

SAN FRANCISCO MOBILITY, ACCESS & PRICING STUDY and URBAN PARTNERSHIP GRANT



SFMTA Board

September 18, 2007

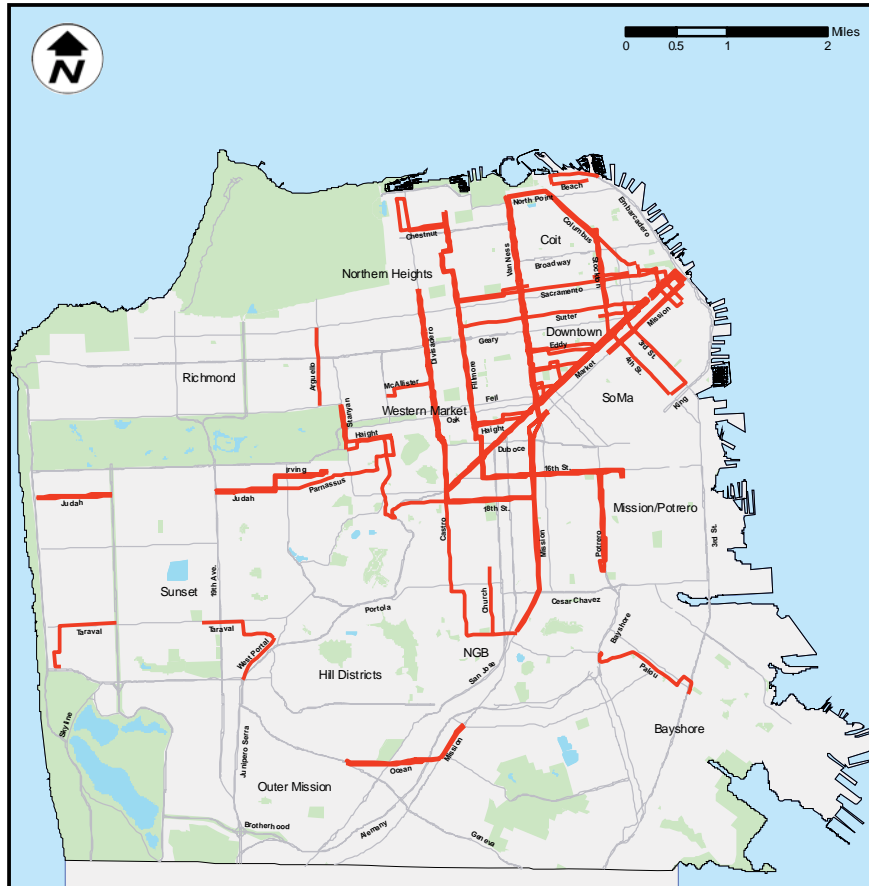
Tilly Chang and Elizabeth Bent, SFCTA

- ❖ The Congestion Problem
- ❖ The Policy Response: Congestion Pricing and Mobility Investment
 - Defining Congestion Pricing
 - Case Studies
- ❖ The Mobility Access and Pricing Study

THE CONGESTION PROBLEM



Congested Transit Routes



— Congested transit segment (travel speed of 8 MPH or less)

Source: Spring 2006 LOS Monitoring for Congestion Management Plan

Congested Auto Routes



— Congested freeway (travel speed of 30 MPH or less)

— Congested city street (travel speed of 10 MPH or less)

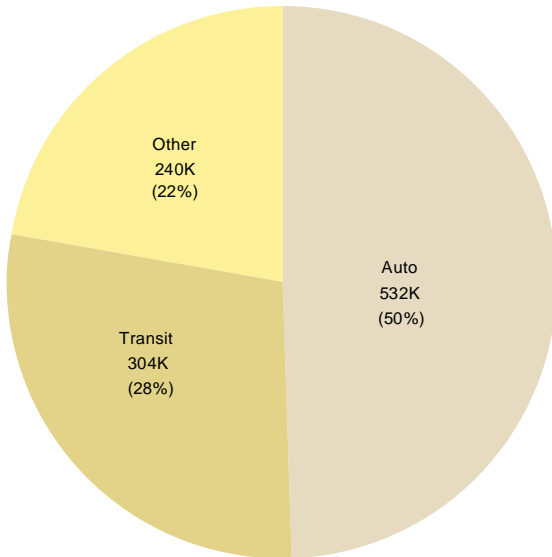
Source: Spring 2006 LOS Monitoring for Congestion Management Plan

TRAVEL to DOWNTOWN SF

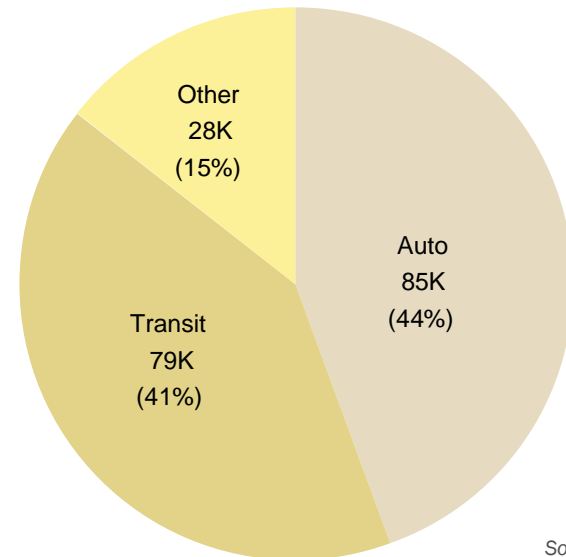


- ❖ About 1,000,000 trips daily to Downtown, Civic Center, and SOMA
- ❖ About 400,000 in the AM/PM peak periods

Mode Share to downtown SF
(daily)



Mode Share to downtown SF
(during PM peak)

