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Memorandum

TO: Interested Parties DATE: January 24, 2012

FR: Sean Co, Lisa Klein, and Dave Vautin W.I.

RE: Plan Bay Area: Project Performance Assessment – Revised Results

Summary

Since the November release of draft project performance assessment results, MTC staff has received feedback from Commissioners, county congestion management agencies (CMAs), project sponsors, and other stakeholders. The attached revised results reflect additional information we received for specific projects, as well as refinements to the assessment methodology for selected targets. At the February Planning Committee meeting, MTC staff will seek the Committee's approval of criteria to identify outliers (high- and low-performing projects) and a process for CMAs and sponsors to make a compelling case for low-performing projects they propose be included in the transportation investment strategy for the preferred Sustainable Communities Strategy (SCS).

Background

All non-committed projects, as defined by the Commission in its Committed Funds and Projects Policy for Plan Bay Area (Resolution No. 4006) adopted in April 2011, are subject to the performance assessment. The project performance assessment aims to determine the degree to which potential transportation projects and programs: (1) advance the ten performance targets adopted by MTC and ABAG in January 2011 (Resolution No. 3987) and (2) are cost-effective. The performance assessment allows comparison of projects on a consistent qualitative and quantitative basis to the extent possible and practical. For a description of the overall approach and analysis methodology for the benefit-cost and targets assessments, please refer to the October 28, 2011 memo to the MTC Planning Committee: http://www.onebayarea.org/pdf/Project_Assessment_11-4-11.pdf.

Revisions to Project Assessment since November

An overview of the major revisions follows below. These are reflected in the revised summary tables and "bubble charts" in **Attachment A**. Today's release includes a significant quantity of materials, each designed to provide further insight on the revised project performance assessment results. (See list of attachments at the end of this memo.) This spring, MTC staff will release a final report on the Plan Bay Area project performance assessment.

As noted from the beginning, the project performance assessment is most useful to identify outliers at both ends of the spectrum – the highest and lowest performing projects. (See below under Next Steps.) While the revisions affect the numeric results for a number of projects, the net effect in terms

of identifying high- and low-performing outlier projects is relatively modest. In particular, there is virtually no change in highest performing projects. At the other end of the spectrum, the number of projects with low benefit-cost scores and low target ratings has decreased as a result of improved project definitions and corrections.

Benefit-Cost Assessment

Revisions were made for a handful of projects subject to benefit-cost assessment. Most revisions reflected updated cost estimates, while a few revisions reflect refined estimates of projects' associated benefits. For a list of projects with updated benefit-cost ratios, see **Table B-1**. Complete results for all projects are shown in **Tables B-2** through **B-5**.

Targets Assessment

In **Attachment C-1**, MTC staff has provided a description of the methodology used to rate each of the targets, including those for which the methodology has been revised. Detailed discussion of the specific changes and revised results for all projects are included in **Attachments C-2** through **C-4**.

MTC staff made three types of changes to the targets assessment.

- Individual Project Review: The target scores for several projects were revised on a case-by-case basis in response either to additional project detail provided by CMAs and sponsors or based on a review of consistency among similar projects. **Table C-2** lists these changes. Note that the total revised target scores for these projects are also affected by the revised methodologies for the housing target and the low-income household housing & transportation cost target (as described below).

- Adequate Housing Target: This assessment approach for this target was significantly revised to consider the target's emphasis on accommodating both overall housing demand and the demand for affordable housing without displacement. The assessment of support for addressing overall housing demand was updated to reflect housing growth in the more realistic Focused Growth scenario, as opposed to the prior use of the unconstrained Initial Vision scenario. In addition, jurisdictions' track records in meeting their Regional Housing Needs Assessment (RHNA) targets provided the basis for assessing support for affordable housing. The revised approach is described in more detail in **Exhibit C-1**.

- Target to Reduce Low-Income Household Expenditures on Housing & Transportation: This target was previously assessed based on whether or not the project provided a lower-cost transit alternative to driving. The updated assessment considers data available for transit operators on the number of low-income riders served. Transit projects sponsored by agencies that serve a high share of low-income riders or have a large number of low-income riders receive higher ratings for this target. We continue to assume that road improvement projects have minimal impact on this target. The revised approach is described in more detail in **Exhibit C-1**.

