

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

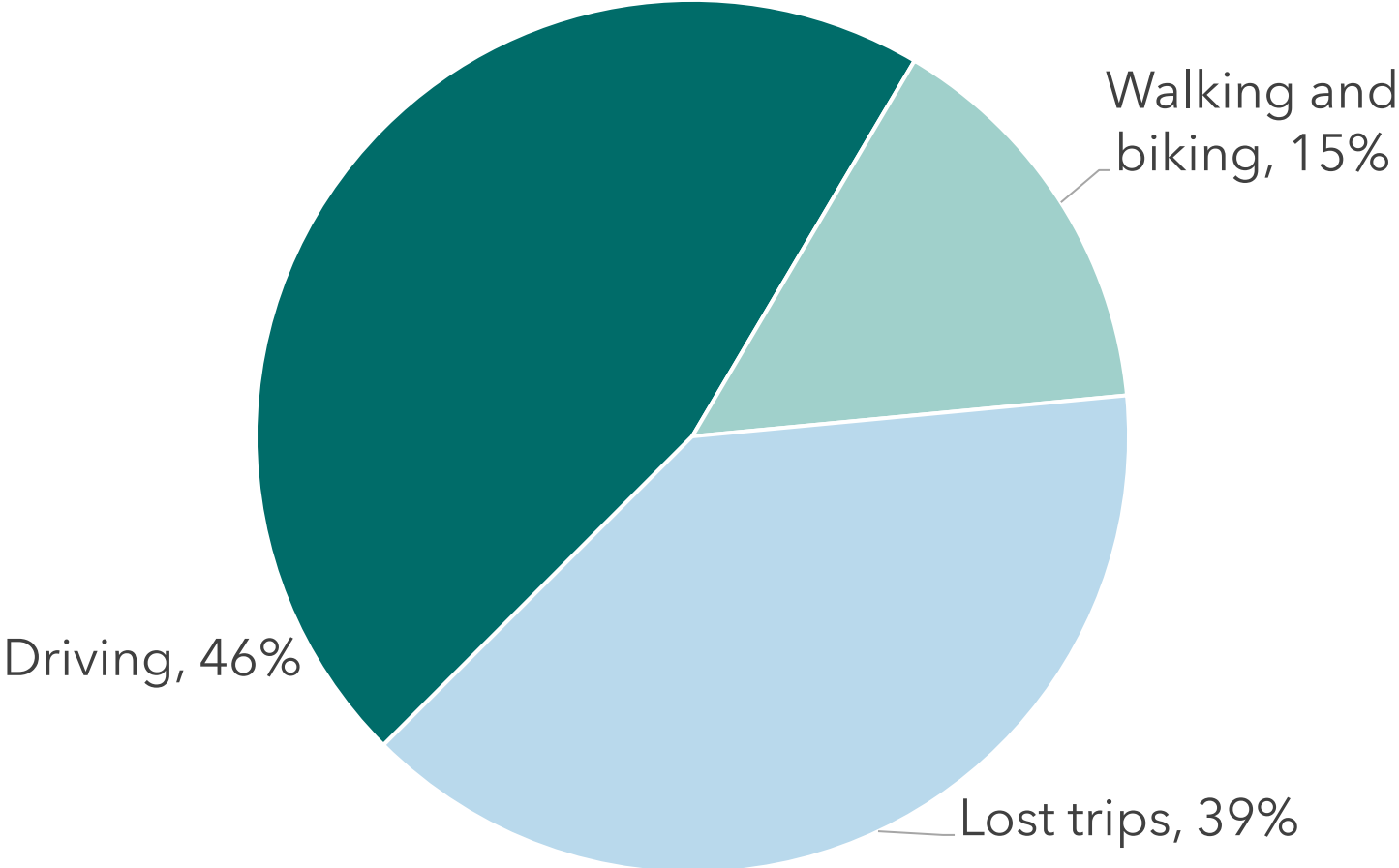
- Work from home and transit hesitancy
 - Model is calibrated and validated to 2023 traffic and transit ridership
 - Conditions are dynamic
- Transit capacity
 - No capacity constraint in this version of SF-CHAMP
- Secondary effects
 - Lower transit ridership / revenue
 - Land use patterns
 - Household 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?

