Agenda Item 4b

METROPOLITAN
TRANSPORTATION
COMMISSION

Joseph P. Bort MetroCenter
101 Eighth Street
Oakland, CA 94607-4700
TEL 510.817.5700
TDD/TTY 510.817.5769
FAX 510.817.5848
E-MAIL info@mtc.ca.gov
WEB www.mtc.ca.gov

Memorandum

TO: MTC Planning Committee, ABAG Administration Committee and Joint Policy Committee

DATE: December 3, 2010

FR: Executive Director

W.I.

RE: SCS/RTP Performance Targets – Draft Staff Recommendation

Background

This memo presents staff's draft recommendation for Sustainable Communities Strategy/Regional Transportation Plan (SCS/RTP) performance targets and follows from the information item at your September meeting. We will seek approval of the targets at your January 14, 2011 joint meeting.

The targets provide additional definition for outcomes we hope to achieve through the SCS/RTP. They serve several purposes in the context of the scenario assessment to be conducted in 2011:

1. Provide reference points that help us construct SCS/RTP scenarios.
2. Highlight trade-offs among goals. For example, what the relationship is between infill development in the urban core and the number of people exposed to fine particulate matter emissions.
3. Help us assess policies and investments by comparing the anticipated performance of the base case and different alternative scenarios through use of land use and travel forecasting models.
4. Demonstrate how close we can get to our goals – or what it would take to reach them.

Recommended Targets

Staff has based this draft recommendation on review of over 90 candidate measures through research and discussion with local government staff, advisors and other stakeholders. Much of this work was done with the Ad Hoc Committee on Performance Measures, whose members include representatives of local governments, transportation agencies, ABAG's Regional Planning Committee and MTC's Policy Advisory Council. The two most important criteria in recommending targets are that they (1) can be influenced by regional and local agencies, and (2) can be accurately forecast using the MTC/ABAG models. In addition, we aimed to select targets that are easy to understand, that are outcome-oriented, and that have a basis for a quantitative goal or target.

In Attachment A the draft staff recommendation consists of 10 targets corresponding with seven goals, as shown below. The targets for reducing carbon dioxide emissions and housing projected population growth are **"statutory"** targets required under SB 375. The remaining eight are **"voluntary"** targets, to which the policy boards may at their discretion and at any time consider

changes, substitutions or deletions to better align with policy or respond to new circumstances. The targets will not only assess performance of the various scenarios leading up to a recommended SCS, but they will also provide the basis for assessing benefits and cost-effectiveness of individual projects included in the various scenarios.

Attachment B describes the basis for each of the recommended targets along with the alternative measures that received the most discussion.

Complementary Scenario Analysis and Data

The target analysis represents just one of the elements of scenario analysis staff will undertake for the scenarios over the course of 2011. Many of the more than 90 measures reviewed remain under consideration for complementary analysis efforts, as shown in Attachment C. Additional analysis efforts will both help us define the scenarios and understand in more detail how they work. They include:

(1) Equity Analysis: Explore how low-income and minority communities fare compared to the rest of the Bay Area.
- Analyze all targets by income and mode, with transit break-outs by bus and rail
- Access by transit from low-income communities to jobs and essential services
- Distribution of benefits and burdens
- Jobs-housing fit analysis

(2) Land Use and Travel Forecast Data Summaries and Analysis: Document major forecasting assumptions and detailed results. Staff may select some issues for more in-depth analysis:
- Distribution of low-income housing
- Share of new development in infill and priority development areas
- Availability of industrial lands
- Mode share, Vehicle miles traveled and Delay
- Analysis of mobility/accessibility of the region's aging population

(3) Indicators: Use actual data, such as that in MTC's Snapshot Analysis, to measure other aspects of community and transportation system quality that may influence definition of the Detailed Scenarios. Eventually, staff will also use indicators to track progress toward the targets over time.
- Acres of resource land preserved
- Displacement and gentrification
- Mobility options for elderly and disabled residents

The Environmental Impact Report (EIR) will also include a number of metrics and additional information for the Draft SCS/RTP.