Equity Considerations

The table summarizing equity considerations has been updated to reflect the revised target assessment results describe above. In addition, MTC staff has generated county maps reflecting each project's level of support for Communities of Concern and towards the corresponding equity-related targets. These materials are presented in **Attachment D**.

Next Steps: Impacts for High- and Low-Performing Projects

In March/April 2012, MTC and ABAG staff will recommend a preferred SCS that will include a preferred land use and transportation investment strategy. The Commission will use its policy discretion along with the performance assessment results to decide which projects and programs to include in the investment strategy. Staff proposes the following guidelines for leveraging project performance assessment results in the development the preferred SCS investment strategy.

1. The analysis results should be used to identify outliers at both ends of the spectrum – the highest and lowest performing projects, as shown in **Table A-5** and described below.

2. The highest performing projects should be included in the preferred investment strategy, subject to analysis of financial feasibility. The highest performing projects include those with:
   - ***High benefit-cost ratio (≥ 10) and at least a moderate target score (≥ 2); or***
   - ***High target score (≥ 6) and at least a moderate benefit-cost ratio (≥ 5)***

3. The lowest performing projects should be included only if the sponsor or CMA can make a compelling case. The lowest performing projects include those with:
   - ***Low benefit-cost ratio (< 1), regardless of target score; or***
   - ***Low target score (< -1), regardless of benefit-cost ratio***

4. A county congestion management agency (CMA) and/or project sponsor must make a compelling case in writing and may be asked to present the case at the March Planning Committee meeting. Further details on making this compelling case will be discussed at the February meetings of the Partnership Technical Advisory Committee (PTAC), MTC Policy Advisory Council, and MTC Planning Committee.

Proposed Schedule (subject to approval by MTC Planning Committee in February)

February 2012	▪ Notify CMAs and project sponsors of the guidelines for applying the project performance assessment results
March / April 2012	▪ CMAs/sponsors submit compelling cases in writing by March 2 and present their cases at the March 9 joint MTC Planning Committee/ABAG Administration Committee meeting ▪ Release preliminary preferred scenario for Plan Bay Area (includes investment strategy)
May 2012	▪ MTC / ABAG approves preferred scenario for Plan Bay Area

List of Attachments

A. Project Assessment Summary Materials
   - **Table A-1**: Summary of Benefit-Cost Ratios and Target Scores, ranked by B/C ratio
   - **Figure A-2**: Project Performance Bubble Chart by project type
   - **Figure A-3**: Project Performance Bubble Chart for road projects
   - **Figure A-4**: Project Performance Bubble Chart for transit projects
   - **Table A-5:** High-Performers and Low-Performers (based on thresholds proposed by staff for approval at the February meeting of the MTC Planning Committee)

B. Revised Benefit-Cost Assessment – Detail

- **Table B-1**: Projects with Revised Benefit-Cost Ratios since November Draft Release
- **Table B-2**: Benefit-Cost Assessment – Nominal Annual Benefits
- **Table B-3**: Benefit-Cost Assessment – Monetized Annual Benefits
- **Exhibit B-4**: Benefit-Cost Sensitivity Testing
- **Exhibit B-5**: Confidence Assessment of Benefit-Cost Results

C. Targets Assessment – Detail

- **Exhibit C-1**: Targets Assessment Methodology
- **Table C-2**: Projects with Revised Target Scores since November Draft Release (based on improved project definitions)
- **Table C-3**: Targets Assessment – Detailed Results (for large projects)
- **Table C-4**: Targets Assessment – Results by Project Type (for small projects)

D. Equity Considerations

- **Table D-1**: Project Assessment Equity Considerations
- **Figure D-2**: Project Assessment Equity Considerations Mapping (Alameda County)
- **Figure D-3**: Project Assessment Equity Considerations Mapping (Contra Costa County)
- **Figure D-4**: Project Assessment Equity Considerations Mapping (Marin County)
- **Figure D-5**: Project Assessment Equity Considerations Mapping (North Bay Counties)
- **Figure D-6**: Project Assessment Equity Considerations Mapping (San Francisco County)
- **Figure D-7**: Project Assessment Equity Considerations Mapping (San Mateo County)
- **Figure D-8**: Project Assessment Equity Considerations Mapping (Santa Clara County)

