

# Transit Fiscal Cliff Impact

SF-CHAMP Travel Model Scenario Analysis



San Francisco  
County Transportation  
Authority

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# Overview

## Fiscal cliff and toll policy modeling

- Bay Area transit agencies are facing the possibility of upcoming budget shortfalls known as the fiscal cliff
- A temporary toll surcharge is one possible option to raise revenue to bridge the shortfalls
- To support and inform policy discussions the San Francisco County Transportation Authority applied the SF-CHAMP activity-based travel demand model to explore fiscal cliff and toll surcharge scenarios

# Model Scenarios

- **Baseline**
  - No fiscal cliff or toll surcharge
- **Toll Surcharge Scenario (SB 532)**
  - Add \$1.50 toll surcharge on BATA toll crossings
- **Bookend Fiscal Cliff Scenarios**
  - Two illustrative model scenarios using different hypothetical assumptions for service cuts
  - Based on approx. September 2023 future year budget shortfall assumptions
  - ***Across the Board Cuts***
    - Reduces transit service frequency by a specified percentage for each affected operator
  - ***Targeted Cuts***
    - Reduces specific BART and Muni routes
    - Other agencies treated the same as in the Across the Board Scenario

# Fiscal Cliff Scenarios

Operator	Across the Board Service Cuts	Targeted Service Cuts
Muni	25% reduction in service frequency	Eliminate 20 low ridership routes
BART	2/3 reduction	Three-line service at 30-60 min headways
Caltrain	1/3 reduction	1/3 reduction
AC Transit	20% reduction	20% reduction
Golden Gate Transit and other operators	Not analyzed	Not analyzed

# Highlights

## **Fiscal cliff transit impacts on Bay Area transportation**

- 100,000 fewer daily transit boardings
- A doubling of transit crowding
- Nearly 20% drop in transit job accessibility region-wide
- More than 60% drop in transit job access in some areas
- Worse than average job access impacts for low-income households and Equity Priority Community residents

## **Toll surcharge has modest impacts on travel**

- Minimal change in travel patterns
- 1%-3% drop in bridge traffic

## **Traffic Congestion**

- Highly traveled corridors, such as the Bay Bridge, remain heavily congested in all scenarios

# Important Notes

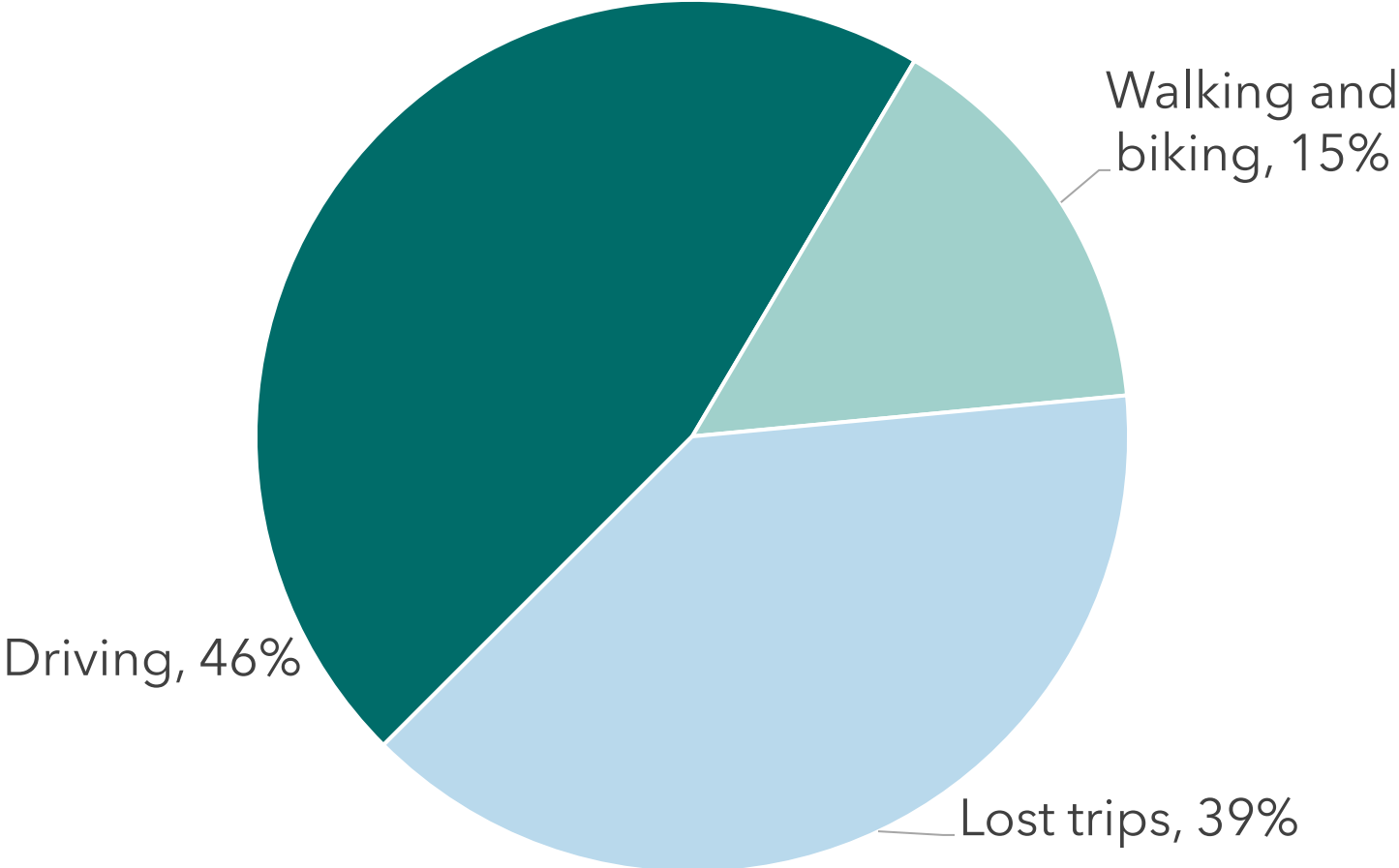
- Work from home and transit hesitancy
  - Model is calibrated and validated to 2023 traffic and transit ridership
  - Conditions are dynamic
- Transit capacity
  - No capacity constraint in this version of SF-CHAMP
- Secondary effects
  - Lower transit ridership / revenue
  - Land use patterns
    - Household and business locations, long term decisions
- Funding shortfalls and transit service
  - Modeled baseline service and cuts are based on year 2023
  - Budget shortfall figures are based on generally lower FY21/22 service

