

San Francisco Transportation Plan Update

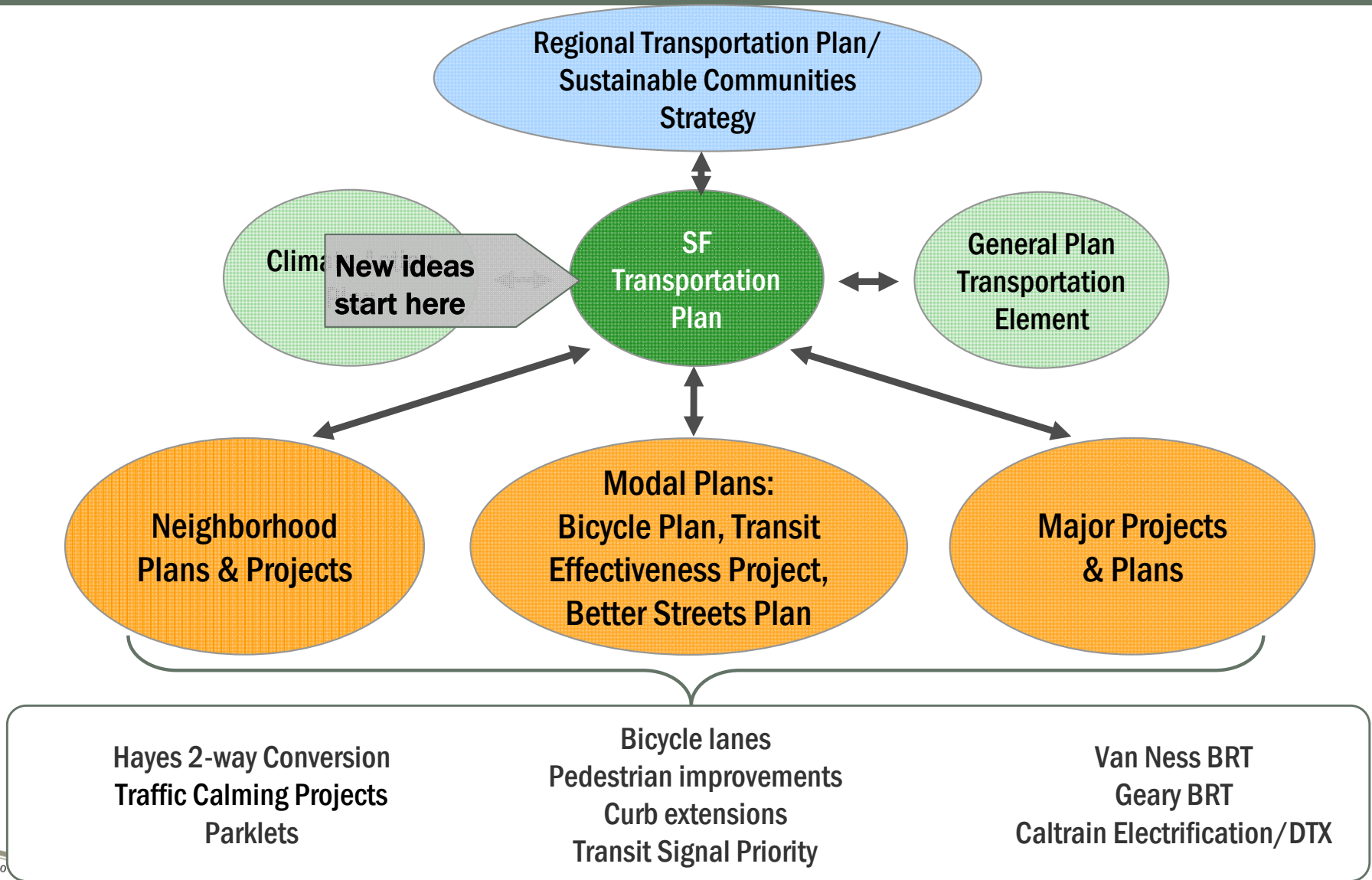
SPUR

August 1, 2011



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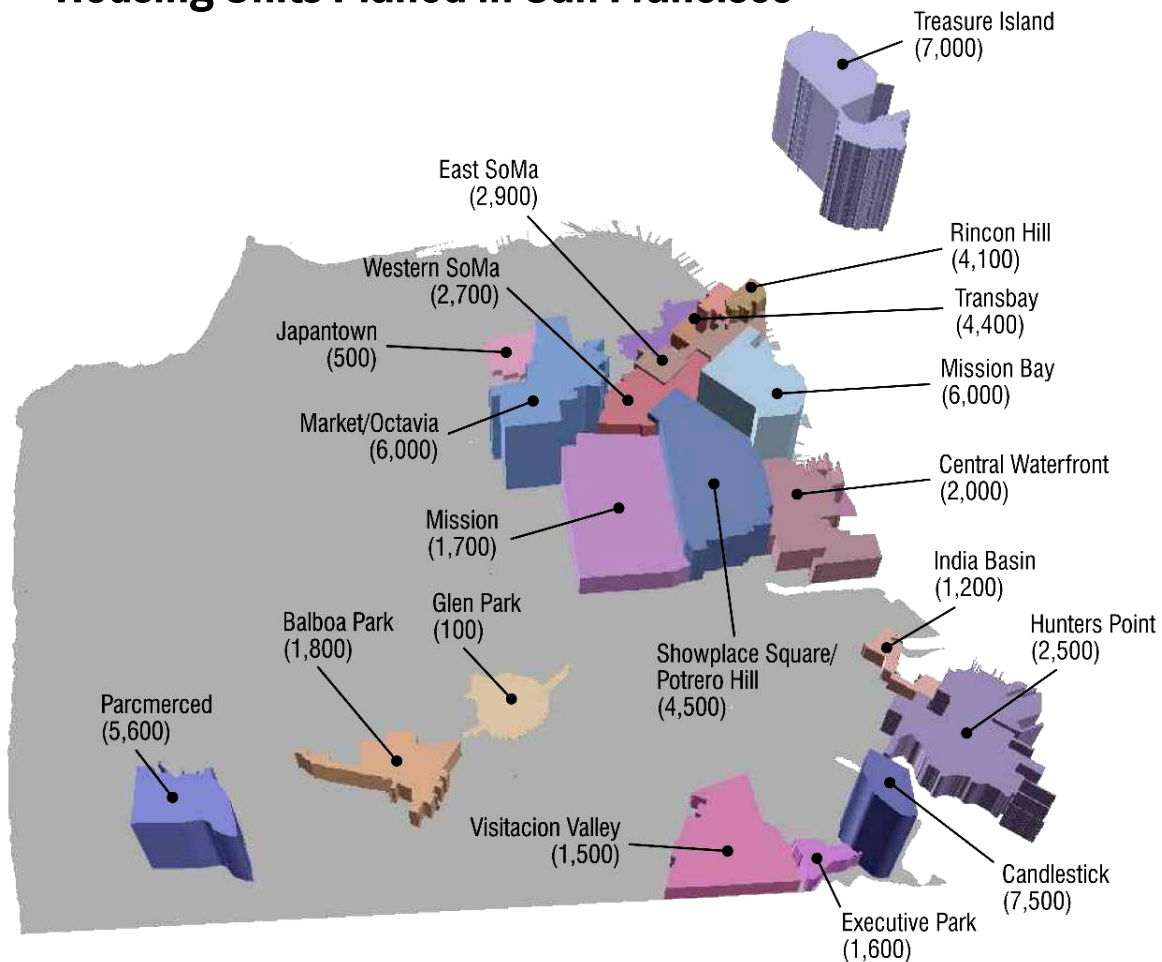
How does the RTP relate to the SFTP?