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Summary of Benefit-Cost Ratios and Target Scores (listed by benefit-cost ratio)

TABLE A-1

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	Row #	Project ID*	Project Name	County	Project Type	Project Capital Costs (in millions of 2013 dollars)	Total Annualized 2035 Benefits (in millions of 2013 dollars)	Total Annualized 2035 Costs (in millions of 2013 dollars)	Plan Bay Area B/C Ratio	T-2035 B/C Ratio	Overall Targets Score	Targets Supported	Targets Adversely Affected
High B/C	1	240182	BART Metro Program (including Bay Fair Connection & Civic Center Turnback)	Multi-County	Transit Efficiency	650	161	-10	>60	n/a	8.5	8.5	0
	2	240694	Treasure Island Congestion Pricing	San Francisco	Pricing	59	69	1	59	n/a	4.0	4.0	0
	3	240522	Congestion Pricing Pilot	San Francisco	Pricing	102	227	5	45	n/a	6.0	6.0	0
	4	22780	AC Transit Grand-MacArthur BRT	Alameda/ 3434	Transit Efficiency	36	32	2	18	n/a	5.5	5.5	0
	5	230419	Freeway Performance Initiative	Regional	FPI	2,991	3,175	202	16	28	4.0	4.0	0
	6	22274	ITS Improvements in San Mateo County	San Mateo	Road Efficiency	66	56	4	16	n/a	4.0	4.0	0
	7	240494	ITS Improvements in Santa Clara County	Santa Clara	Road Efficiency	320	752	48	16	n/a	4.0	4.0	0
	8	22062	Irvington BART Station	Alameda	Transit Efficiency	123	19	2	12	n/a	5.5	5.5	0
	9	240171	SFMTA Transit Effectiveness Project	San Francisco	Transit Efficiency	157	90	8	11	n/a	7.5	7.5	0
Medium-High B/C	10	240582	Truck & Motorcycle Retirement [BAAQMD program]	Regional	Climate	29	55	6	9	n/a	0.5	1.5	1.0
	11	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Contra Costa	Highway Expansion	373	144	21	7	1	-3.5	1.0	4.5
	12	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Santa Clara	Road Efficiency	198	81	12	7	n/a	0.5	0.5	0
	13	94506	Fremont/Union City East-West Connector	Alameda	Arterial Expansion	190	65	10	7	1	0.5	2.0	1.5
	14	98207T	Alameda-Oakland BRT + Transit Access Improvements	Alameda	Transit Efficiency	16	14	2	6	n/a	5.0	5.0	0
	15	240523, 240060	US-101 HOV Lanes (Whipple Avenue to Cesar Chavez Street)	Multi-County	Road Efficiency	331	123	19	6	n/a	2.5	2.5	0
	16	230161	Van Ness Avenue BRT	San Francisco/ 3434	Transit Efficiency	140	44	7	6	n/a	6.5	6.5	0
	17	HOTd	Silicon Valley Express Lanes Network	Santa Clara	Express Lanes Network	1,398	408	70	6	n/a	-0.5	2.0	2.5
	18	240155	Better Market Street	San Francisco	Transit Efficiency	200	56	10	6	n/a	6.0	6.0	0
	19	22455	AC Transit East Bay BRT	Alameda/ 3434	Transit Efficiency	211	62	12	5	n/a	5.5	5.5	0
	20	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network	Multi-County	Express Lanes Network	2,364	602	118	5	n/a	-0.5	2.0	2.5
	21	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Solano	Road Efficiency	50	18	4	5	2†	1.0	1.0	0
	22	n/a	Local Streets and Roads Capital Maintenance Needs	Regional	Maintenance	n/a	1,369	280	5	5	5.0	5.0	0
	23	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Santa Clara/ 3434	Transit Expansion	4,094	324	70	5	n/a	7.0	7.0	0
	24	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-County	Transit Efficiency	848	153	34	5	n/a	7.5	7.5	0
	25	240557	Oakdale Caltrain Station	San Francisco	Transit Efficiency	51	3	1	4	n/a	4.5	4.5	0
	26	240062, 22776	SR-84/I-680 Interchange Improvements + SR-84 Widening (Jack London to I-680)	Alameda	Highway Expansion	381	87	21	4	n/a	-2.5	0.5	3.0
	27	230294	New SR-152 Alignment	Santa Clara	Highway Expansion	776	148	41	4	n/a	-2.0	2.0	4.0
	28	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	San Francisco/ 3434	Transit Expansion	2,348	108	31	4	n/a	7.5	7.5	0
	29	240410	Transportation for Livable Communities	Regional	TLC	7,131	875	255	3	2	7.0	7.0	0
	30	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello Avenue to SR-242)	Contra Costa	Highway Expansion	396	65	21	3	1	0.5	1.0	0.5
	31	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Solano	Transit Efficiency	54	2	1	3	n/a	3.5	3.5	0

