

Draft Plan Bay Area

Equity Analysis Results

Summary for Regional Equity Working Group Discussion, March 28, 2013

1. HOUSING AND TRANSPORTATION AFFORDABILITY

Table 1-1. Housing and Transportation Affordability Results for EIR Scenarios

		2010	1	2	3	4	5	% Change	
		Base Year	No Project	Project	Transit Priority	Network of Comm.	Env., Equity & Jobs	Base Year to Project	No Project to Project
Households <\$38,000/year	<i>Housing %</i>	46%	49%	46%	46%	46%	42%	0%	-6%
	<i>Transp %</i>	26%	31%	28%	31%	28%	31%	7%	-9%
	H+T %	72%	80%	74%	77%	74%	73%	3%	-7%
Households >\$38,000/year	<i>Housing %</i>	28%	29%	28%	28%	28%	28%	1%	-3%
	<i>Transp %</i>	13%	15%	15%	15%	14%	15%	10%	-4%
	H+T %	41%	44%	43%	43%	42%	43%	4%	-4%

Source: MTC and ABAG estimates.

Note: Household income figures provided are in 2010 dollars.

- The Environment, Equity, and Jobs Scenario (Alternative 5) has the lowest combined H+T for low-income households. Inclusion of subsidies intended to fund affordable housing lowered the share of income spent on housing to 42% for low-income households, which offset this scenario's relatively high transportation costs (31%)
- The Project and the Enhanced Network of Communities Scenarios (Alternative 4) have the next-lowest H+T% for low-income households, by combining average housing costs per household similar to today's levels (46%) with the second-lowest average transportation costs (28%).
- Alternatives 2, 3, and 4 retain existing housing policies and subsidies and new ones are created that support development of affordable housing in the region. As a result, the H% remains the same as the Base Year after assuming that H% follows recent trends and increases 1% per decade (3% overall).
- All future scenarios assume higher gas prices in the future. Variations in T costs across scenarios are attributable to variations in vehicle ownership rates based on compact vs. dispersed growth patterns, proximity to employment, and prevalence of non-auto travel.
- Compared to the No Project, the Project delivers slightly greater benefit to low-income households (7% reduction in H+T%) than non-low-income (4% reduction).

2. POTENTIAL FOR DISPLACEMENT

Table 2-1. Potential for Displacement As a Share of Today's Overburdened-Renter Households Located in Future High-Growth Areas: EIR Scenarios.

	2010	1	2	3	4	5	% Change	
	Base Year	No Project	Project	Transit Priority	Network of Comm.	Env., Equity & Jobs	Base Year to Project	No Project to Project
Communities of Concern	n/a	21%	36%	25%	31%	21%	n/a	68%
Remainder of Region	n/a	5%	8%	7%	9%	6%	n/a	67%
Regional Average	n/a	12%	18%	13%	17%	12%	n/a	46%

Source: ABAG calculations based on 2005-09 American Community Survey and ABAG forecasts.

- For communities of concern, the No Project and the Environment, Equity, and Jobs Scenarios have the least overlap between planned high-growth tracts and existing concentrations of overburdened renters. Tracts with these overlapping characteristics capture 21% of today's overburdened renters who live in communities of concern, mainly due to the fact that these scenarios assume more growth in suburban areas (generally outside of communities of concern) and/or in areas where there are not currently concentrations of overburdened renters.
- The Enhanced Network of Communities alternative and the Project have the greatest share of today's overburdened renters included in tracts where these characteristics overlap, with 31% and 36%, respectively.
- Most overburdened-renter households in communities of concern identified as being in communities with future displacement potential under the Project are located in San Francisco, Alameda, and Contra Costa Counties. While the impacted jurisdictions have some anti-displacement policies in place, local policies and regulations are not accounted for in this analysis.
- Compared to the No Project, the focused-growth approach of the Project increases the displacement potential by approximately two-thirds. However this effect is not disproportionately high for communities of concern (68%) when compared to the remainder of the region (67%).
- The methodology for this measure draws attention to what are anticipated to be active real estate markets, but masks the ongoing displacement potential in areas where there is already high demand for housing but less anticipated growth to accommodate it.

3. VMT DENSITY

Table 3-1. VMT Density Results by Community Type: Average Daily Vehicle-Miles of Travel per Square Kilometer of Developed Area Within 1,000 Feet of Major Roadways for EIR Scenarios

	2010	1	2	3	4	5	% Change	
	Base Year	No Project	Project	Transit Priority	Network of Comm.	Env., Equity & Jobs	Base Year to Project	No Project to Project
Communities of Concern	9,737	11,447	11,693	11,536	12,123	11,259	20%	2%
Remainder of Region	9,861	11,717	11,895	11,804	12,261	11,626	21%	2%
Regional Average	9,836	11,664	11,855	11,751	12,234	11,554	21%	2%

Source: MTC estimates.