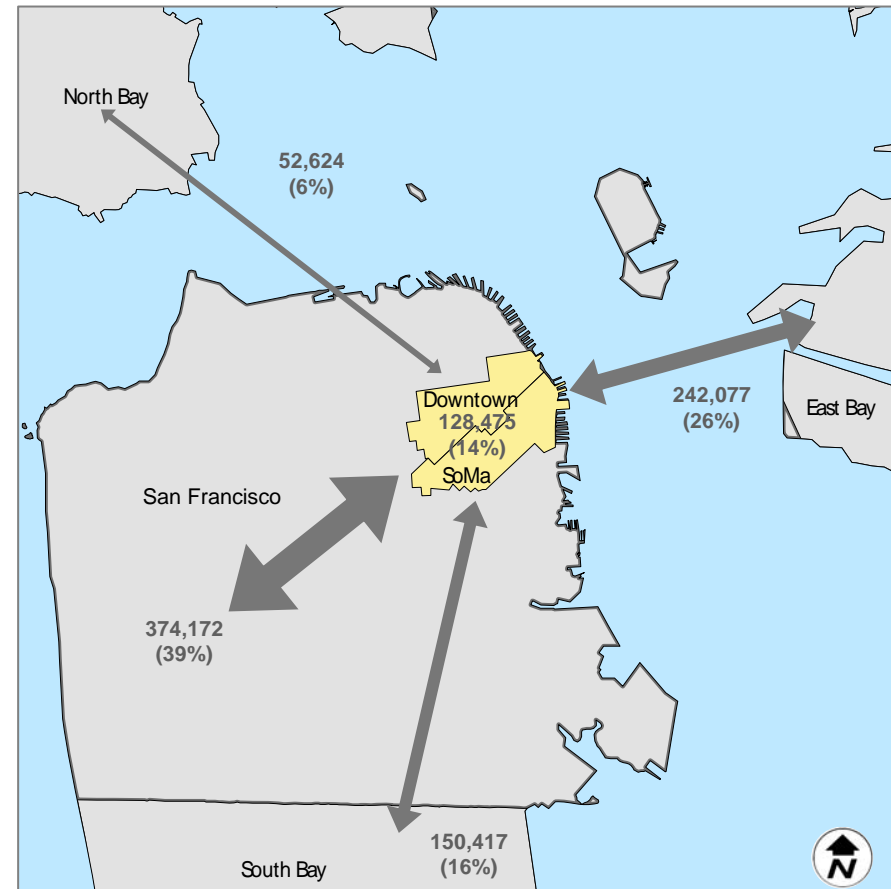


Source: SF-CHAMP

❖ Transit mode share to/from downtown (42%, pm peak)

- San Francisco: 25,000
- Bay Area: 51,000
 - South Bay/Peninsula: 23%
 - East Bay: 67%
 - North Bay: 41%

Daily Trips to/from San Francisco
(2005)

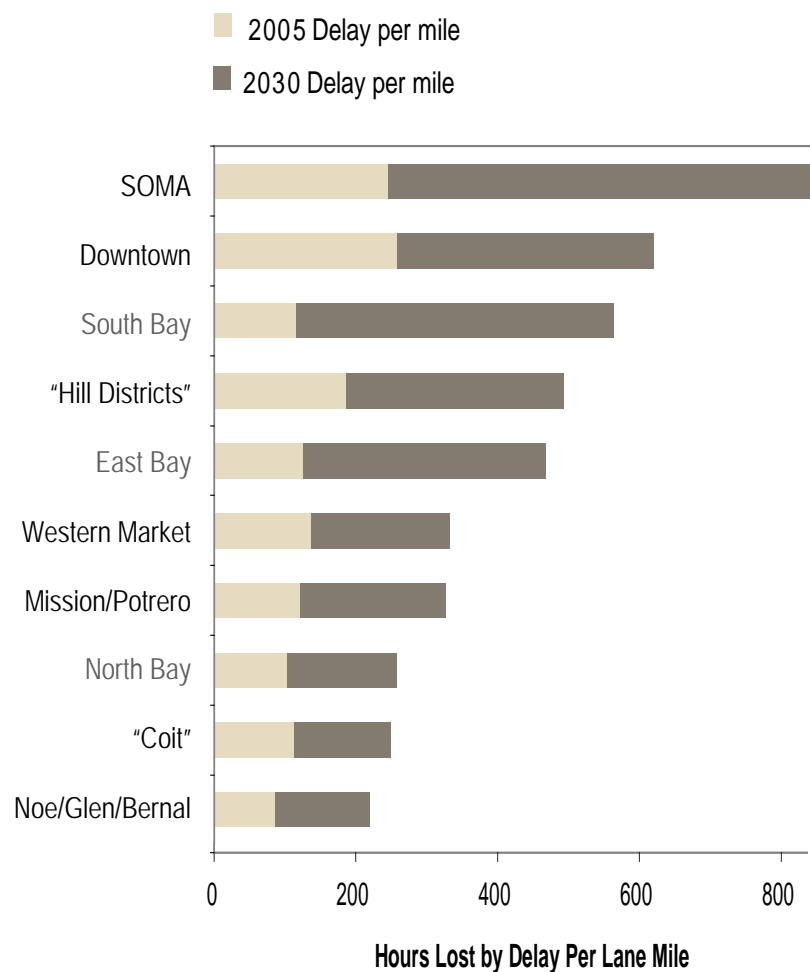


Source: SF-CHAMP

Congestion causes significant delays

- ❖ Delay accounts for about half of an average regional trip (17 of 32 mins)
- ❖ 7.3 million hours lost to drivers daily by 2030
 - Delay could grow to 73% of average trip
- ❖ Downtown & SOMA experience worst delays (27% of regional delay)