Summary of Benefit-Cost Ratios and Target Scores (listed by benefit-cost ratio)

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	Row #	Project ID*	Project Name	County	Project Type	Project Capital Costs (in millions of 2013 dollars)	Total Annualized 2035 Benefits (in millions of 2013 dollars)	Total Annualized 2035 Costs (in millions of 2013 dollars)	Plan Bay Area B/C Ratio	T-2035 B/C Ratio	Overall Targets Score	Targets Supported	Targets Adversely Affected
Medium-Low B/C	32	240617	SR-29 HOV Lanes and BRT (Napa Junction to Vallejo)	Napa	Road Efficiency	60	11	4	3	n/a	1.5	1.5	0
	33	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Multi-County	Transit Efficiency	216	36	15	2	n/a	4.5	4.5	0
	34	240147	Southeast Waterfront Transportation Improvements	San Francisco	Transit Efficiency	397	88	36	2	n/a	3.5	3.5	0
	35	240026	SamTrans El Camino BRT	San Mateo	Transit Efficiency	120	59	25	2	n/a	5.5	5.5	0
	36	240119	VTA El Camino BRT	Santa Clara	Transit Efficiency	239	28	12	2	n/a	7.0	7.0	0
	37	00BART	BART Service Frequency Improvements	Multi-County	Transit Efficiency	1,275	126	56	2	n/a	8.5	8.5	0
	38	230604	Bay Bridge Contraflow Lane	Multi-County	Pricing	611	67	31	2	n/a	4.5	4.5	0
	39	580_BUS	I-580 Express Bus (Dublin to Livermore)	Alameda	Transit Efficiency	150	32	16	2	n/a	4.5	4.5	0
	40	240018	Dumbarton Corridor Express Bus	Multi-County	Transit Efficiency	101	23	12	2	n/a	6.5	6.5	0
	41	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Multi-County/ 3434	Transit Expansion	320	41	22	2	n/a	4.5	4.5	0
	42	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Contra Costa	Highway Expansion	150	15	9	2	1†	-2.5	2.0	4.5
	43	00MUNI	Muni Service Frequency Improvements	San Francisco	Transit Efficiency	0	25	14	2	n/a	5.5	5.5	0
	44	230164	Geary Boulevard BRT	San Francisco	Transit Efficiency	172	15	9	2	7	6.5	6.5	0
	45	240526	SFCTA Transit Performance Initiative	San Francisco	Transit Efficiency	490	28	16	2	n/a	7.5	7.5	0
	46	22247	Regional Bikeway Network	Regional	Bike/Ped	1,464	124	73	2	0.5	7.0	7.0	0
	47	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Multi-County	Transit Efficiency	0	108	65	2	n/a	5.5	5.5	0
	48	n/a	New Freedom Program	Regional	Lifeline/New Freedom	n/a	3	2	2	n/a	5.5	5.5	0
	49	22268	San Mateo Countywide Shuttle Service Frequency Improvements	San Mateo	Transit Efficiency	0	10	6	2	n/a	2.5	2.5	0
	50	230550	Climate Initiatives (5-year program)	Regional	Climate	560	158	112	1	0.4	3.5	3.5	0
	51	n/a	Transit Capital Maintenance Needs	Regional	Maintenance	n/a	1,787	1,286	1	1	5.0	5.0	0
	52	240545	Parkmerced Light Rail Corridor	San Francisco	Transit Efficiency	76	6	5	1	n/a	5.0	5.0	0
	53	230055	Golden Gate Ferry Service Frequency Improvements	Multi-County	Transit Efficiency	34	6	4	1	n/a	4.5	4.5	0
	54	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Alameda	Transit Expansion	555	37	29	1	n/a	5.0	5.0	0
	55	240521, 240134, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-County/ 3434	Transit Efficiency	5,599	272	220	1	n/a	7.5	7.5	0
	56	00ACT1	AC Transit Frequent Transit Network	Multi-County	Transit Efficiency	654	606	510	1	n/a	5.5	5.5	0
	57	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Contra Costa	Transit Efficiency	60	12	11	1	1	4.5	4.5	0
	58	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Multi-County	Road Efficiency	300	20	18	1	8†	0.5	2.5	2.0
	59	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Regional	Climate	211	42	44	1	n/a	0.5	1.5	1.0
	60	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Alameda	Transit Expansion	1,135	50	52	1	4†	5.0	5.0	0

