and federal fund sources.* Over the past couple years, three new major state and federal funding programs with a direct nexus to freight have been initiated. These include the National Highway Freight Program, the National Significant Freight and Highway Projects Discretionary Program (FASTLANE/INFRA), and the SB1 Trade Corridors Enhancement Program. Staff estimates that the region is positioned to receive over \$1 billion in funding over the next 10 years from these funding sources alone.

### **Draft Revenues and Project List**

**Attachment A to MTC Resolution No. 4244** includes a draft estimate for revenues likely to be available for regional goods movement projects over the next 10 years. The revenues — totaling \$3.8 billion — include federal, state, regional, and local sources. The basis for most of the revenue is the Plan Bay Area 2040 forecast and input from other regional and local funding partners.

**Attachment B to MTC Resolution No. 4244** includes a fiscally constrained draft list of projects, programs and costs that could comprise the goods movement investment plan. These projects support recommended investments included in Plan Bay Area 2040, the Bay Area and Alameda County Goods Movement Plans, and were compiled in close coordination with regional partners via the Goods Movement Executive Team.

Staff recommends the Committee refer MTC Resolution No. 4244 to the Commission for approval.



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Steve Heminger

SH: mm

#### **Attachments:**

- MTC Resolution No. 4244: Goods Movement Investment Strategy
- Presentation

Date: February 28, 2018  
W.I.: 1124  
Referred by: Planning

ABSTRACT

Resolution No. 4244

This resolution sets forth MTC's Goods Movement Investment Strategy, a near-term set of projects and programs to improve mobility and economic vitality, address community and environmental concerns of freight, and enable the region to coordinate and compete for state and federal fund sources.

Further discussion of this action is contained in the MTC Executive Director's Memorandum to the Planning Committee dated February 2, 2018.

Date: February 28, 2018  
W.I.: 1124  
Referred by: Planning

Re: Regional Goods Movement Investment Strategy

METROPOLITAN TRANSPORTATION COMMISSION

RESOLUTION NO. 4244

WHEREAS, the Metropolitan Transportation Commission (MTC) is the regional transportation planning agency for the San Francisco Bay Area pursuant to Government Code Sections 66500 et seq.; and

WHEREAS, MTC has developed and adopted a Regional Goods Movement Plan (Plan), which outlines a long-range strategy for how to move goods effectively within, to, from and through the Bay Area by roads, rail, air and water; and

WHEREAS, the Plan recommends that MTC develop a funding strategy, strengthen partnerships, and coordinate rail investments; and

WHEREAS, a regional goods movement executive team, including MTC, Alameda County Transportation Commission, Port of Oakland, the Bay Area Air Quality Management District, Santa Clara Valley Transportation Authority, Solano Transportation Authority, and the East Bay Economic Development Authority have collaborated on goods movement revenue forecasts and project and program priorities; and

WHEREAS, MTC has developed the Goods Movement Investment Strategy (Strategy) in coordination with the aforementioned partners as well as public health and environmental stakeholder organizations; and

WHEREAS, the Strategy will help implement projects and programs crucial to achieving Plan Bay Area 2040's performance targets, including reducing delay on the regional freight network, increasing middle-wage jobs, and reducing per capita GHG emissions; and

WHEREAS, the Strategy also sets forth a commitment to reduce impacts of pollution on communities, mitigate emissions from existing technologies, and adopt cleaner technologies; and

WHEREAS, the Strategy helps position the region to coordinate and compete for state and federal funding sources; and

WHEREAS, due to the evolving nature of technology and circumstances related to the Strategy, staff intends to review the strategy approximately every five years, now therefore be it

RESOLVED, MTC adopts the Strategy, described by the revenue estimates and set of projects and programs outlined in Attachments A and B, and

RESOLVED, MTC should work with regional agencies, including the Bay Area Air Quality Management District, Port of Oakland, and Alameda County Transportation Commission, to pursue funding opportunities to deliver specific community protection projects, and

RESOLVED, projects and programs funded and implemented from the Strategy will undergo appropriate reviews and adopt associated mitigation measures, as may be required by law.

METROPOLITAN TRANSPORTATION COMMISSION

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Jake Mackenzie, Chair

The above resolution was entered into by the Metropolitan Transportation Commission at a regular meeting of the Commission held in San Francisco, California, on February 28, 2018.