Top Ten Congested Areas in the Bay Area

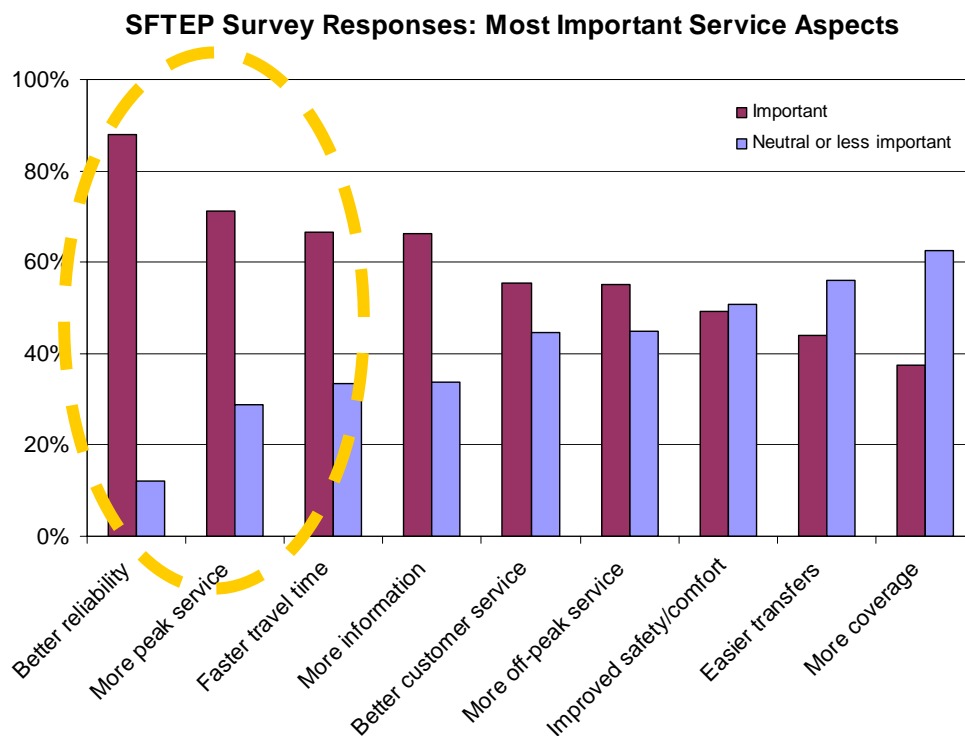


SYSTEM IMPACTS of CONGESTION



Congestion degrades transit performance

- ❖ Bus speeds are 9 – 35% slower than autos
- ❖ Transit reliability continues to hover around 70%
- ❖ Many lines operating below 8 mph
- ❖ Declining funding, but more stringent service standards



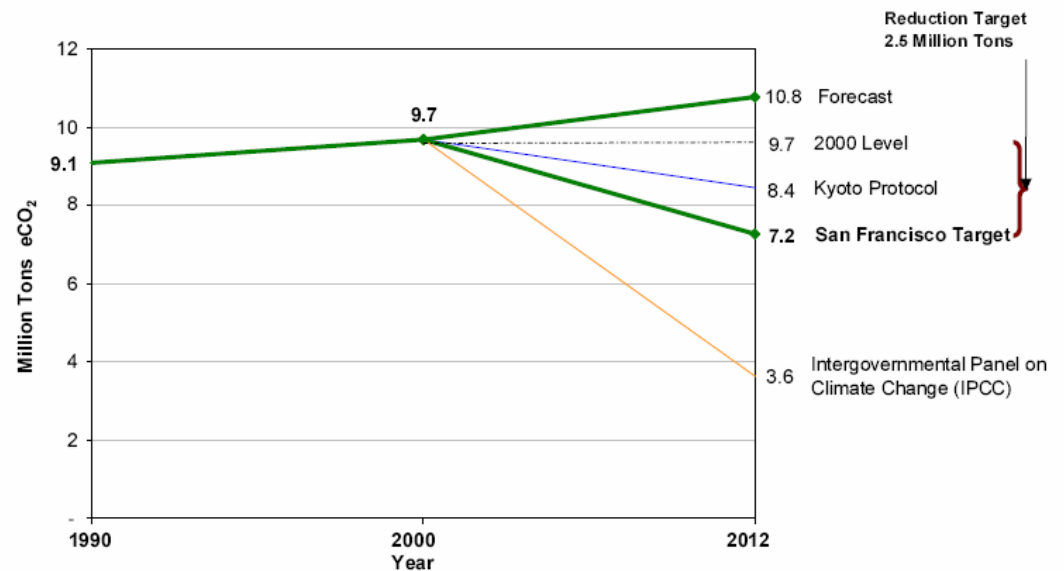
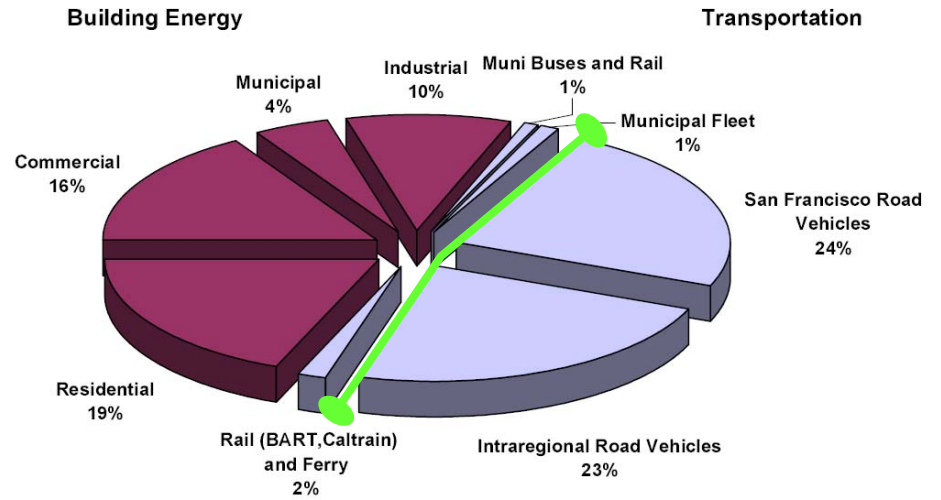
CONGESTION and the ENVIRONMENT



❖ Private autos produced 47% of emissions in SF in 1990

- total eCO₂ was 9.1M tons
- projected to increase to 10.8M tons by 2012

❖ SF reduction target: 20% below 1990 by 2012 (SF Climate Action Plan)



Source: SF Climate Action Plan

- ❖ Congestion cost the region ~\$42B in 2005

	2005 Annual Congestion Cost (in millions)*			
	Cost of Lost Time	Cost of Excess Fuel	Cost to Goods Movement	Total Cost of Congestion
San Francisco	\$1,725	\$300	\$275	\$2,325
Downtown & SOMA	\$450	\$80	\$75	\$600
	2030 Annual Congestion Cost (in millions)*			
	Cost of Lost Time	Cost of Excess Fuel	Cost to Goods Movement	Total Cost of Congestion
San Francisco	\$2,850	\$450	\$500	\$3,800
Downtown & SOMA	\$950	\$150	\$150	\$1,250

* Figures are rounded and may not total exactly
Source: SF-CHAMP

❖ Road safety

- 9% reduction in pedestrian injuries (London)
- 20% increase in bicycle trips (London)