- These results are not population-weighted, to achieve consistency with the analysis conducted for CARE communities for the Draft EIR.
- Generally, all future-year scenarios have higher VMT Density compared to the base year, mainly owing to the increased population in 2040.
- The alternative with the highest VMT density, Scenario 4, also has the highest regional population included in any of the scenarios. The differences between the other four scenarios were not substantial ($\pm 2\%$).
- Scenario 5 has the lowest VMT density overall and for communities of concern in particular, likely owing to the combination of a relatively dispersed regional growth pattern shifting some vehicle travel to non-communities of concern, combined with greater emphasis on transit service lowering VMT overall.
- Looking at county-level results reveals that areas with the highest relative VMT Density within the region, in both the base year and the forecast scenarios, include Marin County’s communities of concern, San Mateo County’s communities of concern, and the remainder of Alameda County.
- The Project has very slightly higher VMT Density than the No Project due to the more focused growth pattern putting more vehicle-travel demand on already heavily-used roadways that are near populated areas. The distribution of these impacts is similar between communities of concern and the remainder of the region.
- The report will also look at
 - The relative distribution of population and VMT/emissions in all scenarios.
 - Emissions density of PM10, PM2.5, and Diesel PM, all of which are tied to VMT but to varying degrees.

4. COMMUTE TIME

Table 4-1. Average Commute Time Results in Minutes by Community Type: EIR Scenarios

	2010	1	2	3	4	5	% Change	
	Base Year	No Project	Project	Transit Priority	Network of Comm.	Env., Equity & Jobs	Base Year to Project	No Project to Project
Communities of Concern	25	26	26	25	26	25	5%	-1%
Remainder of Region	27	29	27	26	27	27	2%	-6%
Regional Average	26	28	27	26	27	27	2%	-5%

Source: MTC estimates.

- Generally, there is not much variation between scenarios overall. All future-year scenarios have increased travel times relative to the base year.
- Most of the variations in travel time are likely related to two factors: (1) increased population overall increases congestion, slowing travel speeds and hence increasing travel times for most modes; and (2) some automobile trips shift to non-auto modes that are generally slower on average than auto travel.
- Comparing the Project to the No Project, communities of concern see a slightly smaller reduction in commute time relative to the remainder of the region. This result is consistent with the two factors noted above.

5. NON-COMMUTE TIME

Table 5-1. Average Non-commute Time Results in Minutes by Community Type: EIR Scenarios

	2010	1	2	3	4	5	% Change	
	Base Year	No Project	Project	Transit Priority	Network of Comm.	Env., Equity & Jobs	Base Year to Project	No Project to Project
Communities of Concern	12	13	13	13	13	13	5%	0%
Remainder of Region	13	13	13	13	13	13	1%	0%
Regional Average	13	13	13	13	13	13	2%	0%

Source: MTC estimates.

- Across the scenarios, there is even less variation than was seen in Commute Time.
- A slight increase is noted in average travel times for communities of concern relative to the base year, but the difference between communities of concern and the remainder of the region in comparing the Project to the No Project is negligible.

6. TRANSPORTATION INVESTMENT ANALYSIS

Population/Use-Based Analysis

1. Establish Regional Population and System Usage Demographics

Table 6-1. Regional System Usage and Population by Subgroup

	Subgroup	Average Daily Trips		Population	
		#	%	#	%
Minority Status	Minority	9,147,768	43%	4,117,836	58%
	Non-minority	12,200,114	57%	3,032,903	42%
	Total	21,347,882	100%	7,150,739	100%
Low-Income Status	Low-Income	3,392,623	18%	2,211,080	31%
	Not Low-Income	15,888,378	82%	4,843,266	69%
	Total	19,281,001	100%	7,054,346	100%

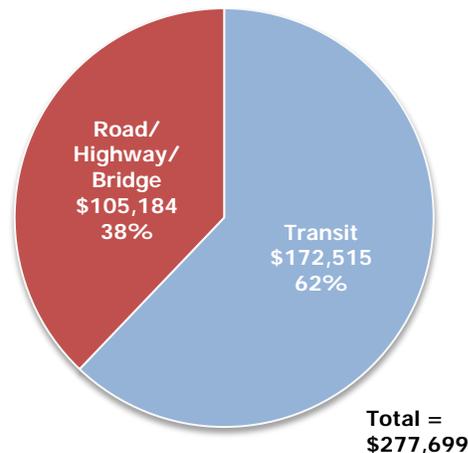
Sources: 2010 Census SF1 ; 2010 American Community Survey Public Use Microdata Sample 1-Year Estimates; Bay Area Travel Survey 2000.