Date: February 28, 2018  
W.I.: 1310  
Referred by: PAC

Attachment A  
MTC Resolution No. 4244

## 10-Year Revenues for Bay Area Goods Movement

Fund Source	10-year estimate	Notes
National Highway Freight Program	\$260	Base year is FY 2015-16 and assumes a growth rate of 2% to 3%. Assumes the Bay Area receives 19% of the state program.
National Significant Freight and Highway Projects Discretionary Program (FASTLANE / INFRA)	\$260	Base year is FY 2015-16 and assumes a growth rate of 2% to 3%. Assumes the Bay Area receives 2.5% of the national program.
STP/CMAQ	\$50	Assumes funding for goods movement projects at 5% of PBA2040 forecast. Estimate begins after OBAG2 (e.g. starting with FY23)
RTIP/ITIP	\$140	Based on upprogrammed SB1 STIP revenues from FY 20 to FY 27; assumes 20% would be spent on freight corridors and on freight projects.
SB1 - Trade Corridors	\$540	Assumes Bay Area receives 20% of annual \$300 million earmark that would be begin in FY2019.
SB1 - Solutions for Congested Corridors	\$90	Assumes \$250M a year x 9 years. Assumes Bay Area receives 20% of the program and 20% would be spent on freight elements.
SHOPP	\$170	Assumes 6.5% of SHOPP will be spent on "mobility" enhancements, per the 2016 SHOPP distribution. Assumes 50% of the "mobility" funding would be spent on freight corridors.
Future Bridge Toll Increases (RM3)	\$990	Assuming the SB 595 expenditure plan, assumes \$160M from regional programs plus additional revenues for corridor-specific projects
TFCA - 40% counties	\$5	Assumes funding for goods movement projects at 5% of PBA2040 forecast.
TFCA - 60% regional	\$10	Assumes funding for goods movement projects at 7% of PBA2040 forecast.
Carl Moyer	\$10	Assumes 1% of funding for goods movement projects and assumes authorization continues after 2023.
Mobile Source Incentive Funds	\$8	Assumes authorization continues after 2023. Assumes funding for goods movement projects at 10% of forecast.
AB 617/134	\$20	Assumes one-time funding (40% of \$50M total to the region) for cleaning up trucks and other goods movement-eligible projects
Proposition 1B	\$20	Assumes funding to be awarded to a final tranche of goods movement emissions-reduction projects
Low Carbon Transportation Program	\$10	Assumes funding to the Bay Area from this Cap and Trade source for advanced freight demonstrations
Alameda County Measure BB	\$700	Assumes that 33% of BB would be spent on goods movement, congestion relief on freight corridors, and technology development.
Other sources: private sources, Local match for state and federal sources, other federal sources	\$500	Assumes roughly 30% match for certain competitive programs, and includes private sources of funding for trade projects. Includes \$9.6M in FHWA ATCMTD funds for GoPort ITS.
<b><u>Total</u></b>	<b><u>\$3,783</u></b>	

All values in millions of dollars

The 10-year estimate covers FY 17-18 through FY 26-27, unless noted.



Date: February 28, 2018  
W.I.: 1310  
Referred by: PAC

Attachment B  
MTC Resolution No. 4244

## Bay Area Goods Movement Investment Strategy

## Bay Area Goods Movement Investment Strategy - DRAFT

#	Focus Area	Project Name	Project Description	Project Cost (\$millions)
1	Community Protection	Equipment-Based Reduction Projects	<p>Categories for upgrade to zero or near-zero emission (focused on West Oakland, but could also include other communities) include:</p> <ul style="list-style-type: none"> <li>-Yard trucks</li> <li>-Tug boats (incl shore power)</li> <li>-On-road Class 5/6 trucks</li> <li>-Truck retirement project</li> <li>-Locomotives (Class 1 &amp;3)</li> <li>-Ocean-going vessels (bonnets and electrification)</li> <li>-Forklifts</li> <li>-Transport Refrigeration Units</li> <li>-Top/Side Pick Cranes</li> </ul>	\$200
2	Community Protection	Port of Oakland Non-Equipment-Based Reduction Projects	<p>Includes the following components:</p> <ul style="list-style-type: none"> <li>-Port Electrical Grid Improvements</li> <li>-Facility upgrades and emission reductions</li> <li>-Supply Chain Efficiencies- extended Marine terminal hours, grey chassis pool, gate modifications, and technology solutions</li> <li>-Extended gate hours/days</li> </ul>	\$100
3	Community Protection	Freight Emission Reduction Action Plan: Recommended Regional Demonstrations	<p>Urban Delivery Demonstration Project: Range Extended Electric Vehicle (REEV) for Medium Heavy Duty (Class 5 - 6) Trucks.</p> <p>Rail Demonstration Project: Yard Switcher Using Dual Mode Battery-Assisted Locomotive in West Oakland and Richmond.</p> <p>Grow Bay Area Near-Zero and Zero Emission Vehicle R&amp;D</p> <p>Public/Private Clean Truck Collaborative</p>	\$40
4	Community Protection	Community Impact reduction through "receptor-side" mitigations	Invest in "receptor side" mitigations to reduce impacts on "fence-line" communities, including, for example, planting trees or other pollution catchments between sources and communities, investing in improved air quality, air filtration, HVAC etc systems for sensitive facilities located near freight corridors.	\$10
<b>Community Protection Subtotal</b>				<b>\$350</b>