# Transit Ridership

EVALUATION MEASURE	TOLL SURCHARGE SCENARIO	ACROSS THE BOARD CUTS	TARGETED CUTS
Bay Area Transit Ridership	Flat (Changes by less than 1,000)	-129,000 (-13%)	-99,000 (-10%)
Bay Area Transit Passenger Miles	3,000 (+0.1%)	-682,000 (-16%)	-727,000 (-17%)
Muni Ridership	Flat	-24,000 (-6%)	21,000 (+5%)
BART Ridership	Flat	-79,000 (-46%)	-99,000 (-57%)
BART Transbay Crossings	Flat	-25,000 (-34%)	-35,000 (-50%)

# Transit Ridership

## Where do fiscal cliff transit trips go?



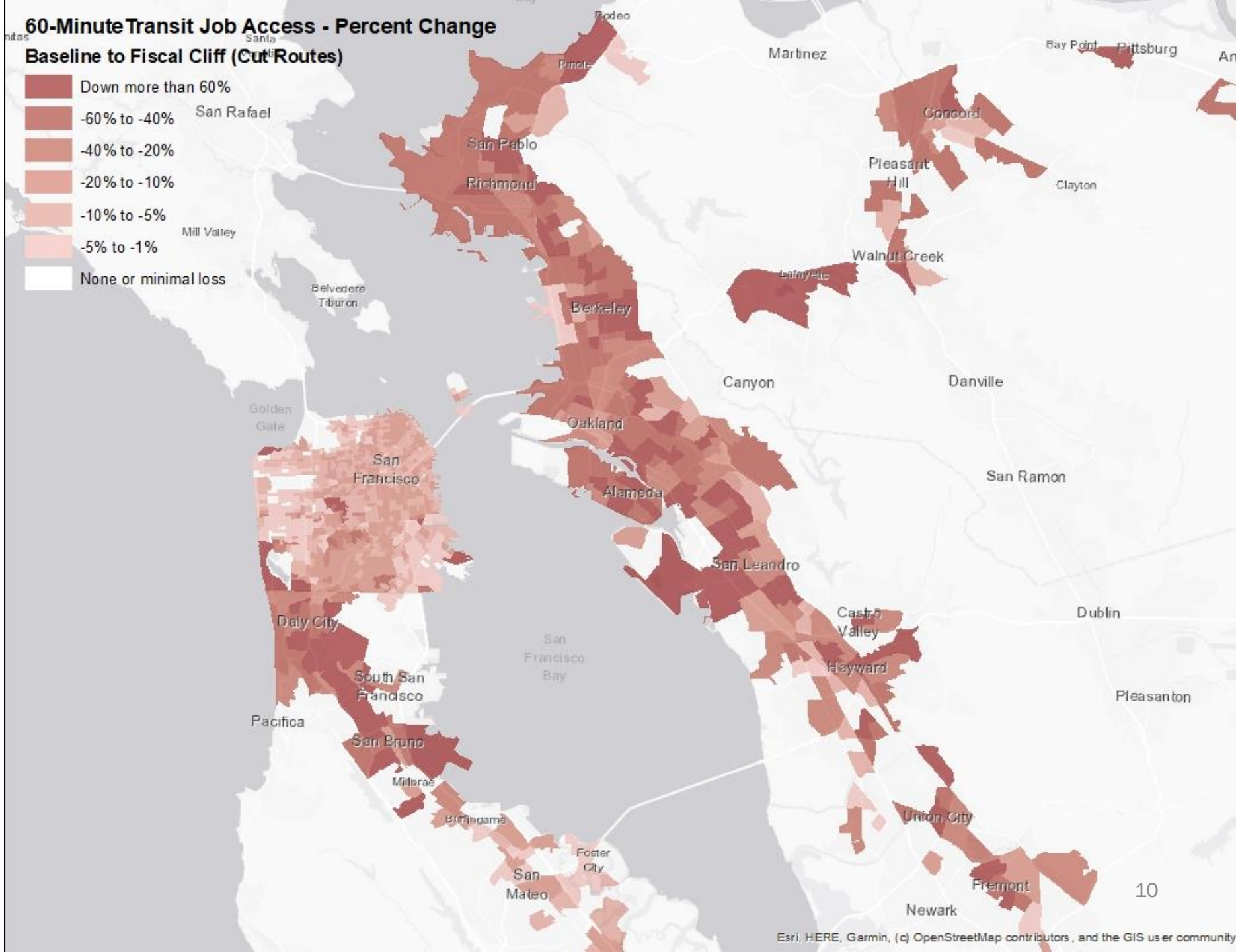


# Job Accessibility

EVALUATION MEASURE	TOLL SURCHARGE SCENARIO	ACROSS THE BOARD CUTS	TARGETED CUTS
<b>Transit Job Access (45-Minute)</b>			
SF Households	Flat	-65,000 (-13%)	-41,000 (-8%)
Other Bay Area Households	Flat	-8,000 (-26%)	-8,000 (-27%)
All Bay Area Households	Flat	-15,000 (-16%)	-12,000 (-13%)
<b>Transit Job Access (60-Minute) - Equity Comparison</b>			
All Bay Area Households	Flat	-33,000 (-17%)	-36,000 (-18%)
Low Income Households	Flat	-41,000 (-18%)	-45,000 (-20%)
Equity Priority Community Households	Flat	-60,000 (-18%)	-67,000 (-21%)

- The scenarios do not have a meaningful impact on auto job access
- Transit jobs access loss is somewhat worse for low-income households and Equity Priority Community households
- Low-income household work and school trips fall by 1% in the fiscal cliff scenarios

# Transit Job Accessibility



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# Transit Crowding

OPERATOR	TOLL SURCHARGE SCENARIO	ACROSS THE BOARD CUTS	TARGETED CUTS
<b>Crowded Passenger Miles</b>			
<b>All Operators</b>	-500 (-0.3%)	222,000 (+130%)	143,000 (+85%)
<b>Muni</b>	-2,000 (-3%)	74,000 (+90%)	26,000 (+32%)
<b>Other Operators</b>	2,000 (+2%)	148,000 (+174%)	117,000 (+138%)

- Fiscal cliff scenarios significantly increase transit crowding
- The share of crowded passenger miles increases from 4% in the Baseline to