New SCS context: addressing climate change/ affordable housing through RTP

- SB 375, landmark legislation on land use, transportation and environmental planning passed in 2008
- Requires regions to add a new element to RTP called a **Sustainable Communities Strategy (SCS)** which must:
 - ▶ Reduce greenhouse gas (GHG) emissions from driving in the Bay Area by 15% per capita by 2035.
 - ▶ Identify a strategy to house the region's population at all income levels
- Region's growth projections for SF:
 - ▶ 71,000+ new households
 - ▶ 154,000+ new jobs

Housing Units Planned in San Francisco



Source: SF Planning Dept.

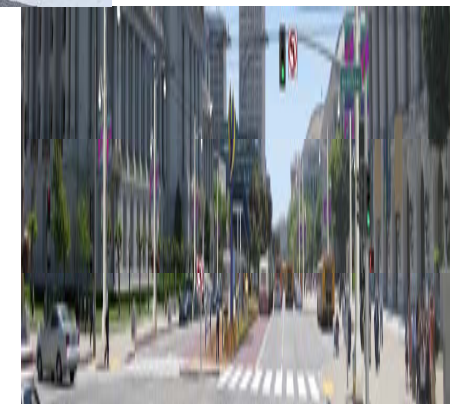


Spring 2011 RTP Call for Projects:

What we heard from members of the public

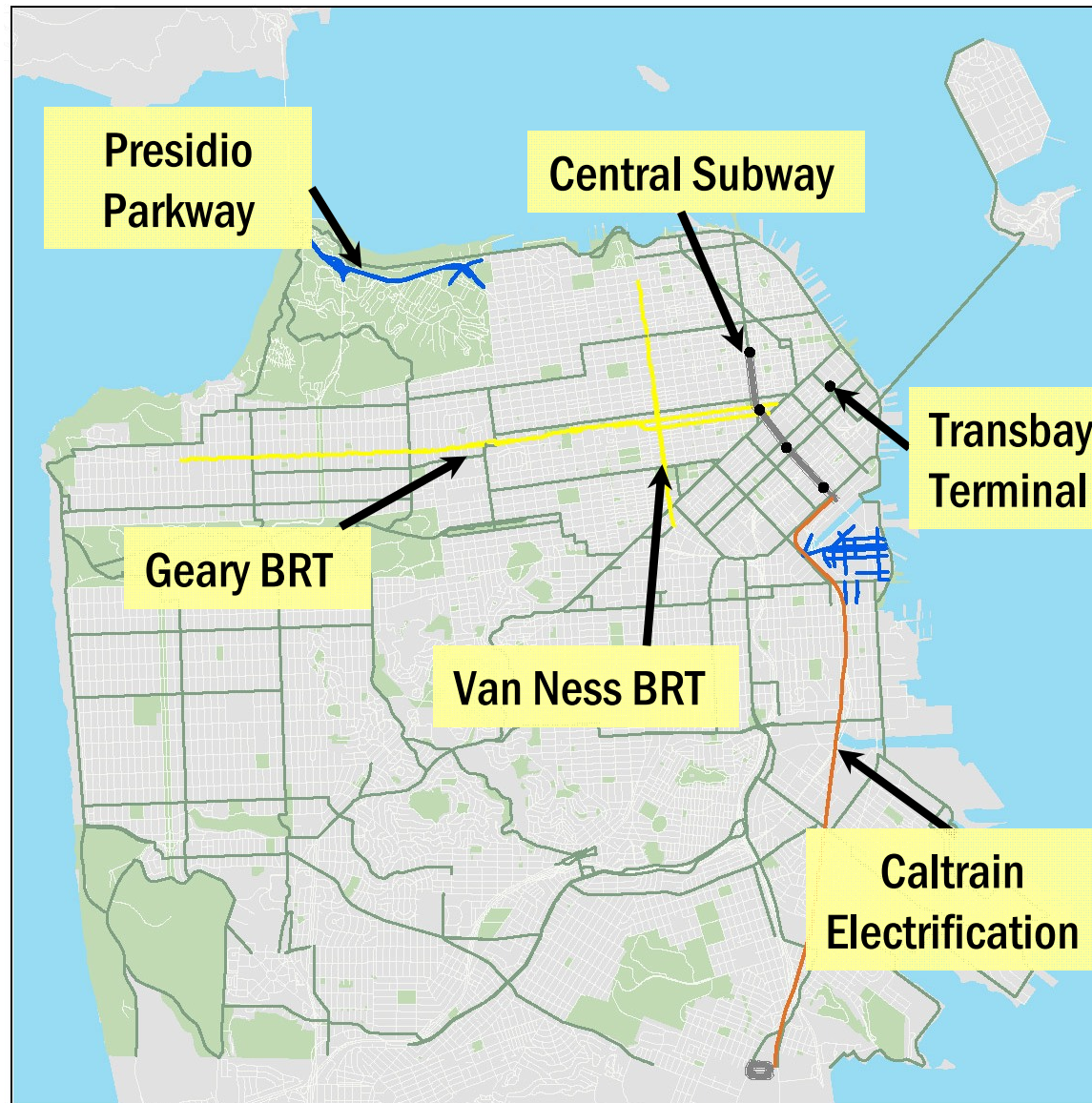
200+ ideas submitted:

- ▶ Support for projects already being pursued
- ▶ High demand for transit, pedestrian, cycling, traffic calming
- ▶ High demand for expansion of transit w/ designated right-of-way
- ▶ Demand for roadway capacity reduction projects (eg road diets)



Starting with the 2035 Baseline

Map of current planned/programmed/funded projects



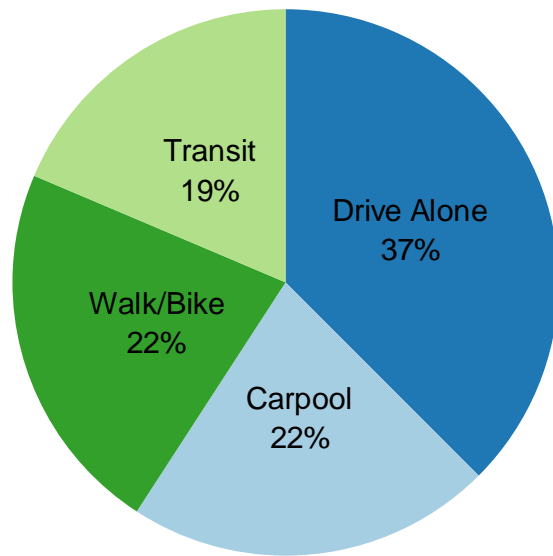
- New Transit Station
- Bus Rapid Transit
- Caltrain Electrification
- New Roadway
- Transit Infrastructure
- Bicycle Infrastructure Enhancements



About 790,000 additional daily trips by 2035

with over 330,000 new auto trips (~40%), little change in mode share

2035 Baseline Scenario:
41% Non-Auto
59% Auto



Absolute change, 2010 - 2035

	Total
Auto	-1%
Transit	2%
Walk/ bike	-1%



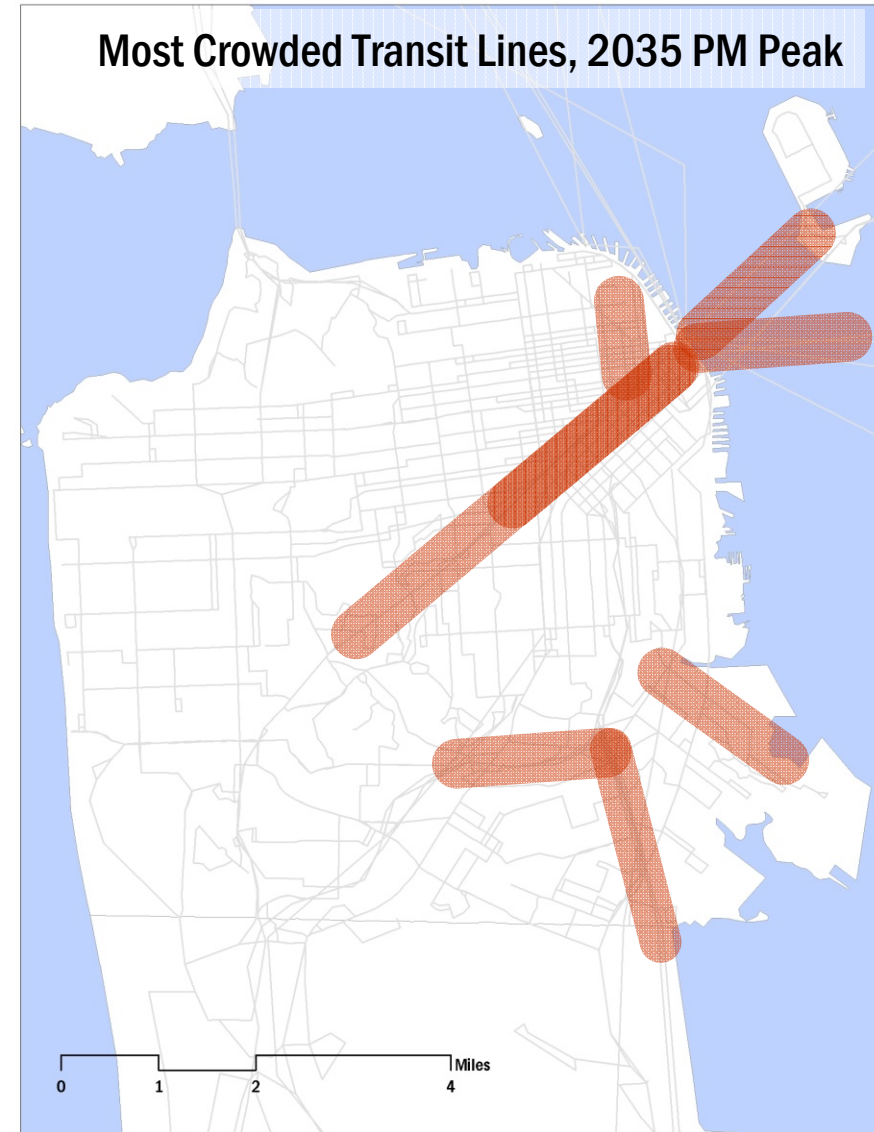
Transit Crowding

By 2035, twice as many transit lines expected to be crowded during PM peak periods