## Bay Area Goods Movement Investment Strategy - DRAFT

#	Focus Area	Project Name	Project Description	Project Cost (\$millions)
5	Freight Roadway	Interstate 80 Corridor	Includes: I-80/I-680/SR12 Interchange - Packages 2-7 West Bound Truck Scales (Solano County) Ashby Interchange Improvements Gilman Street Interchange Improvements	\$640
6	Freight Roadway	Interstate 880 Corridor	Includes: Whipple Road and Industrial Blvd Interchange Improvements Winton Avenue Interchange Improvements A Street Interchange Improvements	\$200
7	Freight Roadway	Interstate 680 Corridor	Includes: SR-4 Interchange Improvements - Phase 3 SR-84 Interchange Improvements + SR-84 Widening South County Access (262/Mission Blvd Cross Connector)	\$440
8	Freight Roadway	Interstate 580 Corridor	Includes: Interchange improvements at Vasco Road Integrated Corridor Management between Foothill Road and Isabel Avenue I580/680 interchange improvements- Planning	\$310
9	Freight Roadway	US 101 Corridor	Includes: SR-25 Interchange and US-101 Widening to 6 lanes SR-92 Interchange Improvements	\$460
10	Freight Roadway	SR-37 Corridor	SR-37 Improvements	\$100
11	Freight Roadway	SR-152 Corridor	SR-152 Environmental and Planning Studies	\$30
12	Freight Roadway	Local road and county road access and safety program on truck routes	Includes: Kirker Pass Road - NB Truck Climbing Lane Vasco Road Safety Improvements - Phase 2 Bvron Highway and Camino Diablo Road	\$40
<b>Freight Roadway Subtotal</b>				<b>\$2,220</b>

## Bay Area Goods Movement Investment Strategy - DRAFT

#	Focus Area	Project Name	Project Description	Project Cost (\$millions)
13	Rail Strategy	Port of Oakland: Go Port	The GoPort project will reduce emissions from idling trucks, increase Port operational efficiency, and provide significantly improved truck and rail access. Project includes: 7th Street Grade Separation West 7th Street Grade Separation East Port of Oakland ITS improvements	\$500
14	Rail Strategy	Rail Connectivity Improvements	Industrial Parkway Connection Shinn Connection New wye connections at Lathrop and Stockton Junctions - not included in project cost since revenue assumptions are not inclusive of SJ County	\$240
15	Rail Strategy	Safety Improvements	Grade crossing improvements at Jack London Square and in Emeryville - City of Berkeley Railroad Crossing Improvements City of Berkeley Gilman Street Grade Separation City of Fremont Railroad Quiet Zones	\$130
16	Rail Strategy	Railroad Grade Crossing Improvements and Grade Separations	Additional Grade Crossing Improvements	\$150
17	Rail Strategy	Targeted Operational Improvements	City of Hercules Third Track Upgrade water side drill track to 3 mainline between Port and Bancroft Track improvements to Coast Subdivision	\$60
18	Rail Strategy	Port of Oakland	Includes: OAB Phase 2 improvements (logistics warehousing, transloading)	\$150
19	Rail Strategy	SMART	Freight rail improvements to the SMART corridor including double-tracking select segments.	\$10
<b>Rail Strategy Subtotal</b>				<b>\$1,240</b>
20	Other	Oakland Airport	Includes: Oakland International Airport Perimeter Dike	\$20
<b>Other Subtotal</b>				<b>\$20</b>
<b>Draft Investment Plan Total: 10-Year</b>				<b>\$3,830</b>



# Bay Area Goods Movement Investment Strategy



Planning Committee  
February 9, 2018



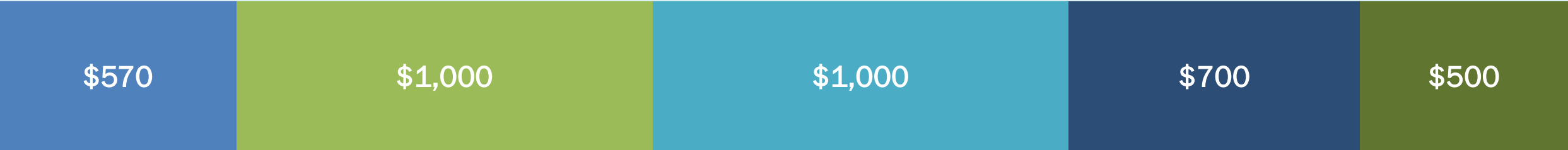
# Why develop a near-term investment strategy for goods movement?