Notes: Low-income universe is population in households, excluding persons living in group quarters. Low-income households adjusted for inflation across different data sources/years to capture households with incomes below \$50,000 per year in 2006 dollars.

- Both minority and low-income subgroups' trip-making represents a smaller share of the regional total relative to their respective populations.
- Some but not all of this difference is attributable to slight differences in overall regional demographics between the two datasets used (2010 Census Bureau data for populations, 2000 Bay Area Travel Survey data for trips).

2. Split Plan Investments by Mode

Figure 6-1. Plan Bay Area Investments by Mode, in Millions of Year-of-Expenditure Dollars



Source: MTC

3. Assign Investment by Mode to Population Subgroups

Table 6-2. Share of **System Use by Mode** by Subgroup (Regional Summary)

	Subgroup	Transit System Use (Ridership)	Roadway System Use (Vehicle-Miles of Travel)
Minority Status	Minority	62%	38%
	Non-minority	38%	62%
	Total	100%	100%
Low-Income Status	Low-Income	55%	13%
	Not Low-Income	45%	87%
	Total	100%	100%

Sources: 2006 Transit Passenger Demographic Survey, 2000 Bay Area Travel Survey.

- For simplicity, only the regional average usage shares for each mode are shown in Table 6-2; actual investment allocations to specific counties and transit operators varied based on the specific demographic characteristics of each county/transit operator.
- Relative to the comparison of regional population characteristics to regional trip-making by all modes shown in Table 6-1, the distribution of system usage in terms of transit ridership and VMT in Table 6-2 shows even greater differences between the population subgroups by mode.

4. Analysis Results: Sum All Investments by Population Subgroup and Compare Each Group's Share of Investments to Shares of Regional System Usage and Population

Table 6-3. Plan Bay Area **Transit Investments** by Population Subgroup

	Subgroup	Total Plan Bay Area Transit Funding (Millions of YOE \$)	% of Total Transit Funding	% of Regional Transit Ridership	% of Total Regional Population
Minority Status	Minority	\$107,950	63%	62%	58%
	Non-minority	\$64,564	37%	38%	42%
	Total	\$172,515	100%	100%	100%
Low-Income Status	Low-Income	\$95,663	55%	55%	31%
	Not Low-Income	\$76,852	45%	45%	69%
	Total	\$172,515	100%	100%	100%

Source: MTC analysis of Plan Bay Area investments, 2006 Transit Passenger Demographic Survey, 2010 Census SF1, 2010 American Community Survey Public Use Microdata Sample 1-Year Estimates.

Note: Totals may not sum due to rounding.

- Regional investments in transit generally have a disproportionate benefit to both minority and low-income users compared to their share of the regional population, due to their propensity to use transit.

Table 6-4. Plan Bay Area Road, Highway, and Bridge Investments by Population Subgroup

	Subgroup	Total Plan Bay Area Road/ Highway/ Bridge Funding (Millions of YOE \$)	% of Total Road/ Highway/ Bridge Funding	% of Regional VMT	% of Total Regional Population
Minority Status	Minority	\$41,169	39%	38%	58%
	Non-minority	\$64,015	61%	62%	42%
	Total	\$105,184	100%	100%	100%
Low-Income Status	Low-Income	\$13,782	13%	13%	31%
	Not Low-Income	\$91,402	87%	87%	69%
	Total	\$105,184	100%	100%	100%

Source: MTC analysis of Plan Bay Area investments, 2000 Bay Area Travel Survey, 2010 Census SF1, 2010 American Community Survey Public Use Microdata Sample 1-Year Estimates.

- Regional investments in roads, highways, and bridges generally tend to disproportionately benefit the region’s non-minority and non-low-income populations, because minority and low-income populations are relatively underrepresented in the share of regional roadway usage relative to their share of the region’s population.

Table 6-5. Plan Bay Area Transportation Investment Analysis Results by Population Subgroup, All Modes

	Subgroup	Total Plan Bay Area Funding (Millions of YOE \$)	% of Total Funding	% of Average Daily Regional Trips	% of Total Regional Population
Minority Status	Minority	\$149,119	54%	43%	58%
	Non-minority	\$128,580	46%	57%	42%
	Total	\$277,699	100%	100%	100%
Low-Income Status	Low-Income	\$109,445	39%	18%	31%
	Not Low-Income	\$168,254	61%	82%	69%
	Total	\$277,699	100%	100%	100%

Source: MTC analysis of Plan Bay Area investments, 2000 Bay Area Travel Survey, 2010 Census SF1, 2010 American Community Survey Public Use Microdata Sample 1-Year Estimates.