Summary of Benefit-Cost Ratios and Target Scores (listed by benefit-cost ratio)

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	Row #	Project ID*	Project Name	County	Project Type	Project Capital Costs (in millions of 2013 dollars)	Total Annualized 2035 Benefits (in millions of 2013 dollars)	Total Annualized 2035 Costs (in millions of 2013 dollars)	Plan Bay Area B/C Ratio	T-2035 B/C Ratio	Overall Targets Score	Targets Supported	Targets Adversely Affected
Low B/C	61	22415	Historic Streetcar Expansion Program	San Francisco	Transit Efficiency	66	9	9	0.9	2	5.0	5.0	0
	62	240216	Dumbarton Rail	Multi-County/ 3434	Transit Expansion	755	31	36	0.8	n/a	6.0	6.0	0
	63	240589	EV Solar Installation [BAAQMD program]	Regional	Climate	25	1	2	0.8	n/a	1.0	1.5	0.5
	64	240650	Sonoma Countywide Bus Service Frequency Improvements	Sonoma	Transit Efficiency	428	32	41	0.8	n/a	5.0	5.0	0
	65	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Multi-County/ 3434	Transit Expansion	283	10	13	0.7	n/a	5.0	5.0	0
	66	230252	Marin Countywide Bus Service Frequency Improvements	Marin	Transit Efficiency	0	9	12	0.7	1	4.5	4.5	0
	67	230219, 230314	Golden Gate Bus Service Frequency Improvements	Multi-County	Transit Efficiency	143	16	29	0.5	n/a	4.5	4.5	0
	68	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Santa Clara	Transit Expansion	276	4	8	0.5	n/a	6.0	6.0	0
	69	230547	Monterey Highway BRT	Santa Clara	Transit Efficiency	140	15	37	0.4	n/a	5.5	5.5	0
	70	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Alameda	Transit Expansion	4,177	57	153	0.4	n/a	5.0	5.0	0
	71	22019	Downtown East Valley (Phase 2: LRT)	Santa Clara/ 3434	Transit Expansion	307	5	16	0.3	n/a	6.0	6.0	0
	72	98139	ACE Service Expansion	Multi-County/ 3434	Transit Efficiency	600	19	67	0.3	n/a	4.0	4.0	0
	73	230554	Sunnyvale-Cupertino BRT	Santa Clara	Transit Efficiency	100	5	26	0.2	n/a	5.0	5.0	0
	74	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Santa Clara	Transit Expansion	435	3	19	0.2	n/a	6.0	6.0	0
	75	240690	Lifeline Transportation Program	Regional	Lifeline/New Freedom	n/a	10	119	0.1	0	5.5	5.5	0
	76	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)	Multi-County/ 3434	Transit Efficiency	509	1	18	0.1	n/a	6.0	6.0	0
	77	98119	Vasona Light Rail Extension (Phase 2)	Santa Clara	Transit Expansion	176	0	6	0.0	n/a	5.5	5.5	0
	78	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Alameda/ 3434	Transit Efficiency	180	0	2	0.0	n/a	5.0	5.0	0

B/C RATIO - COLOR KEY	
High B/C (B/C ratio greater than 10)	
Medium-High B/C (B/C ratio between 5 and 9)	
Medium-Low B/C (B/C ratio between 1 and 4)	
Low B/C (B/C ratio less than 1)	

	TARGETS SCORE - COLOR KEY
	Strong Support (score of 6.0 or higher)
	Moderate Support (score between 1.5 and 5.5)
	Minimal Impact (score between -1.0 and 1.0)
	Moderate Adverse Impact (score between -1.5 and -5.5)
	Strong Adverse Impact (score of -6.0 or lower)

FIGURE A-2

Project Performance Assessment: Results by Project Type

Bubble size represents the total annual benefits for all projects of that type.