❖ Public health

- Lower emissions
- More active lifestyle

❖ Community & civic life

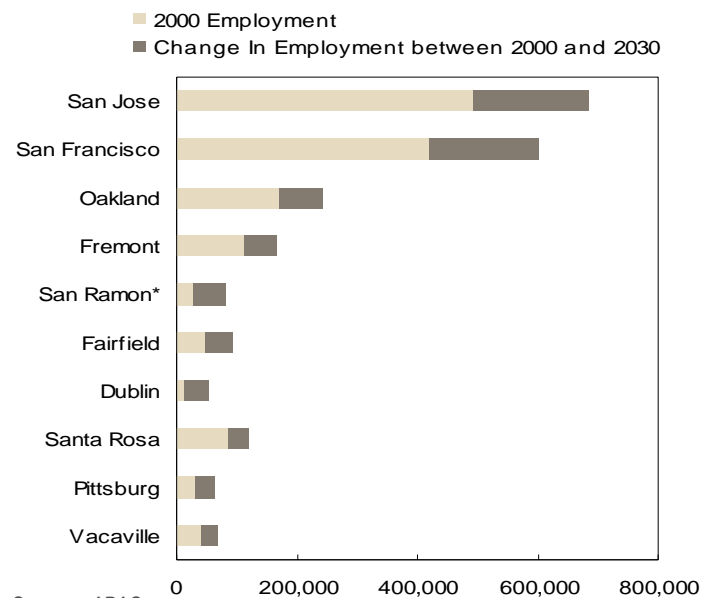
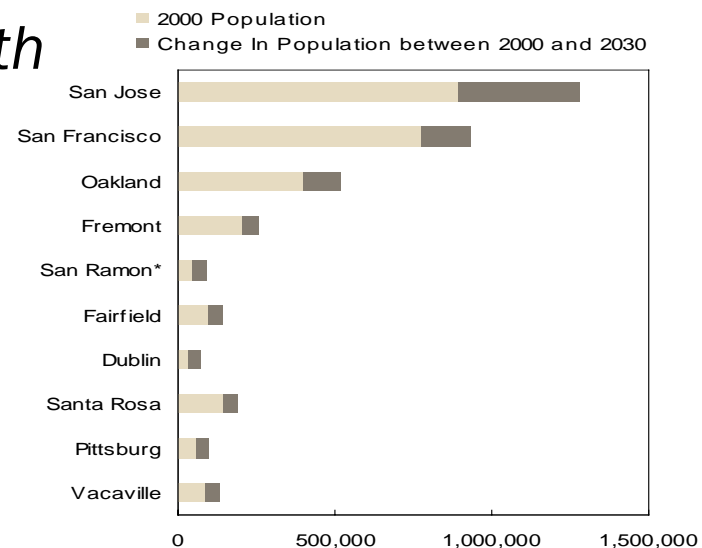
- More opportunities for participation and leisure time with family



“Traffic congestion affects virtually every aspect of people’s lives – where people live, where they work, where they shop, and how much they pay for goods and services.” – USDOT

Congestion is a barrier to sustainable growth

- ❖ City and regional population expected to grow 15 - 20% by 2030
- ❖ Regional employment expected to grow significantly by 2030
 - San Francisco jobs: +43%
 - San Jose jobs: +38%
- ❖ Areas expecting growth also face congestion



Source: ABAG

- ❖ Economic tool for managing scarce, underpriced resources
- ❖ Successful implementation in London (2003)
- ❖ SF Countywide Transportation Plan (2004)
- ❖ SF Climate Action Plan (2004)

Transportation Action Categories	Estimated CO ₂ Reduction (tons/year)
A. Increase the Use of Public Transit as an Alternative to Driving	87,000
B. Increase the Use of Ridesharing as an Alternative to Single Occupancy Driving	42,000
C. Increase Bicycling and Walking as an Alternative to Driving	10,000
D. Support Trip Reduction Through Employer-Based Programs	28,000
E. Discourage Driving	155,000
F. Increase the Use of Clean Air Vehicles and Improve Fleet Efficiency ²	641,000
Total	963,000

Source: San Francisco Department of Environment

Figure 1-5

Congestion Management in the General Plan and Countywide Transportation Plan

Transit First Policy:

- » Encourage multimodalism – the use of transit and other alternatives to the single-occupant automobile
- » Give priority to the maintenance and expansion of the local transit system and improvement of regional transit connections

Transportation Demand Management:

- » Reducing the demand for the private automobile and promote alternatives such as transit, walking, bicycling and car-sharing

Transportation System Management:

- » Optimize the cost-effective use of existing facilities
- » Prioritize the movement of people and goods rather than vehicles

Parking Management:

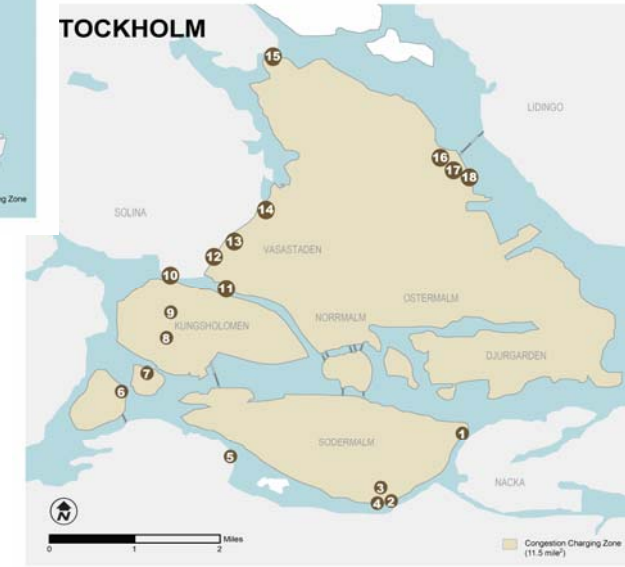
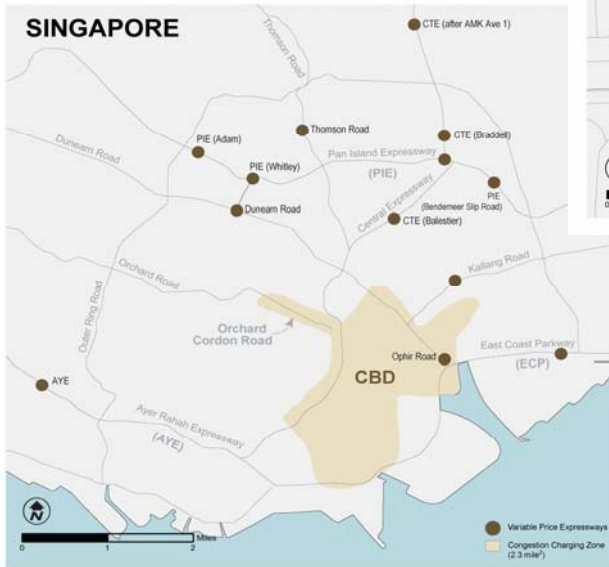
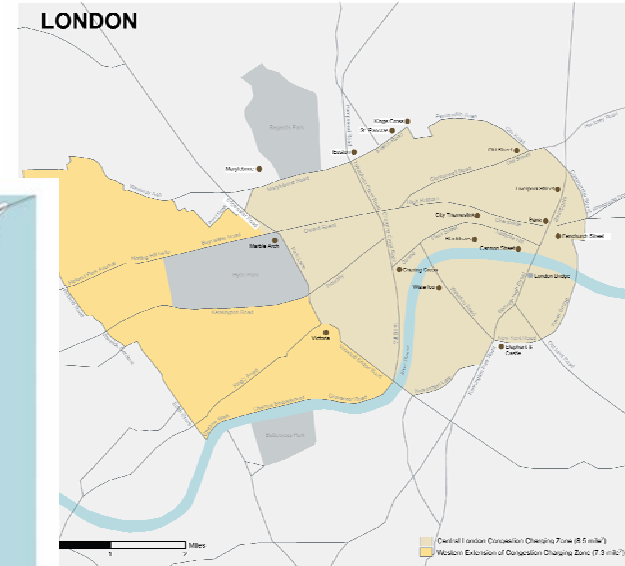
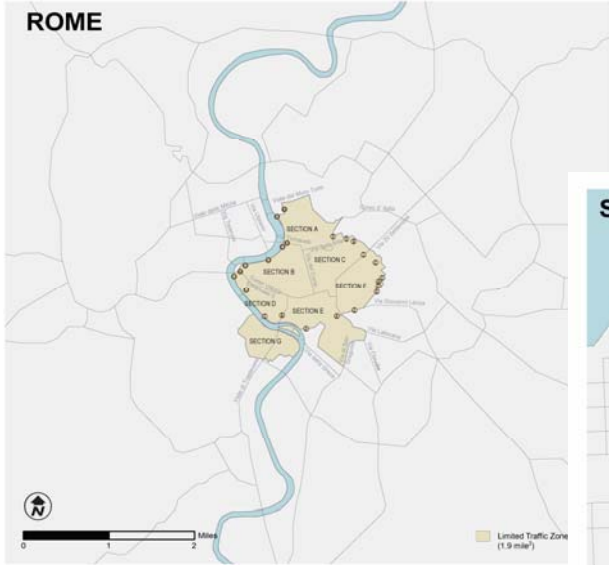
- » Minimize needed parking, particularly all-day or long-term parking
- » Encourage short-term parking, ridesharing, transit, bicycling, shared parking, and appropriate pricing of parking services

WHAT IS “CONGESTION PRICING”?

- ❖ User fee paid by motorists on congested roads or routes
- ❖ Benefits and program vary according to conditions, goals, impacts
- ❖ Revenues reinvested in transportation improvements
- ❖ “Barrier-free” detection and enforcement
- ❖ Multiple, convenient payment methods
- ❖ On-street signage



CONGESTION PRICING in PRACTICE

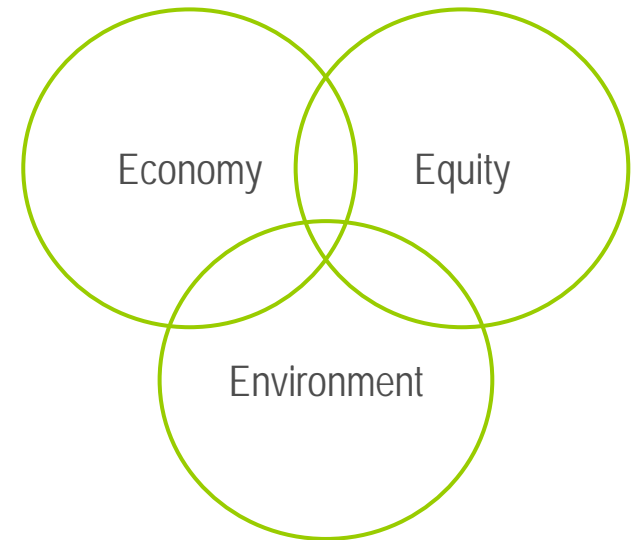


- ❖ Improving system performance and investment
 - Improved travel times
 - Reduced travel time variability
 - Increased speeds
 - Increased non-auto mode share

- ❖ Enhancing environment and quality of life
 - Improved air quality
 - Improved road safety
 - More leisure time, participation in civic life

- ❖ Maintaining economic vitality
 - Efficient goods movement (reliable deliveries)
 - Improved trips to trade, retail, employment centers
 - Decreased travel costs for individuals and businesses

- ❖ Supporting growth
 - Consistent with Transit First Policy
 - Better land use decisions

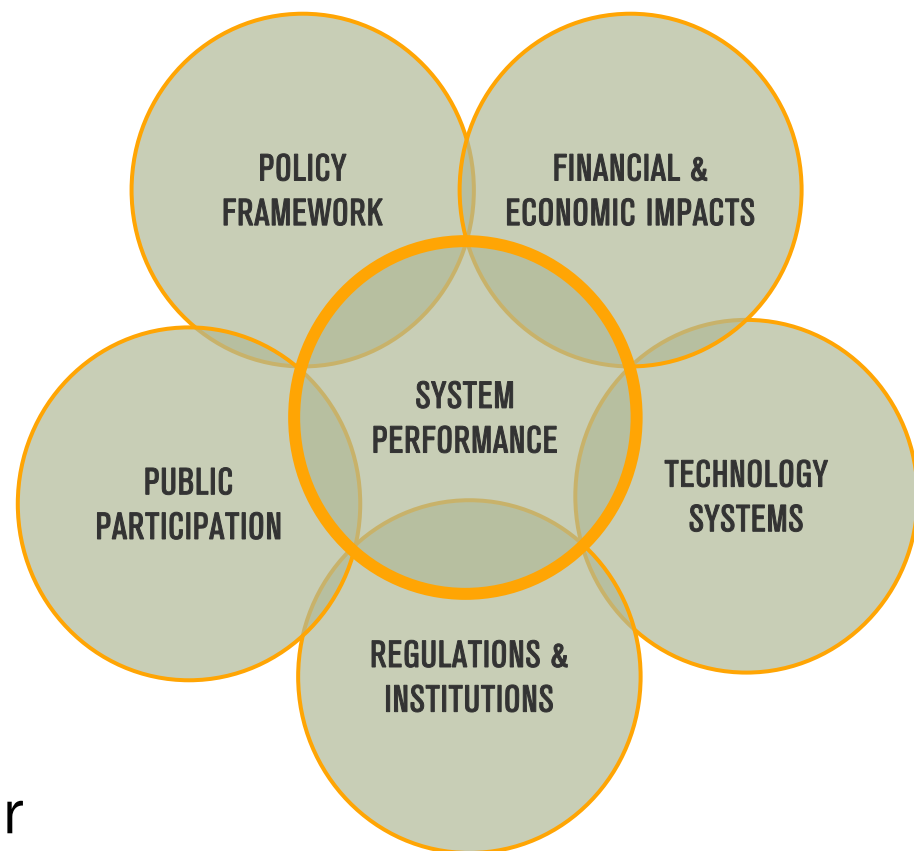


Study Approach:

- ❖ Congestion should be *managed*, not eliminated
- ❖ Support balance by investing in *more sustainable alternatives* to private autos
- ❖ Establish *performance-based criteria* for allocating funds to alternatives
- ❖ Ensure *realistic options* by emphasizing fast delivery of infrastructure and services



- ❖ Feasibility for San Francisco
 - severity of auto *and* transit congestion
 - availability of auto alternatives
- ❖ Define and evaluate potential mobility packages
 - mobility and accessibility
 - environment quality of life
 - economic vitality
- ❖ Determine costs and revenues of potential packages
- ❖ Develop recommendations and/or potential implementation plan

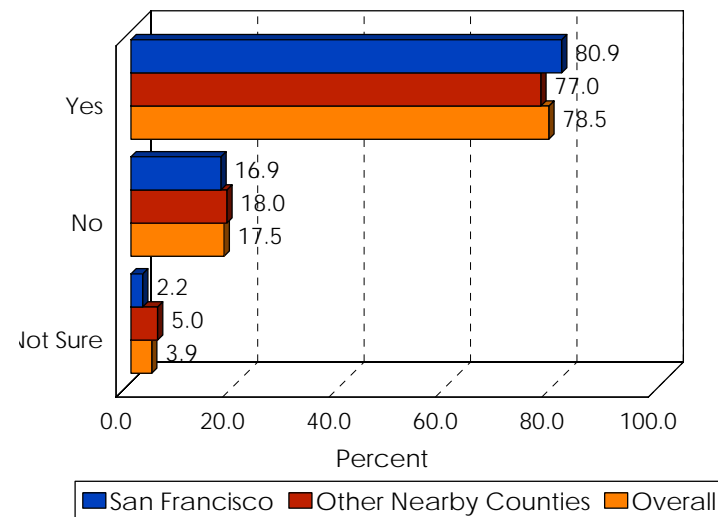


WHAT WE'VE LEARNED FROM USERS...

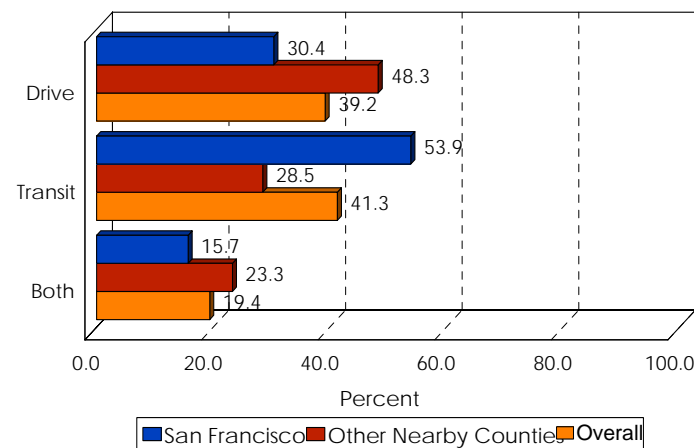


- ❖ 88% of all travelers consider downtown SF congested
- ❖ 60% of all travelers visit downtown SF in off-peak hours
- ❖ Majority of travelers have transit options
- ❖ Top benefits expected: environment and traffic reduction
- ❖ Top concerns: affordability, business impacts, and skepticism

Availability of Transit to downtown SF



Access Modes to downtown SF

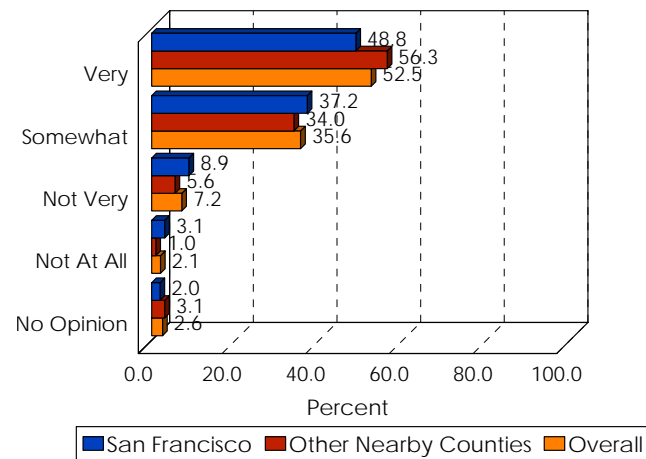


...and WHAT IT MEANS

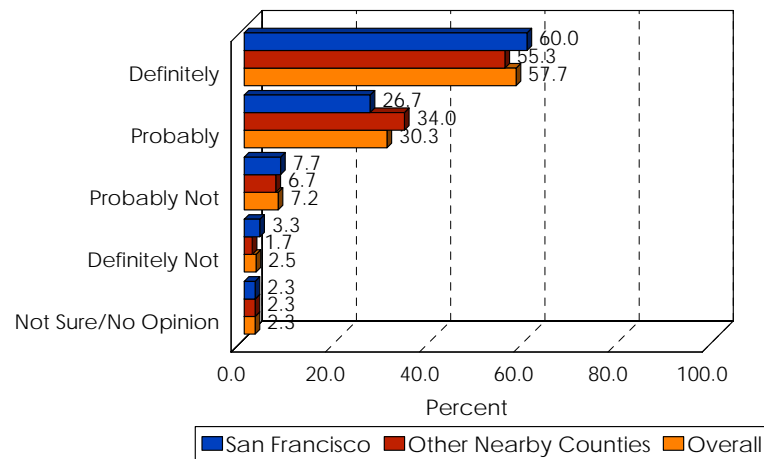


- ❖ Perceptions of congestion are strong
- ❖ Need to better understand travel characteristics of peak period trips
- ❖ Transit is broadly available; need to look at quality and level of service in specific markets
- ❖ More education on congestion pricing needed
- ❖ Need to rebuild public trust through transparency and efficient delivery

Perceptions of Congestion in Downtown San Francisco



Perception that City should Address Congestion in Downtown San Francisco



❖ Policy Working Group

- SFMTA
- Mayor's Office of Economic Development
- BART
- MTC/BATA
- SF Planning Department
- Caltrans
- Golden Gate Bridge District
- Alameda County Congestion Mgmt Agency
- FHWA, FTA

❖ Technical Advisory Committee

- SFMTA
- BART
- Caltrain/SamTrans
- AC Transit
- MTC/BATA
- ABAG
- Bay Area Air Quality Mgmt District
- Golden Gate Bridge District
- Port of SF
- Etc...