- **2010 5 SF Muni lines at/approaching crush loads**
 - ▶ F outbound, 30 inbound, 38L outbound, 45 outbound, J outbound
- **2035 trend increases from 27 to 57 crowded lines**
 - ▶ Of these, 35 are SF Muni
- **2035 loads expected to exceed over 2x capacity on**
 - ▶ 38L outbound, F outbound, 108

NB: Crowding factors vary by transit operator, eg 85% of capacity for Muni.

- "Crowded lines" can be characterized by standing room only, with standees shoulder-to-shoulder.
- Lines "exceeding capacity" are those where riders are likely to wait for more than one vehicle before they are able to board.

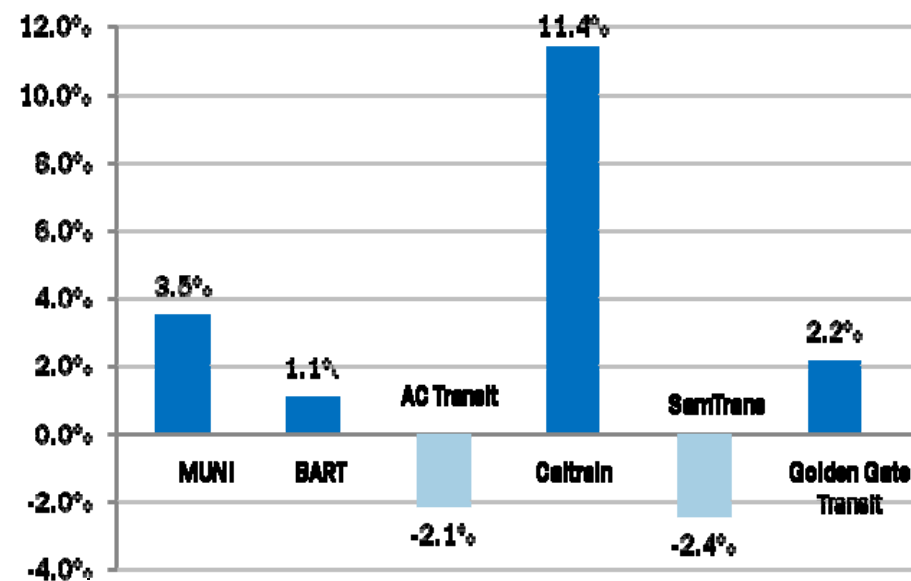


Operating Speed, Transit

Muni, Caltrain and GG Transit operating speeds expected to increase

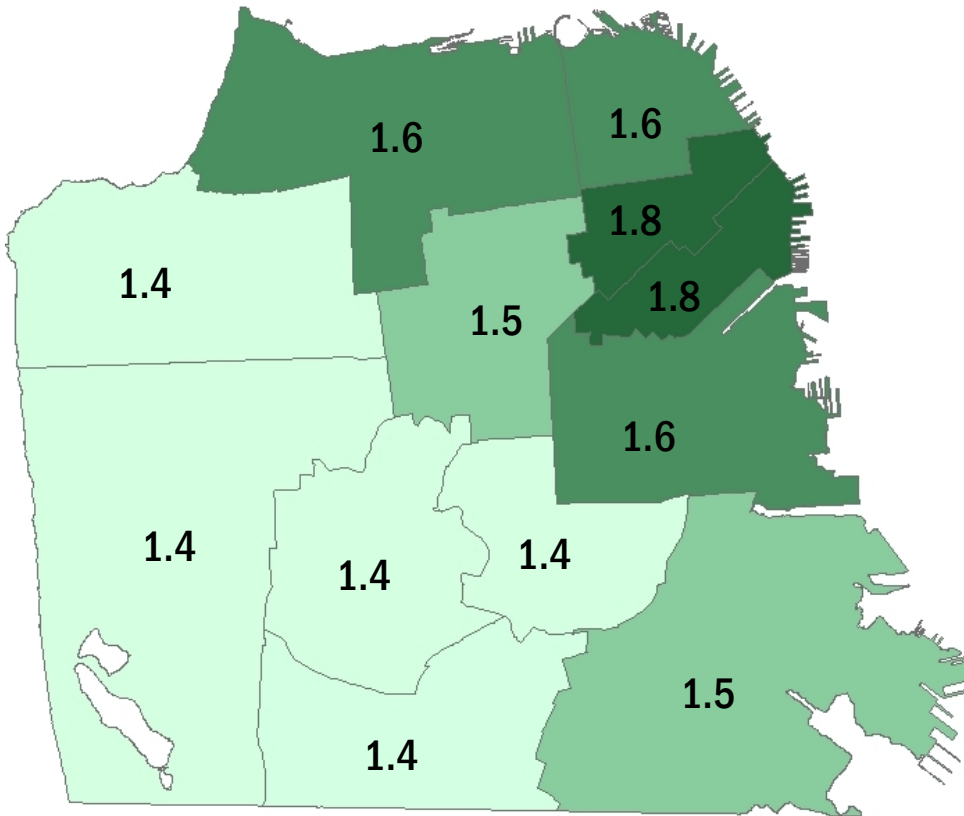
Operator	2035 speed
SF Muni	8.5
BART	34.1
Caltrain	39.1
AC Transit	7.8
SamTrans	9.4
Golden Gate Transit	14.8