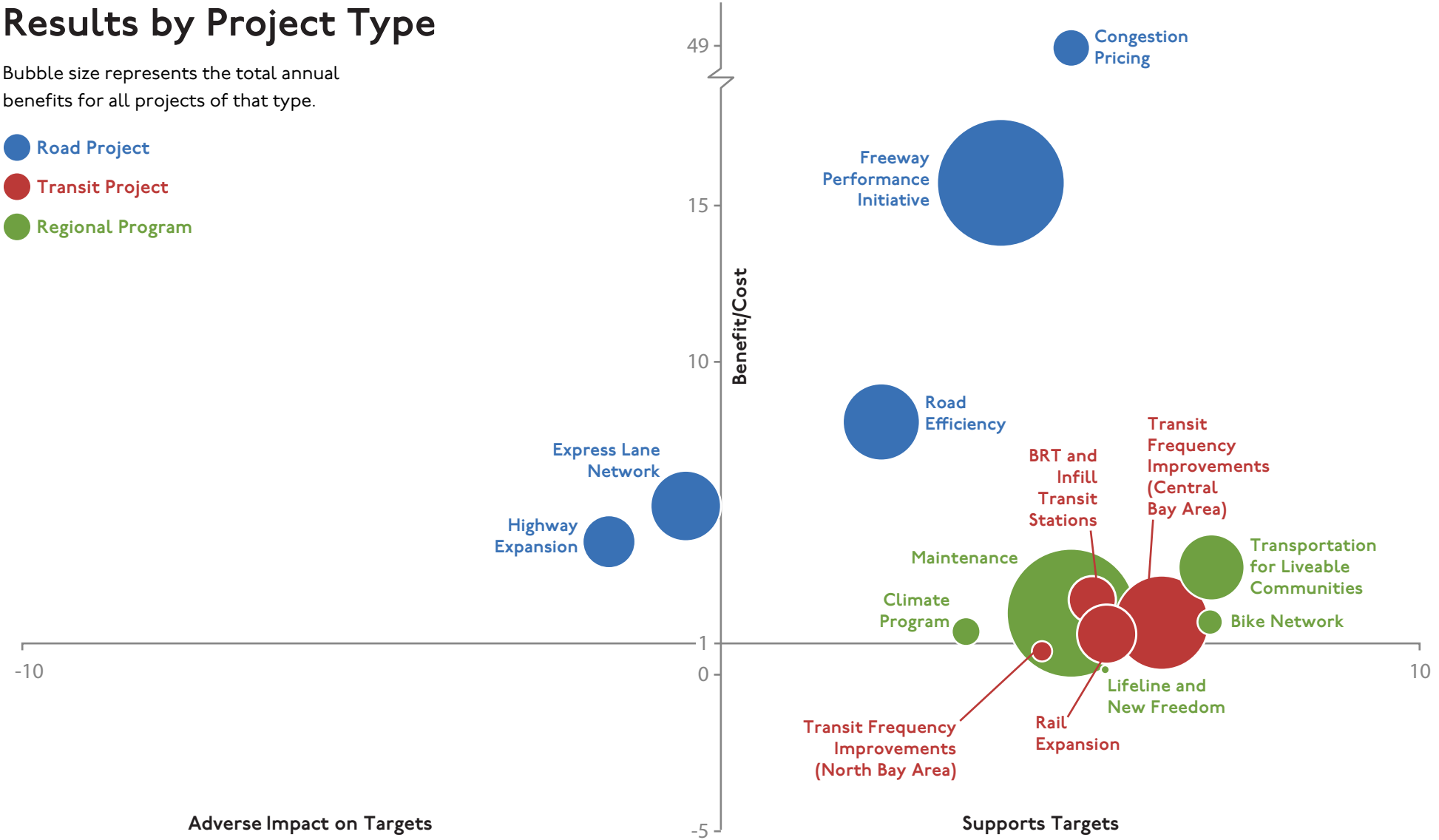


FIGURE A-3

Project Performance Assessment: All Road Projects

Bubble size represents the project benefits.