❖ Business Advisory Council

- Bay Area Council
- SF Chamber of Commerce
- Union Square Association
- Market Street Association
- Transportation Mgmt Association
- UCSF
- PG&E
- AAA
- Etc...

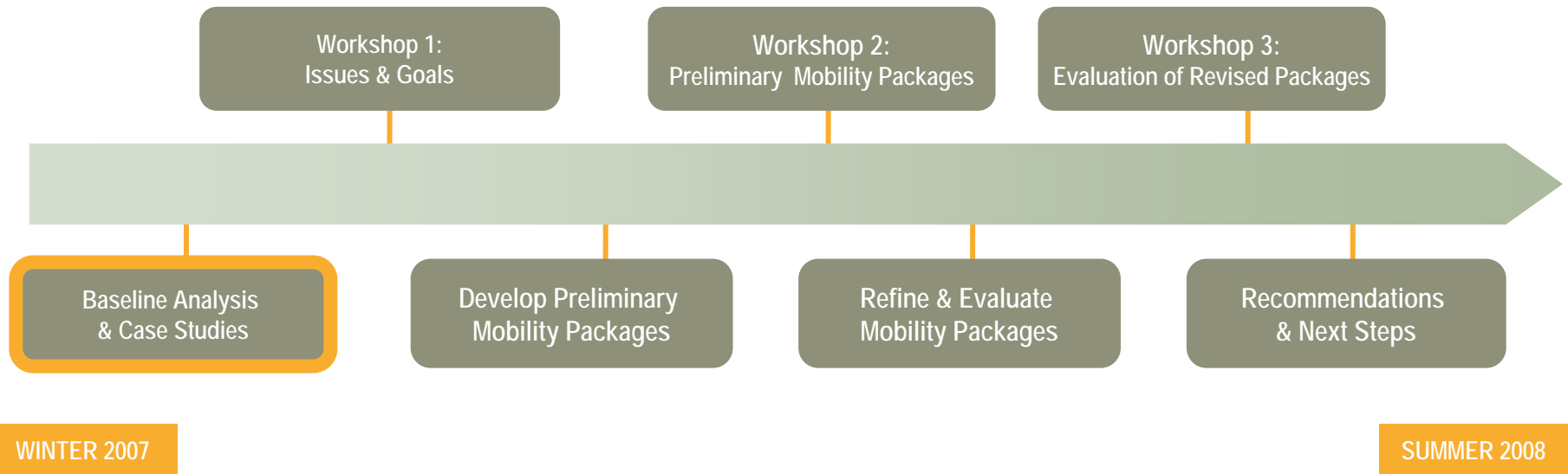
❖ Stakeholder Task Force

- SPUR
- TALC
- Sierra Club
- Livable City
- SF Bicycle Coalition
- Senior Action Network
- Walk SF
- SF Convention & Visitors Bureau
- Etc...

CURRENT MAPS TEAM ACTIVITIES



- ❖ Model development
- ❖ Alternatives design
- ❖ Transit operator interviews
- ❖ Market research
- ❖ Direct outreach, workshop planning

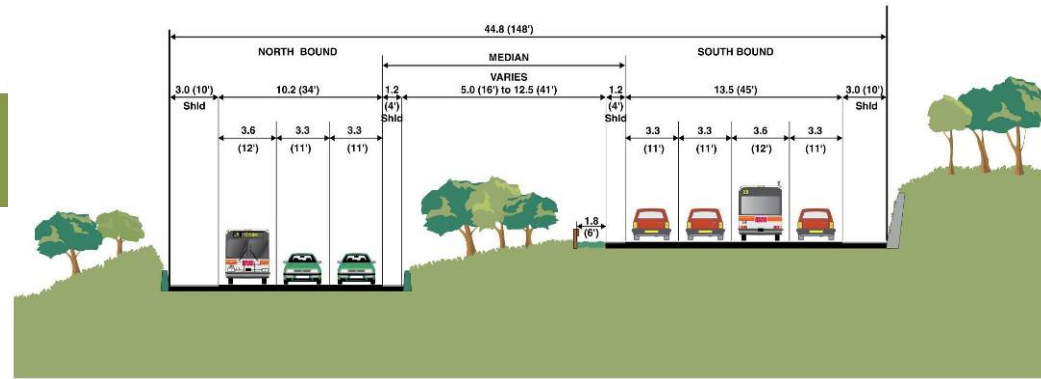
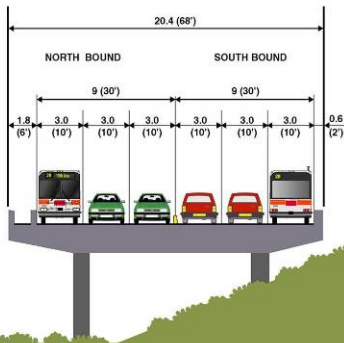