Change in Transit Operating Speed
2010 to 2035



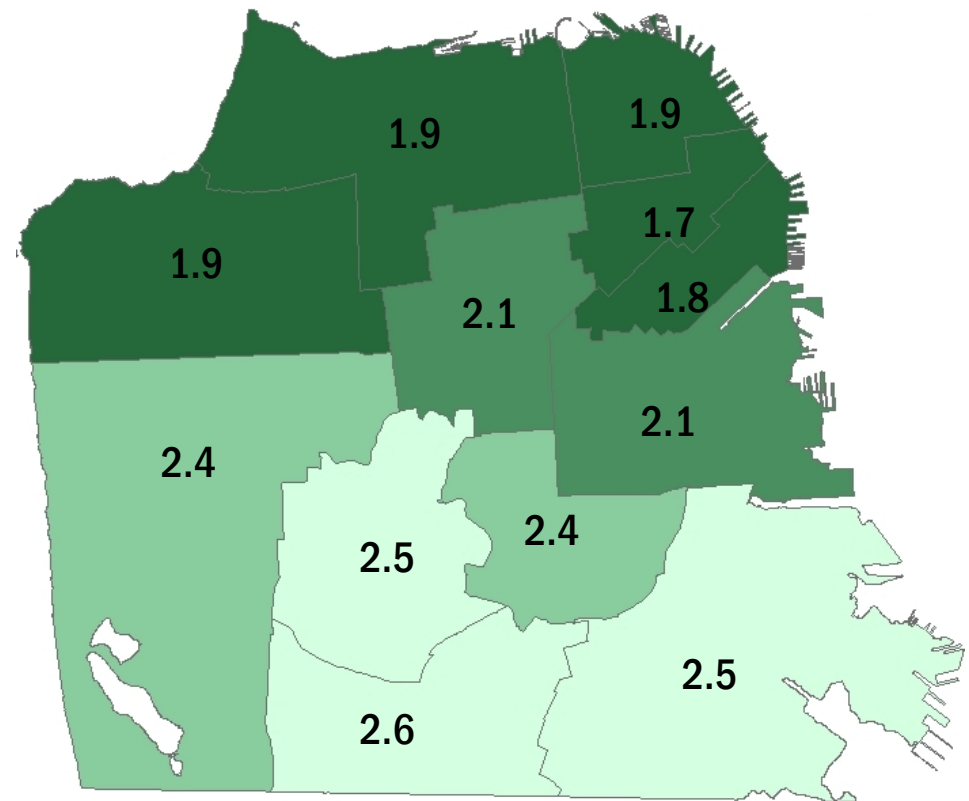
Closing the Travel Time Gap

Peak to Off-Peak Motorist Travel Times, 2035



- Citywide average peak driving times are 1.7x longer than off-peak
- Little change in peak/off-peak ratio over time

Transit to Auto Travel Times, 2035



- Citywide average transit times are nearly 2x longer than driving times
- 10% increase in transit/auto gap over time



Baseline Summary

key descriptors help indicate challenges and opportunities

	2010	2035	Change
Non-auto mode share	40%	41%	1% pt
Transit service hours (hours)	24,100	23,800	-1%
Crowded transit lines	27	57	111%
Congested streets in PM (miles)	3,700	4,300	21%
Trips requiring a transfer	30%	35%	5% pts
Transit operating speed (mph)	9.8	10.0	2%
Transit : Auto travel time (ratio)	1.8	1.9	10%
Peak : off-peak car travel time (ratio)	1.7	1.7	1%



Preliminary Equity Analysis:

MTC Communities of Concern fare same or better than SF average

	2010		2035	
	MTC Communities of Concern	All of SF	MTC Communities of Concern	All of SF
Commute Travel Time (minutes)				
Average trip with SF origin	28	30	31	32
Transfer Rate (percent of all trips)				
Trips requiring a transfer	27%	30%	33%	35%
Accessibility (0 = least accessible TAZ in Bay Area, 10 = most accessible; for low-income, low-auto HH's)				
Accessibility index score	6.7	6.6	6.9	6.7



“What would it take” to achieve our goals?



Total Estimated SOGR Need

SOGR Asset Category	Draft 25-Year Need (billions)	Draft Annual Need (billions)	% Shortfall for SF only in T2035
Local Streets and Roads (pavement & non-pavements)	\$3.9	\$.2	51%
Street Structures	\$0.4	<\$0.1	Unavailable
Transit Capital Rehabilitation	\$17.6	\$0.7	45%
Transit Operations & Maintenance	\$31.3	\$1.3	6%
Total	\$53.2	\$2.2	