Next Steps - Major milestones for the targets and scenario analysis include:

2010 December	• Comments on and refinements to draft targets recommendation • Initiate review of indicators
2011 January	• Seek approval of targets by the MTC Commission (January 26, 2011)
February	• Initial Vision Scenario results: Targets, Other Performance Measures, Data Summaries • Begin definition of Detailed Scenarios (continues through summer 2011)
April	• Seek approval of indicators; assemble data to inform Detailed Scenarios
Fall	• Detailed Scenarios results: Targets, Equity Analysis, Data Summaries

Steve Heminger

J:\COMMITTE\Planning Committee\2010\December 10\4b_Draft SCS Performance Targets.doc

Attachment A
Recommended Targets

GOAL/OUTCOME	#	RECOMMENDED TARGET *Unless noted, all targets are for year 2035 compared to a year 2005 base*	IN T-2035 OR PROJECTIONS 2009
CLIMATE PROTECTION	1	Reduce per-capita CO_2 emissions from cars and light-duty trucks by 15% *Statutory - Source: California Air Resources Board, as required by SB 375*	✓
ADEQUATE HOUSING	2	House 100% of the region's projected 25-year growth by income level (very-low, low, moderate, above-moderate) without displacing current low-income residents *Statutory - Source: ABAG adopted methodology, as required by SB 375*	
HEALTHY & SAFE COMMUNITIES	3	Reduce by 10% premature deaths from exposure to fine particulate matter (PM 2.5) *May be amended to reflect targets for CARE communities or hot spots, pending review of feasibility by BAAQMD.* *Source: Adapted from federal air quality standards by BAAQMD*	
	4	Reduce by 50% the number of injuries and fatalities from all collisions (including bike and pedestrian) *Source: Adapted from California State Highway Strategic Safety Plan*	✓
	5	Increase the average time walking or biking per person per day by 50% from year 2000 levels *Source: Adapted from U.S. Surgeon General's guidelines*	
OPEN SPACE AND AGRICULTURAL PRESERVATION	6	Direct all non-agricultural development within urbanized areas as of 2010 *Source: Adapted from SB 375*	
EQUITABLE ACCESS	7	Decrease by 10% the share of low-income and lower-middle income residents' household income consumed by transportation and housing *Source: Adapted from Center for Housing Policy*	✓
ECONOMIC VITALITY	8	Increase gross regional product (GRP) by [TBD]% *Source: Bay Area Business Community*	
TRANSPORTATION SYSTEM EFFECTIVENESS	9	Decrease average per-trip travel time for auto and transit modes by 10% *Source: Adapted from Caltrans Smart Mobility 2010*	
	10	Maintain the transportation system in a state of good repair: • Increase local road pavement condition index (PCI) to 75 or better • Decrease distressed lane-miles of state highways to less than 10% of total lane-miles • Reduce average transit asset age to 50% of useful life *Source: Regional and state plans*	✓

Attachment B
Description of Recommended Targets
and Other Measures of Interest

Unless noted, each target is for year 2035 compared to a year 2005 base.

Climate Protection

1. ***Reduce per capita CO_2 emissions from cars and light duty trucks by 7% by 2020 and 15% by 2035.*** CARB adopted this target for the Bay Area in September 2010.

   Other measures: Early in the process, some members of the Ad Hoc Committee on Performance Measurement expressed interest in an additional target to reduce vehicle miles traveled (VMT). Staff considers VMT an intermediate measure of one approach to reducing carbon dioxide emissions (or particulate matter emissions or collisions) and will be assessed as part of the RTP/SCS EIR; we recommend more outcome-oriented measures.

Adequate Housing

2. ***House 100% of the region's projected 25-year population growth by income level (very low, low, moderate, above moderate) without displacing current low-income residents.*** In November 2010, ABAG adopted a methodology to define this target as required under SB 375. Staff recommends including a qualifier to reflect the desire that this be accomplished without displacing existing low-income residents, particularly those that currently live near to transit.