- Enable the region to coordinate and compete for state and federal fund sources
- Deliver projects that can improve mobility and economic vitality
- Address community and environmental concerns of freight



# \$3.8 billion is estimated to be available over the next 10 years for Bay Area goods movement projects

■ Federal ■ State ■ Regional ■ Local ■ Other

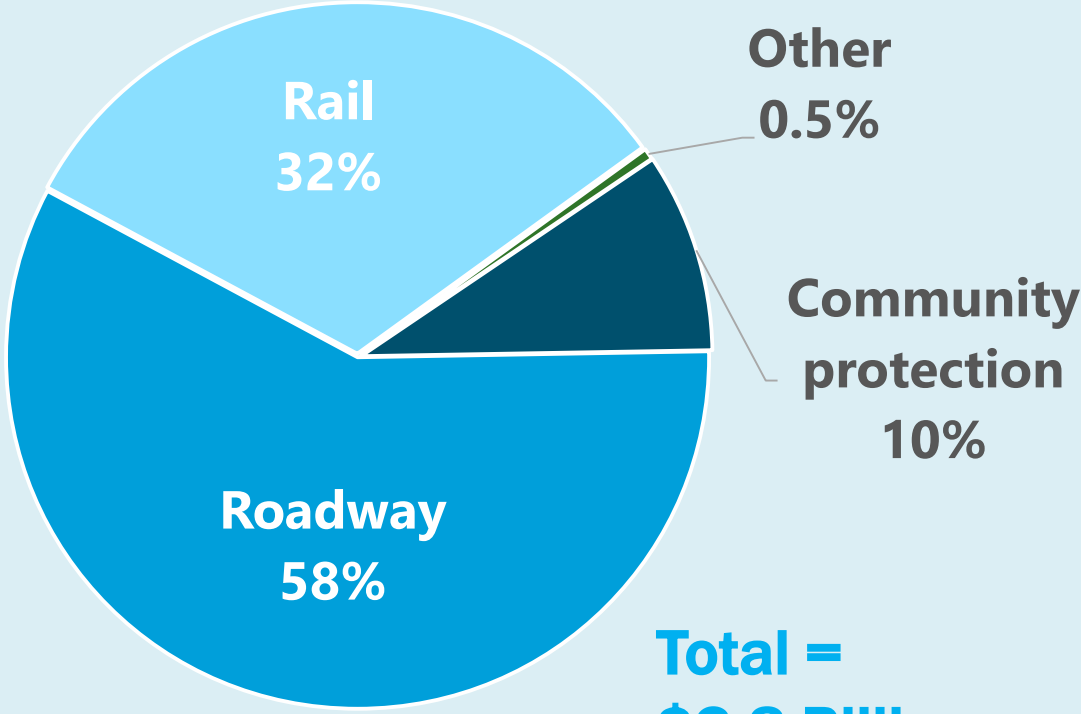


**\$3.8 billion over 10 years**



# The region has developed a corresponding set of investments crucial to achieving Plan Bay Area 2040's performance targets

	Goal	Draft Plan Performance		
Goods Movement/Congestion Reduction	-20%	-29%		
Middle-Wage Job Creation	+38%	+43%		
Climate Protection	-15%	-16%		
Open Space and Agricultural Preservation	100%	100%		
Adequate Housing	100%	100%		
Transit Maintenance	-100%	-75%		
Non-Auto Mode Shift	+10%	+3%		
Affordable Housing	+15%	+3%		
Healthy and Safe Communities	-10%	-1%		
Access to Jobs	+20%	-0%		
Road Maintenance	-100%	+6%		
Displacement Risk	+0%	+5%		
Housing + Transportation Affordability	-10%	+13%		WORST



**Total = \$3.8 Billion over 10 years**



# The projects in the investment strategy span the Bay Area, with a significant portion of investment in Alameda county

## Projects Not Mapped

- West Oakland Equipment-Based Reduction Projects
- Port of Oakland Emission Reduction Projects
- Freight Emission Reduction Action Plan: Recommended Regional Demonstrations
- Community Impact reduction through "receptor-side" mitigations
- Additional Grade Crossing Improvements
- Track Improvements to Coast Subdivision



# Recommended Action

- Refer MTC Resolution No. 4244 - Goods Movement Investment Strategy - to the Commission for approval.