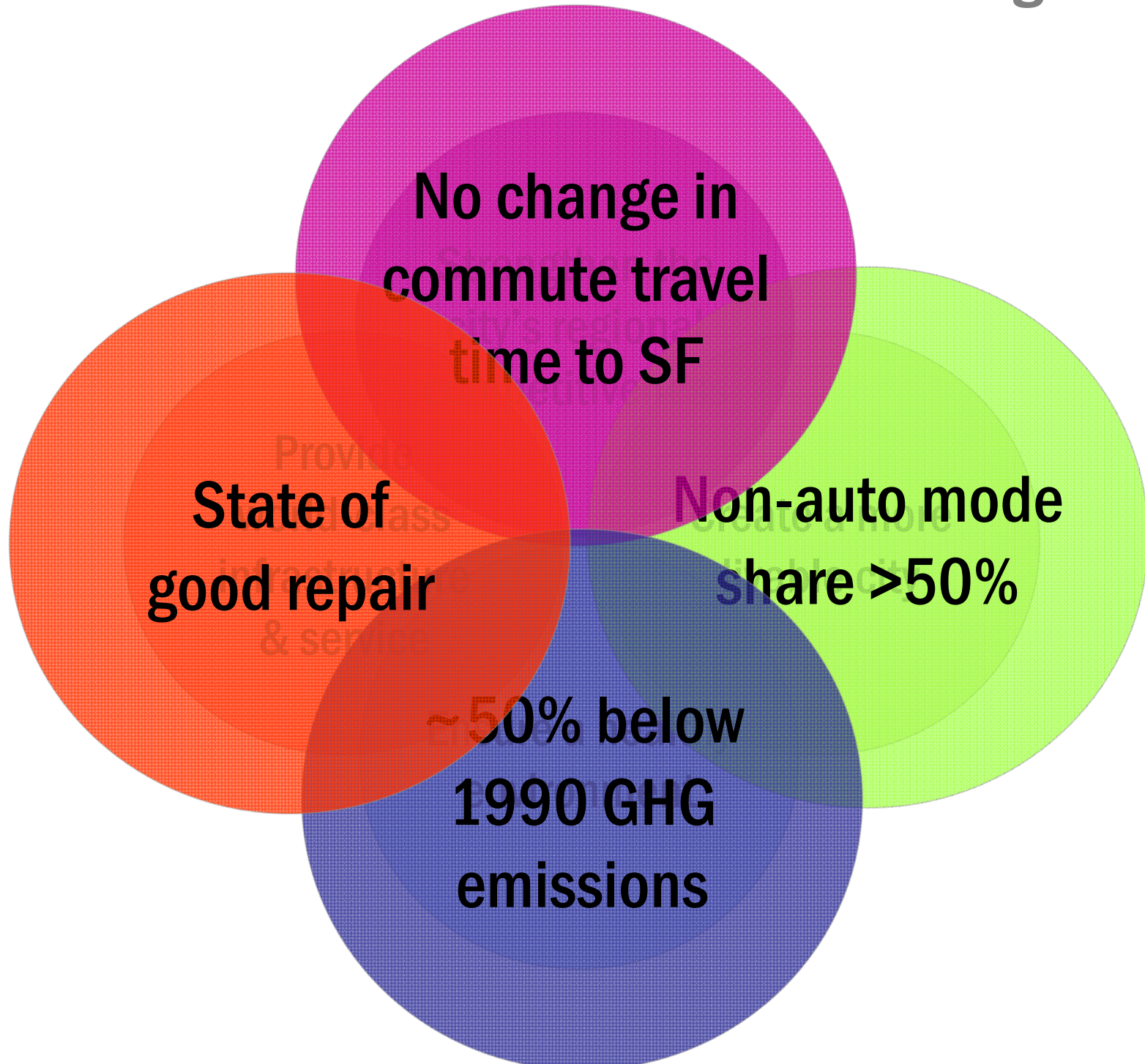
State of Good Repair

Moving Forward

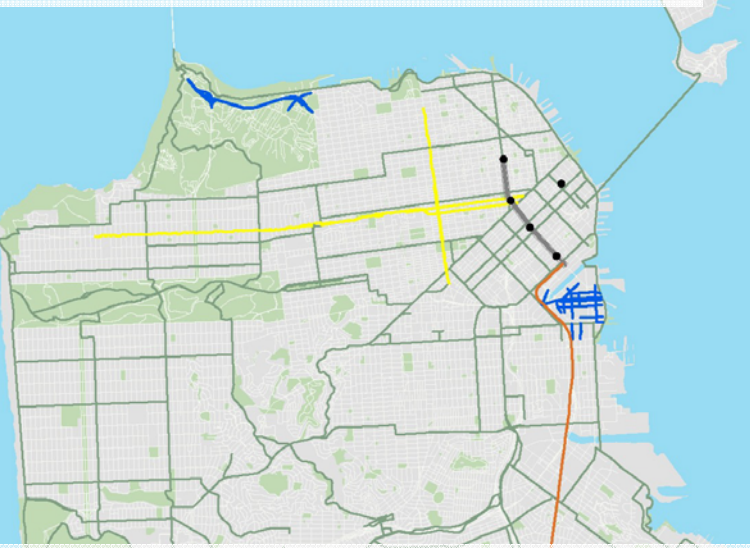
- **Need significantly more revenues to achieve SOGR:**
 - ▶ Find ways to use existing resources more efficiently
 - ▶ Advocate for a larger share of regional revenues for SOGR
 - ▶ Seek new revenue sources for SOGR
- **Continue to refine estimates of additional SOGR needs to accommodate planned growth**
- **RTP and Transit Sustainability Project provide key opportunities for advocacy this fall**
- **Identify strategic capital improvements to enhance transit performance**



“What would it take” to achieve our goals?

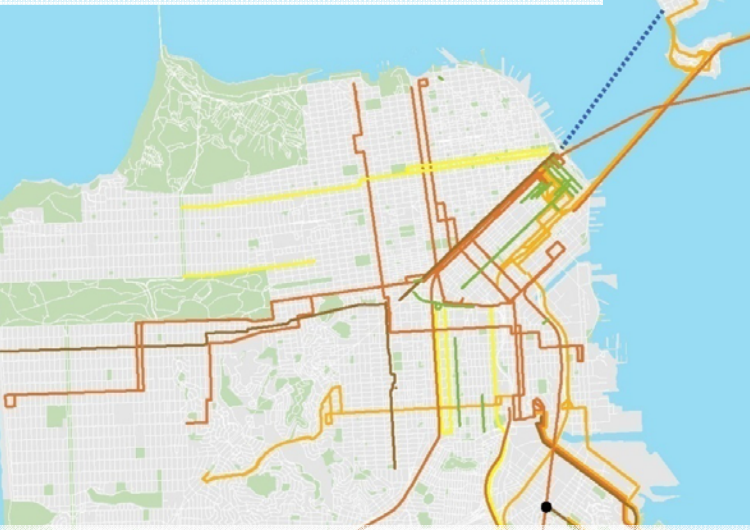


2035 Baseline / State of Good Repair



- State of Good Repair for *existing* assets & service
- Planned and programmed projects
- >71,000 new households and >154,000 new jobs