   Other measures: Stakeholders from local government and housing organizations have expressed interest in the distribution of low-income housing. Staff agrees the distribution of low-income housing is paramount in the SCS; however, staff is reluctant to recommend a target in advance of the Regional Housing Needs Assessment process starting in early 2011, through which local government representatives and others will have a chance to advise ABAG on this matter.

Healthy and Safe Communities

3. ***Reduce by 10% premature deaths from exposure to fine particulate matter ($PM_{2.5}$)***
   The Air District is reviewing whether it is possible technically to include impacts on CARE communities or hot spots.
   The Bay Area currently does not meet the federal standard for fine particulate matter. The 10% reduction goal roughly reflects the expected benefit from meeting the standard[1], assuming each emission sector (both mobile and non-mobile sources) takes on similar emission reduction shares, as calculated by the Air District.

   This target represents an important shift from measuring vehicle emissions, as in the current Transportation 2035 target, to a health outcome-based approach. The target captures the health impacts of changes in vehicle emissions and of changes in the number of people exposed to emissions from all sources. Staff acknowledges exposure to particulates has other serious health impacts (asthma and other respiratory diseases) that could be measured; we are recommending premature deaths as a somewhat simplified "leading indicator."

   Other measures: Numerous stakeholders would like to see this target address the communities most severely impacted by particulate emissions. Due to data limitations, the Air District

[1] The US Environmental Protection Agency (EPA) is currently reviewing the current standard. If EPA were to propose a more stringent standard while the SCS is still under development, staff may recommend adjusting this target to reflect the new standard.

typically does not forecast future health outcomes at the community level, and their staff is presently reviewing options to do so. If it is not possible to incorporate community based health-outcomes into this target, staff recommends forecasting fine particulate emissions in the CARE communities compared to the rest of the Bay Area in the Equity Analysis, similar to analysis in the Transportation 2035 Equity Analysis and MTC's Snapshot Analysis.

4. ***Reduce by 50% the number of injuries and fatalities from all collisions (including bikes and pedestrians)***
We recommend adapting this target from Transportation 2035 to reflect recent data which shows a 26% reduction in injury and fatal collisions between 2000 and 2008. The target, originally adapted from the State Highway Strategic Safety Plan (2006), reflects a core goal of the RTP and an important co-benefit of reduced driving (if this is an outcome of the RTP/SCS). The target includes pedestrians and cyclists in the total but available data is not sufficient to forecast these as stand-alone targets. We track actual bicycle and pedestrian collisions in the Snapshot Analysis and State of the System Report.

Other measures: Some participants in the Ad Hoc Committee prefer to forgo this target in favor of an additional housing target. They argue that this target is largely driven by changes in vehicle miles traveled and is of limited interest since the scenario assessment will generally not reflect safety initiatives and enhancements such as improvements in vehicle technology, enforcement and education strategies and targeted safety projects. Staff may be able to estimate the benefits of some well-documented safety initiatives, such as Safe Routes to Schools, in the scenario assessment but some further research is needed.

5. ***Increase the average time walking or biking per person per day by 50% from 2000 levels***
This target relates directly to U.S. Surgeon General's guideline that people get 30 minutes per day of physical activity to lower risk of chronic disease and increase life expectancy. There is no accepted guideline for the amount of activity people should get through day-to-day transportation compared to other activities. The average time Bay Area residents spent walking and biking for transportation was about 7 minutes per person in 2000. A 50% increase equates to 10.5 minutes per person, roughly 1/3 the daily recommendation. While this may sound like a modest target, it reflects the fact that transportation is just one means of daily physical activity. This target includes walking or biking to transit.

Other measures: Many feel that the targets should explicitly address a goal to increase transit, walking and bicycle trips and would prefer a mode share target. Staff agrees mode share is important information, and will capture it in data summaries and other analyses; however, staff from county public health departments advise us that minutes of biking and walking is more directly related to health-outcomes and is thus an important step forward in linking transportation planning with public health.