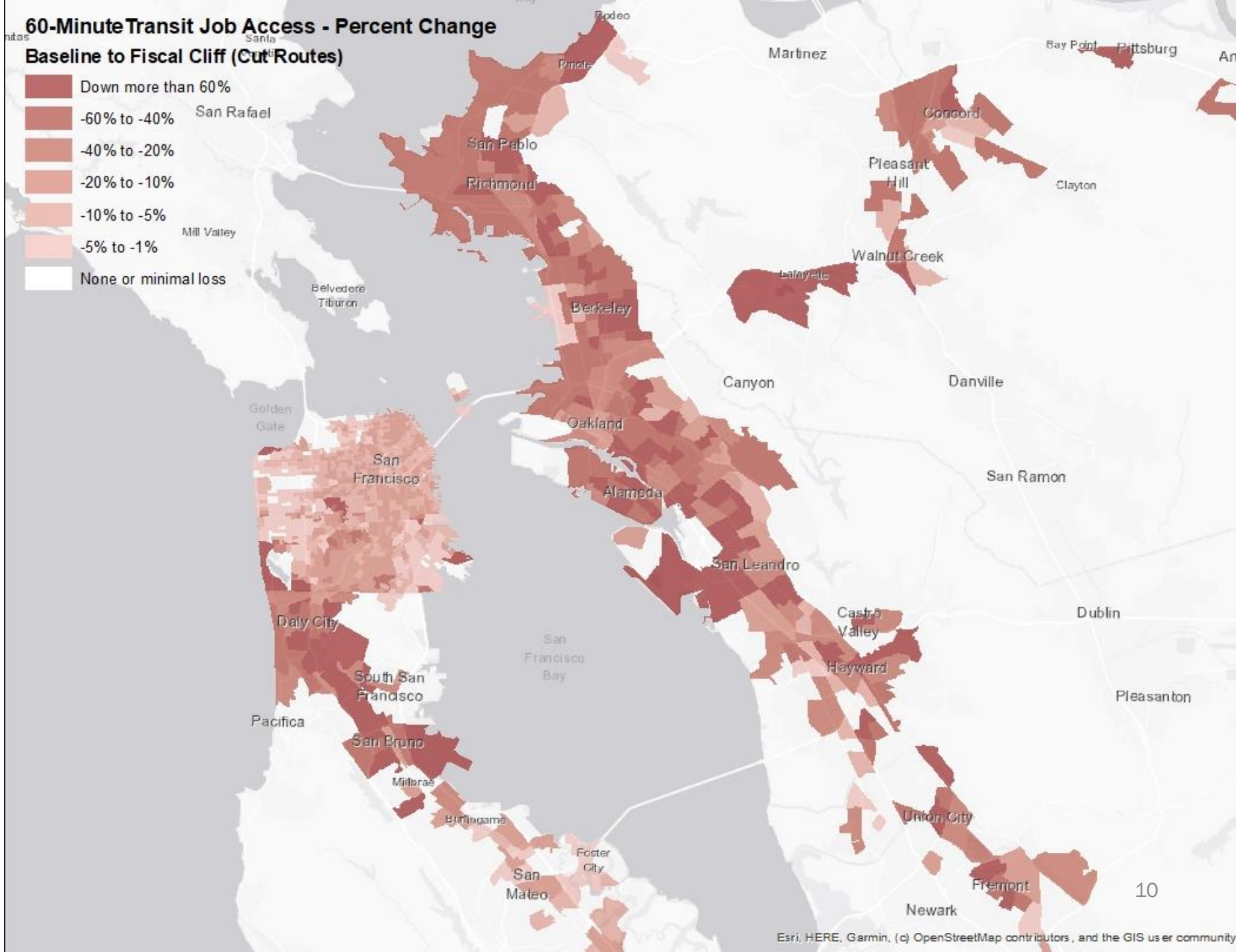


Job Accessibility

EVALUATION MEASURE	TOLL SURCHARGE SCENARIO	ACROSS THE BOARD CUTS	TARGETED CUTS
Transit Job Access (45-Minute)			
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%)
Transit Job Access (60-Minute) - Equity Comparison			
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



Transit Crowding

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