Increase Non-Auto Mode Share

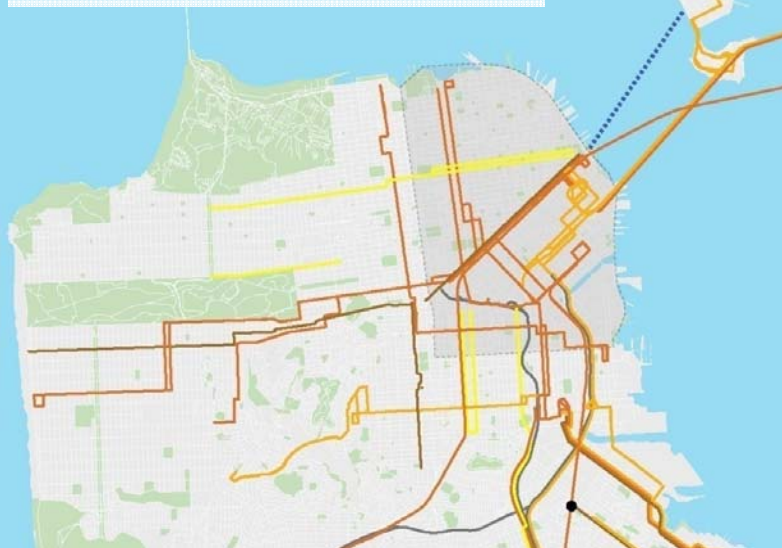


- Goal: non-auto mode share >50%
- Citywide pedestrian improvements
- 125 miles of cycletracks
- Central Freeway & partial 280 demolition

Representative Investments by Scenario (in addition to Baseline)

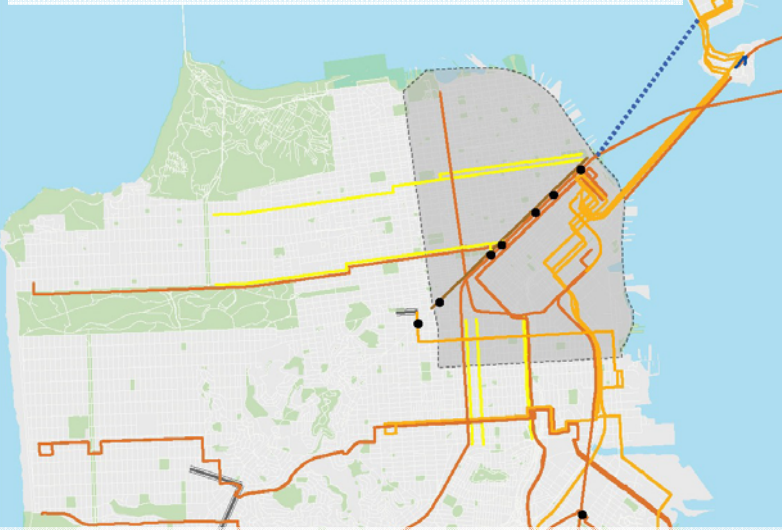
- New or Consolidated Transit Station
- Bus Rapid Transit
- Increased Frequency and/or Capacity
- ⋯ New Ferry Route
- New Roadway
- New Transit Route
- Transit Signal Priority
- Pedestrian Infrastructure
- Bicycle Infrastructure Enhancements
- Transit Infrastructure
- Congestion Pricing

Steady Commute Travel Time



- Goal: no change in commute travel time to SF in 25 yrs
- 3 investment scenarios, plus regional pricing scenarios
- Focus on transit/auto improvements and policies

Reduce Greenhouse Gas Emissions



- Goal: >50% reduction in GHG emissions (per mandate)
- Additional community & employee TDM
- Robust electric vehicle penetration
- Citywide cycletrack network

Performance of aspirational scenarios

Goal	2010	2035 Baseline	2035 EconMed	2035 EconMed + Parking Pricing	2035 Healthy Env	2035 Healthy Env + Pricing	2035 Livability
Economic Competitiveness: Commute Travel Time to SF (minutes)							
No increase from 2010	40	42	40	40	40	31	41
Healthy Environment: Greenhouse Gas Emissions reduction (daily metric tons for SF destination trips)							
City's target: 2,900 daily metric tons (56% reduction from 1990)	+142%	+62%	+50%	+46%	+42%	+18%	+48%
Livability: Non-Auto Mode Share (percent of trips by transit, walking, and biking to, from, and within SF)							
Above 50%	41%	41%	44%	45%	45%	50%	47%*

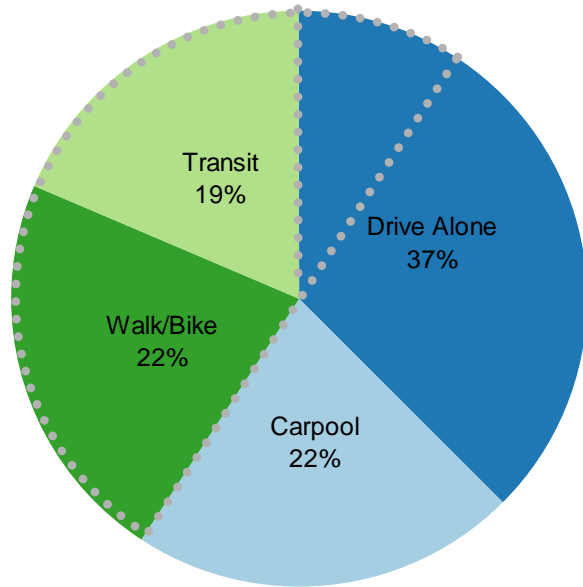
*could achieve goal with moderate to aggressive pricing strategies