  - 11% with Across the Board Cuts
  - 9% with Targeted Cuts
- Fiscal cliff impact is most pronounced on AC Transit transbay buses and some Muni lines

# Bridge Traffic

BRIDGE (WESTBOUND OR SOUTHBOUND)	TOLL SURCHARGE SCENARIO	ACROSS THE BOARD CUTS	TARGETED CUTS
Bay Bridge	-2,000 (-1%)	Flat	Flat
Richmond - San Rafael Bridge	-1,000 (-2%)	Flat	Flat
San Mateo Bridge	-1,000 (-3%)	Flat	Flat
Golden Gate Bridge	Flat	Flat	Flat

- The Toll Surcharge Scenario has a modest impact on affected crossings, reducing daily traffic by 1-3%
- Fiscal cliff scenarios have insignificant impact on bridge traffic (<1,000 vehicles per day)
- Bay Bridge AM peak period traffic is nearly at pre-pandemic high
  - The bridge does not have capacity to accommodate peak period mode shift from transit

# Vehicle Travel and Delay

EVALUATION MEASURE	TOLL SURCHARGE SCENARIO	ACROSS THE BOARD CUTS	TARGETED CUTS
Vehicle Delay (hours)	-7,000 (-1%)	3,000 (+0.3%)	1,000 (+0.1%)
Vehicle Travel (miles)	-170,000 (-0.1%)	220,000 (+0.2%)	140,000 (+0.1%)

- The toll policy moderately reduces traffic delay and vehicle miles
- Fiscal cliff transit service moderately increases traffic delay and vehicle miles
- In all scenarios the Bay Bridge corridor remains heavily congested

# Thank you.

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# Approach

- **SF-CHAMP 6.1.2 - COVID Express**

- CHAMP version developed for COVID scenario modeling. Includes parameters to adjust work from home and transit avoidance

- **Land Use**

- 2023 land use estimates
  - San Francisco pop: 832,000
  - Bay Area pop: 7,549,000

- **Transportation Networks**

- Fall 2023 service on Muni, BART, Caltrain, and bus operators
- 2025 bridge toll policy

- **Model Validation**

- Monthly 2023 ridership data for Muni, BART, and Caltrain
- APTA 2023 Q2 ridership data for additional operators
- BATA toll bridge crossings through May 2023