Some have suggested a variation on the recommended target based on the number of people who meet the recommendation for physical activity through biking or walking. This would avoid setting an arbitrary threshold for transportation's "share". However, this alternative target would not capture many changes with health impacts such as people who increase from 10 to 15 minutes a day.

Open Space and Agricultural Preservation

6. ***Direct all non-agricultural development (100%) within urbanized areas as of 2010***
   The intent of this target is to support infill development while protecting the Bay Area's agriculture and open space lands. The target references urbanized areas, which are publically defined. Staff is reviewing sources to define urbanized areas including the State Department of Conservation, US Census and US Geological Survey.

   Other measures: Stakeholders have suggested two main variations of this target.
   (1) A less restrictive variation that limits the lands off-limits for new development (to defined agricultural resources for example) or allows some change in the publically defined urban spheres over time. Another suggested alternative is to aim for a share of new development within priority development areas or around transit.
   (2) A more restrictive variation that includes all resource lands mentioned in SB 375 including resource lands, including habitat, farmland, and other open space designations. Many, but not all of these lands have commonly accepted definitions, which would make it very difficult to reach agreement on a target methodology.

Equitable Access

7. ***Decrease by 10% the share of low-income and lower-middle income residents' household income consumed by housing and transportation***
   This target used in Transportation 2035 remains very relevant in the context of the SCS/RTP. According to a study by the Center for Housing Policy, low-income and working class families in the Bay Area spend a larger share of household income on housing and transportation when compared to families in other major U.S. cities. The 10% reduction target would bring the Bay Area in line with the national average. This measure will capture expenditures for both work and non-work travel.

   Other measures: The main alternative suggested by social justice organizations is to increase the number of low-income households within 30 minutes and $2.50 of jobs and essential destinations by transit. While it is difficult to forecast essential destinations, this alternative is feasible. Staff believes it may be appropriate for the Equity Analysis; however, we recommend the target which captures the costs of both housing and transportation based on the finding by the Center for Housing Policy that housing represents the larger expenditure (35% of income) than transportation (27% of income) for families in the Bay Area.

Economic Vitality

8. ***Increase gross regional product (GRP) by [TBD]%***
   GRP reflects the region's overall economic health and competitiveness. The business community views this target as a key indication of the region's commitment to advance the SCS/RTP in a manner that supports economic growth and competitiveness. Growth patterns and transportation investments in the SCS/RTP scenarios will affect travel time, cost and reliability. Staff will use an economic impact model to estimate the resulting impacts on business productivity based on the cost of on-the-clock travel and access to labor, suppliers and markets. Importantly, increased productivity makes the region more competitive for attracting new businesses and jobs; this will increase employment and wages, which are also reflected in the GRP target.

   Staff will undertake further research in the next few weeks to recommend a numeric target for GRP. This type of economic impact analysis represents a new endeavor for MTC and ABAG and we have much to learn about the modeling tools; as we undertake this analysis, staff will consult with our consultants and other MPOs that have more experience in this arena. Past analysis, such

as that done for California High Speed Rail, suggests transportation investments may affect overall GRP by 1% to 2%. (This is still a very large number for the Bay Area, which had a total GRP of $450 billion in 2008.)

Other measures: Median income is an alternative measure, strongly related to GRP. It is preferred by some stakeholders because it would given an indication of potential disparities in economic outcomes by income group. Staff considered a target to improve access to labor, but the business community and other stakeholders felt this was a poor proxy for economic outcomes.

Transportation System Effectiveness

9. ***Decrease average per-trip travel time for auto and transit modes by 10%***

This target is intended to measure the effectiveness of the transportation system in providing easier, faster access to individuals' travel destinations. Bus and auto travel times will include both recurring delay, due to congestion, and non-recurring delay, due to incidents and accidents.