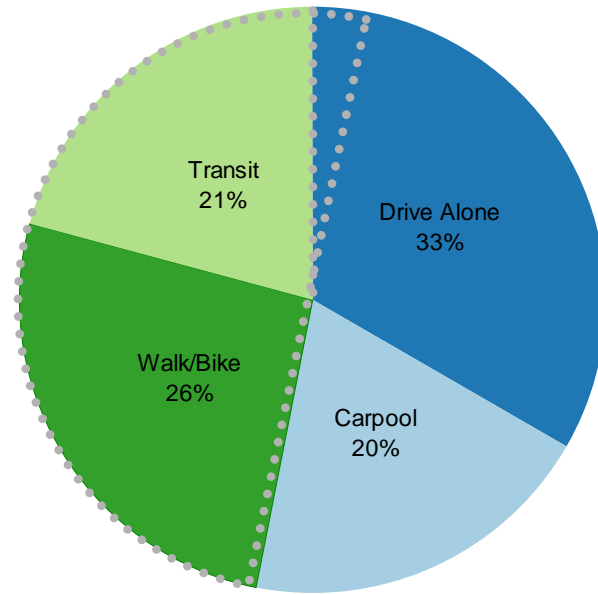
Results of Livability Scenario

6% shift in non-auto mode share!

2035 Baseline Scenario:
41% Non-Auto
59% Auto



Livability Scenario:
47% Non-Auto
53% Auto



Change in Auto Person Trips
Needed (relative to 2035 Baseline)

To Achieve 30/30/40 goal	-905,000
To Achieve 50% Goal	-429,000

- Road and parking pricing could produce additional 1-5% mode shift



Performance of Healthy Environment Bundles can only approach goal w/ aggressive policy change

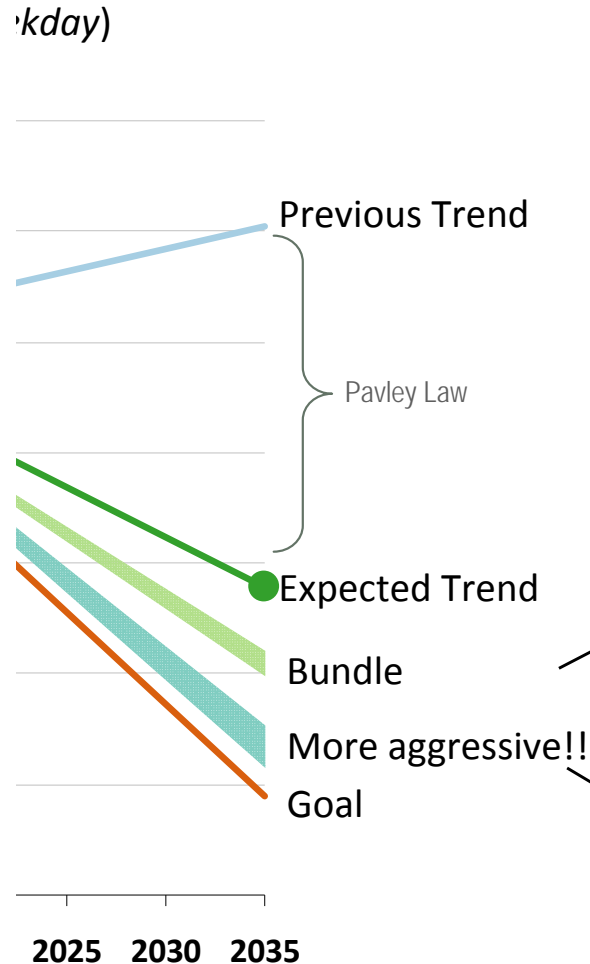
San Francisco GHG Emissions Trend vs. Goal

Decreasing Effectiveness
Metric Tons per Day (Metric Tons per Day)

Strategies

- Electric vehicles
- Road pricing**
- Transit network expansion
- Employer subsidized transit passes + TDM*
- Mandatory transit passes in new development + TDM**
- Bicycle improvements*
- Personalized outreach*
- School TDM

** = most cost effective
* = medium cost effective
= least cost effective



Costs, Bundle

- ~\$10B Total
- \$4 B w/out 2 most expensive transit capital projects

- 9-16% EV penetration
- 30-40% reduction vs. trend
- 1.1-1.3 metric tons gap

- 9-25% EV penetration
- 65-85% reduction vs. trend
- 0.3-0.7 metric tons gap



Source: SF CHAMP 4.1 Draft SCS, SFCTA, 2011

Performance of the economic competitiveness scenarios: are these representative projects effective at keeping commute travel times constant?

	2010	2035 Base	2035 Low	2035 Med	2035 Med +Parking Pricing	2035 High
Total average commute time to SF including non-motorized (minutes)	40	42	41	40	40	41
Auto	38	39	39	35	35	36
Transit	48	51	49	48	48	49
Cost (millions of \$)	-	-	\$2,000	\$5,000	\$5,000	\$20,000
Cost Effectiveness	-	-	High	Med	Med	Low



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How will we use this information?

Framework for coming analysis

- Rank projects within each aspirational goal area
- Develop 3 financially constrained scenarios (ie, alternatives)
- Analyze performance of specific *corridors* under each scenario
- Define and evaluate a preferred scenario



Summer/early fall 2011

- **Livability**
 - Traffic collisions
 - School transportation needs
- **Economic Competitiveness**
 - Needs assessment for goods movement
 - Core circulation study
- **Second call for projects (August)**
- **Institutional analysis**
- **Revenue paper**



Robust, comprehensive solutions are needed

how would you move ahead?

- Are we on the right track with performance analysis?
- Are the goals too ambitious? Not ambitious enough? Just right?
- How would you approach the financially constrained scenario? What are the relative priorities among the four goal areas?
- Should we focus on new funds for big projects or new policies to change behavior (or both)? What strategies would you advocate?
 - Investment
 - Management
 - Policy



Thank you!

Additional Questions?

Next round of public outreach:
Late August/early September

Next SFTP TAC/CAC meeting:
Late September/early October



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