*SF selected as a US DOT Urban Partner;
Region to receive \$159M in grant funds*

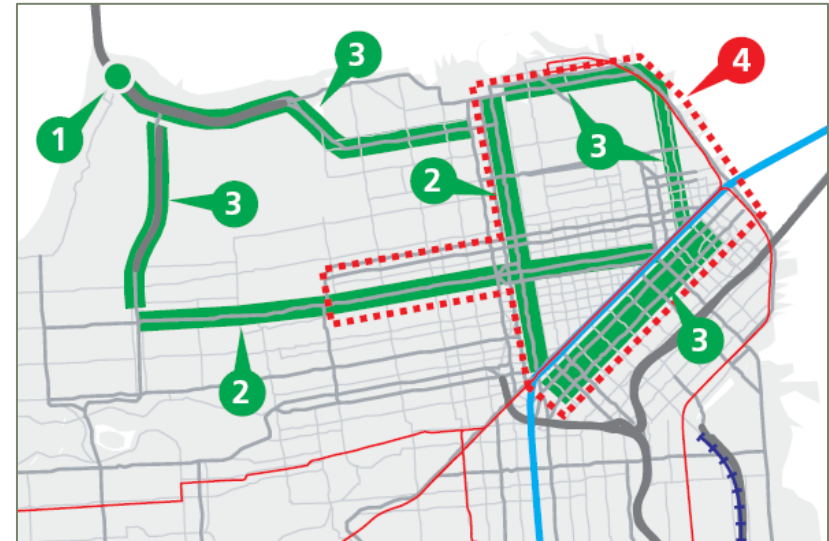
- ❖ Doyle Drive Value Pricing Program is centerpiece
- ❖ Program demonstrates US DOT's 4Ts of congestion management:
 - tolling (congestion pricing)
 - transit and ferry investments
 - technology
 - telecommuting
- ❖ Implementing agencies include: SFCTA, MTC, SFMTA, GGBHTD and Caltrans
- ❖ Legislative authority is required to access grant funds

DOYLE DRIVE REPLACEMENT PROJECT



- ❖ Highest priority safety project in the state
 - Worst rated bridge in the state (seismic), 2 of 100 nationally
- ❖ Parkway design to replace Doyle Drive (broad consensus)
- ❖ \$810M project: \$605M committed in state & local funds
 - Urban Partnership program offers additional \$35M Federal funds
- ❖ Existing facility tolled to fill funding gap (~\$165M), manage demand

- ❖ Doyle Drive Value Pricing Program (1)
 - toll Doyle Drive to close funding gap and manage congestion
- ❖ Arterial management (2, 3)
 - SFgo; transit signal priority
- ❖ Smart parking (4)
 - variable pricing
 - real-time information on availability
- ❖ Integrated mobility account
 - TransLink, FasTrak, parking, road pricing
- ❖ Expansion of City telecommuting program



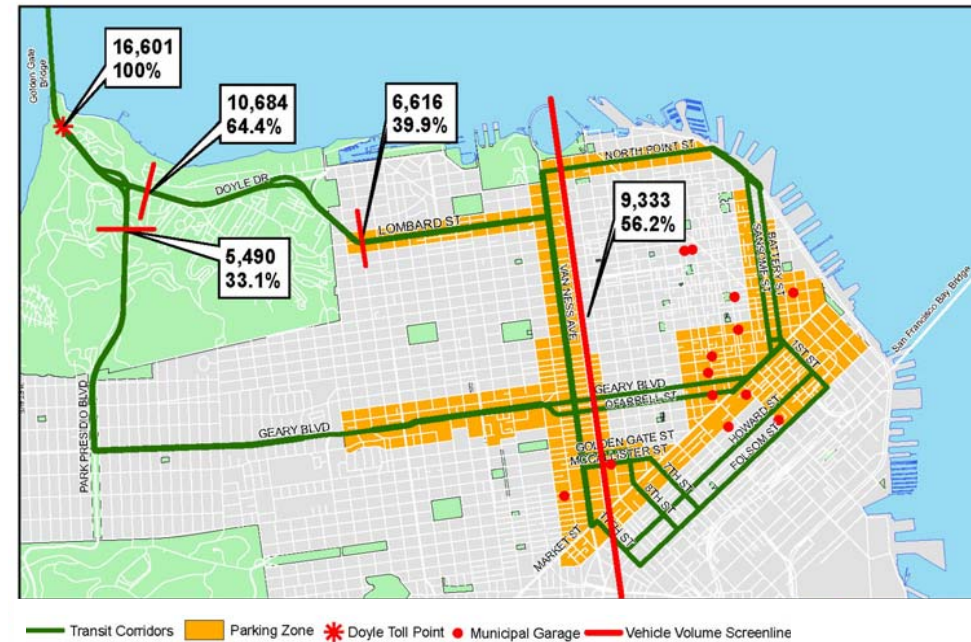
UPA GRANT SUMMARY



Project	Amount (millions)	Lead Agency
<i>Tolling subtotal</i>	67.3	
Doyle Drive Tolling	12.0	SF Transportation Authority
Doyle Drive Reconstruction	35.3	SF Transportation Authority
Parking Management (on and off-street)	20.0	SFMTA (TA for grant admin)
<i>Transit subtotal</i>	71.2	
SFgo at 500 intersections	58.0	SFMTA
Regional ferry service	12.8	GGBHTD
Travel forecasting for Grand/MacArthur Bus Project	0.4	Alameda County Congestion Management Agency
<i>Technology subtotal</i>	20.2	
Doyle Tolling: Back Office and Customer Support Center	11.2	SF Transportation Authority
Integrated Mobility Account		MTC
511 enhancements: real time transit, parking info, etc	8.0	MTC
DD VII testbed		MTC with Caltrans
GRAND TOTAL	158.7	

Travel Patterns:

- ❖ Most trips destined for downtown
 - 120,000 daily
 - 58,000 inbound
 - 16,500 inbound during AM peak
- ❖ Most trips from North Bay
 - 85% during AM peak hours
 - 70% during off-peak hours



Tolling Design:

- ❖ Preliminary toll studies: \$1-\$2/day could shift 10%-12% of traffic to off-peak or transit
- ❖ Updated toll study to be conducted pending CHAMP 4.0 model completion

MAPS is a feasibility study;

UPA project is a demonstration project

❖ UPA to demonstrate value:

- Close Doyle funding gap with self-help
- Manage peak period demand
- Showcase technology
- Concept of re-investing revenue in the Doyle/101 corridor
- Build public trust in government to deliver
 - Transparent public process
 - Public participation

❖ Monitoring and evaluation of Doyle program will help inform decision-making for potential area-pricing in SF

Current Efforts:

- ❖ Obtain Legislative Authority (deadline March 31, 2008)
- ❖ Grant Administration/Startup
 - Revise grant applications for 4 funding sources
 - TIP/STIP Amendments
 - RTP Amendments
 - Environmental clearance
- ❖ Develop more detailed Project Management Plans
 - Refine scopes, schedules and budgets for each Project
 - Coordinate overall Program management through Workshops (with MTC)
 - Develop procurement strategy
- ❖ Develop Pricing Policies: e.g. variable pricing, use of revenues, public involvement

THANK YOU!



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