- In most cases, low-income and minority populations and travelers are receiving a similar or greater share of Plan investments relative to their overall share of the region’s population and trips.

- Only in the case of the region’s minority population as a whole does a target group receive a slightly smaller share of regional funding (54%) relative to population as a whole (58%). To some degree this result appears to reflect differences in overall regional demographics captured between the 2000 Bay Area Travel Survey (which was weighted according to the region’s 2000 Census population, which was then 50% minority) used to allocate funding on the basis of usage, and the 2010 Census (58% minority) used for the overall regional population comparison.

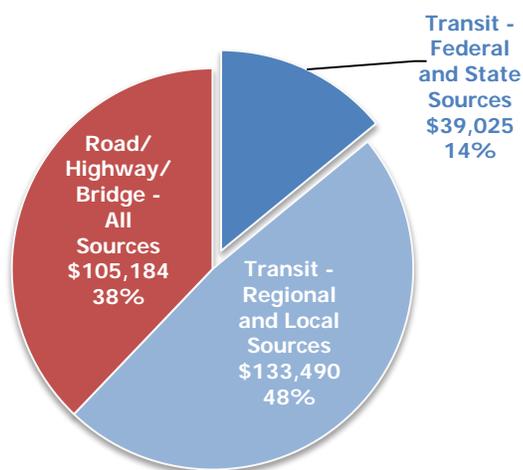
Project Mapping

See handouts

Title VI Analysis

- FTA requires MPOs to produce:
 - “[C]harts that analyze the impacts of the distribution of State and Federal funds in the aggregate for public transportation purposes...”
 - “An analysis of impacts identified ... [above] that identifies any disparate impacts on the basis of race, color, or national origin”

*Figure 6-2. Public Transportation Investments from Federal and State Sources
As a Share of All Plan Bay Area Investments*



Source: MTC

Table 6-6. Plan Bay Area Federal and State Transit Investments by Minority Status

Subgroup	Total Federal/ State Transit Funding (Millions of YOE \$)	% of Total Federal/ State Transit Funding	% of Regional Transit Ridership	% of Total Regional Population
Minority	\$24,147	62%	62%	58%
Non-minority	\$14,877	38%	38%	42%
Total	\$39,025	100%	100%	100%

Source: MTC analysis of Plan Bay Area investments, 2006 Transit Passenger Demographic Survey, 2010 Census SF1.
 Note: Totals may not sum due to rounding.

- Note these results are very similar compared to the analysis of all transit funds shown in Table 6-3.

Table 6-7. Disparate Impact Analysis of Plan Bay Area Federal and State Transit Investments: Population Analysis

Subgroup	Total Federal/ State Transit Funding (Millions of YOE \$)	Regional Population (2010)	Per-Capita Benefit	Minority Per-Capita Benefit as % of Non-minority Per- Capita Benefit
Minority	\$24,147	4,117,836	\$5.86	120%
Non-minority	\$14,877	3,032,903	\$4.91	--
Total	\$39,025	7,150,739		--

Source: MTC analysis of Plan Bay Area investments, 2006 Transit Passenger Demographic Survey, 2010 Census SF1.
 Note: Totals may not sum due to rounding.

Table 6-8. Disparate Impact Analysis of Plan Bay Area Federal and State Transit Investments: Ridership Analysis

Subgroup	Total Federal/ State Transit Funding (Millions of YOE \$)	Avg. Daily Transit Ridership (2006)	Per-Rider Benefit	Minority Per-Rider Benefit as % of Non-minority Per- Rider Benefit
Minority	\$24,147	816,059	\$29.59	99%
Non-minority	\$14,877	498,303	\$29.86	--
Total	\$39,025	1,314,362		--

Source: MTC analysis of Plan Bay Area investments, 2006 Transit Passenger Demographic Survey, MTC Statistical Summary for Bay Area Transit Operators.
 Note: Totals may not sum due to rounding.

- On a per-capita **population** basis, Table 6-7 shows minority persons in the region are receiving 120% of the benefit of Plan Bay Area’s investments in public transportation from Federal and State sources compared to non-minority persons.

- On a **ridership** basis, Table 6-8 shows that minority riders are receiving 99% of the benefit of Federal- and State-funded transit investments in Plan Bay Area compared to non-minority riders. This 1% difference between minority and non-minority per-rider benefits is not considered statistically significant.