Other measures: Staff considered alternatives including: (1) delay reduction and improved travel time reliability, which both have the limitation that they cannot be meaningfully forecast for transit service; (2) transit utilization, which is better addressed at a corridor level since utilization rates vary considerably (this also will be addressed in a more detailed fashion in the Transit Sustainability Project); and (3) increased peak period person throughput, which is better suited for corridor analysis than an overall regional target.

10. ***Maintain the transportation system in a state of good repair***

- ***State highway system: Decrease the number of distressed pavement lane miles to less than 10% of the state highway system***
- ***Local roadways: Increase the average pavement condition rating to 75 or better***
- ***Transit: Reduce the average asset age to 50% of useful life***

We recommend keeping these targets from Transportation 2035. We will need to maintain our transportation infrastructure in order to support the SCS. Failure to do so would result in unreliable service, inconveniences, and increased costs to travelers.

Other measures: Some participants have suggested we forgo this measure in favor of other targets that reflect housing and land use. Other stakeholders have expressed concern that these targets do not differentiate between transportation assets on the basis of how well they support focused growth. Staff recommends a target that reflects the goal to achieve a state of good repair for all assets, which we would seek to do if there were no funding constraint. Decisions about how to prioritize maintenance and rehabilitation funding should be made in the broader context of investment trade-offs and considerations of the policies that support the SCS preferred land use strategy.

Attachment C
Other Measures Reviewed

In developing the recommended targets, staff reviewed over 90 measures. As detailed on the next two pages, many of the measures reviewed remain under consideration for inclusion in one of the following three efforts to provide additional data and analysis in conjunction with the targets analysis of the scenarios in 2011.

- Equity Analysis will explore how low-income and minority communities fare compared to the rest of the Bay Area and whether benefits and burdens are distributed equitably in the scenarios. We will start it in early 2011 with the Initial Vision Scenario and continue through the Detailed Scenario and Draft SCS/RTP. The initial analysis could include a drill-down of the targets by income in addition to measures from the Transportation 2035 Equity Analysis. Other measures that facilitate a more detailed review of the impacts on low-income and minority communities remain under consideration for this effort, as noted below.

- Land Use and Travel Forecast Data Summaries/Analysis will include detailed data and analysis that can help explain the target results. The land use summary will describe the general projected land use pattern for the region and summarize the major changes in employment and housing locations. The transportation summary will describe travel patterns by mode and trip purpose, traffic forecasts and transit ridership, and vehicle emissions.

- Indicators will track actual progress towards the targets and measure other aspects of community quality. These measures cannot be forecast but are related to transportation and land use, such as concentration of poverty, displacement, school quality, and local government implementation. Indicators are an important means to inform policy discussions that are also part of the SCS. For example, current data on access to quality schools can define the transportation policies and jobs/housing growth allocations in the scenarios. Staff will recommend a set of indicators for adoption in April, based on feedback from the Ad Hoc Committee on Performance Measures over the next several months.

GOAL: CLIMATE PROTECTION

CONSIDER FOR SUPPLEMENTARY ANALYSIS

Data Summary and Analysis
- Vehicle miles traveled (VMT) per capita
- Mode share for public transit and non-motorized modes

Equity Analysis
- Impact of greenhouse gas emissions on communities of concern

Indicators
- % of Bay Area transportation powered by carbon-free, regional renewable energy sources

NOT RECOMMENDED AT THIS TIME

Doesn't Reflect Goal
- Energy intensity per person mile traveled

Outside of Primary SCS/RTP Scope
- Acres of land underwater due to sea level rise caused by global warming

GOAL: ADEQUATE HOUSING

CONSIDER FOR SUPPLEMENTARY ANALYSIS

Data Summary and Analysis
- Distribution of low-income housing
- Share of new development in infill and priority development areas

Equity Analysis
- Concentration of poverty
- Affordable housing in neighborhoods of opportunity
- Number of affordable homes
- Displacement
- Number of low-income households in transit-rich environments

Indicators
- New deed-restricted affordable housing units

NOT RECOMMENDED AT THIS TIME

Address through RHNA Process
- Distribute new housing growth equally across neighborhoods of all income levels
- Increase RHNA allocation for very low and low income housing that is accommodated in areas zoned for 2-5 stories

GOAL: HEALTHY & SAFE COMMUNITIES

CONSIDER FOR SUPPLEMENTARY ANALYSIS

Data Summary and Analysis
- Vehicle miles traveled (VMT) per capita
- Mode share for all modes

Equity Analysis
- PM2.5 emissions in communities of concern adjacent to transportation hot spots
- Accessibility to essential destinations (by mode)

Indicators
- Densities of station areas compared to areas outside of them
- Quality of bike facilities and destinations accessible by bike
- Percentage of jurisdictions that rezone after SCS

NOT RECOMMENDED AT THIS TIME

Technical Limitations (Data or Forecasting)
- Quality of the public realm

GOAL: OPEN SPACE PRESERVATION/EFFICIENT USE OF LAND

CONSIDER FOR SUPPLEMENTARY ANALYSIS

Indicators
- Resource lands preserved or protected
- Urban development on the region's most essential resource lands
- Acres of prime agricultural lands
- New housing units within designated station areas/TOD/PDAs

NOT RECOMMENDED AT THIS TIME

Technical Limitations (Data or Forecasting)
- Quantity of water runoff caused by human development

Outside of Primary SCS/RTP Scope
- Land for food production/% of food consumption from sustainable sources

GOAL: EQUITABLE ACCESS

CONSIDER FOR SUPPLEMENTARY ANALYSIS

Equity Analysis
- All targets by income and by mode
- Low-income households within a 30-minute and $2.50 transit trip to jobs and essential destinations
- Distribution of benefits and burdens from RTP/SCS for low-income communities & residents compared to general population
- Average travel time to jobs and services (by income and/or by mode)
- Non-automobile dependent access to jobs and services
- Ratio of transit to auto commute travel time

Data Summary and Analysis
- Jobs-housing fit analysis
- Availability of industrial land
- Analysis regarding mobility/accessibility of elderly residents

Indicators
- Walkability index
- Population concentration by race
- Accessibility options for elderly and disabled residents

NOT RECOMMENDED AT THIS TIME

Technical Limitations (Data or Forecasting)
- Number of essential destinations within [TBD] minutes for disabled population
- Concentration of communities of concern in urban areas
- Impact of rising fuel prices on communities of concern
- % of high priority community-based transportation plan projects/programs funded/completed in communities of concern

Input Assumptions
- Lifeline gaps
- Correlation between wages & housing cost

Doesn't Reflect Goal
- Average trip distance by income

GOAL: ECONOMIC VITALITY

CONSIDER FOR SUPPLEMENTARY ANALYSIS

Data Summary and Analysis
- Availability of industrial land
- Delay
- Travel time
- Transit loading
- Access to Labor
- Employment/unemployment/job creation
- Personal income
- Job-housing fit analysis

Indicators
- Total regional property tax generation
- Densities of station areas compared to areas outside of them
- Percentage of the sales price of new homes that fees & extractions represent
- Percentage of jurisdictions that rezone after SCS adoption

NOT RECOMMENDED AT THIS TIME

Doesn't Reflect Goal
- Total cost per capita
- Peak to off-peak travel time ratio
- Transportation systems operations and maintenance cost per capita

Outside of Primary SCS/RTP Scope
- Revenue vehicle-miles by operator by mode

Too Complex
- User benefits

GOAL: TRANSPORTATION SYSTEM EFFECTIVENESS

CONSIDER FOR SUPPLEMENTARY ANALYSIS

Data Summary and Analysis
- System utilization & transit loading
- Person-throughput
- Delay

Indicators
- Average distance between transit service calls
- Travel time reliability

NOT RECOMMENDED AT THIS TIME

Technical Limitations (Data or Forecasting)
- Cost to serve new development per capita
- Service level expressed as a percentage of service that could be provided if moving stock were operated at full capacity
- Operating shortfall covered based on highest level of transit service in the past 30 years