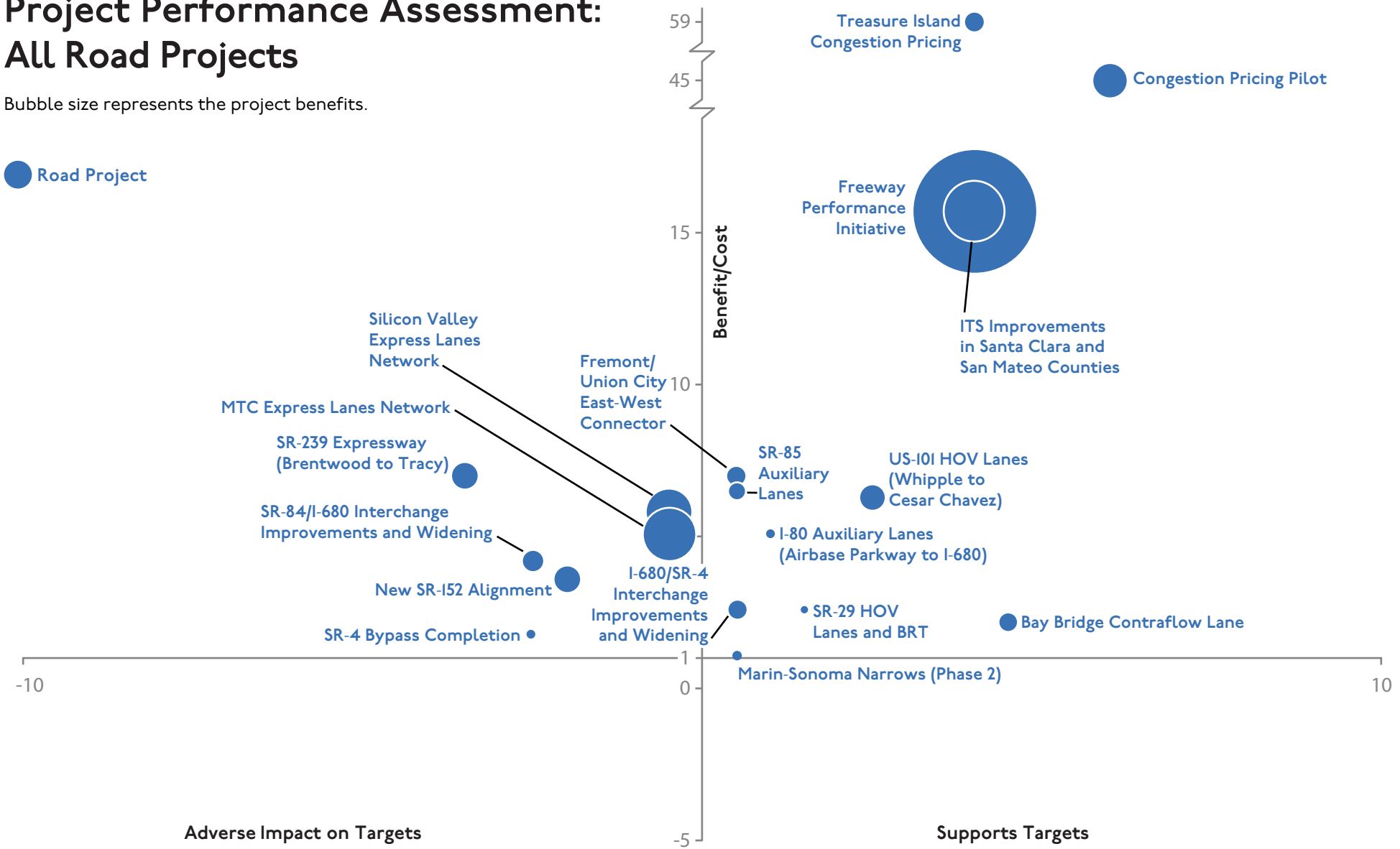
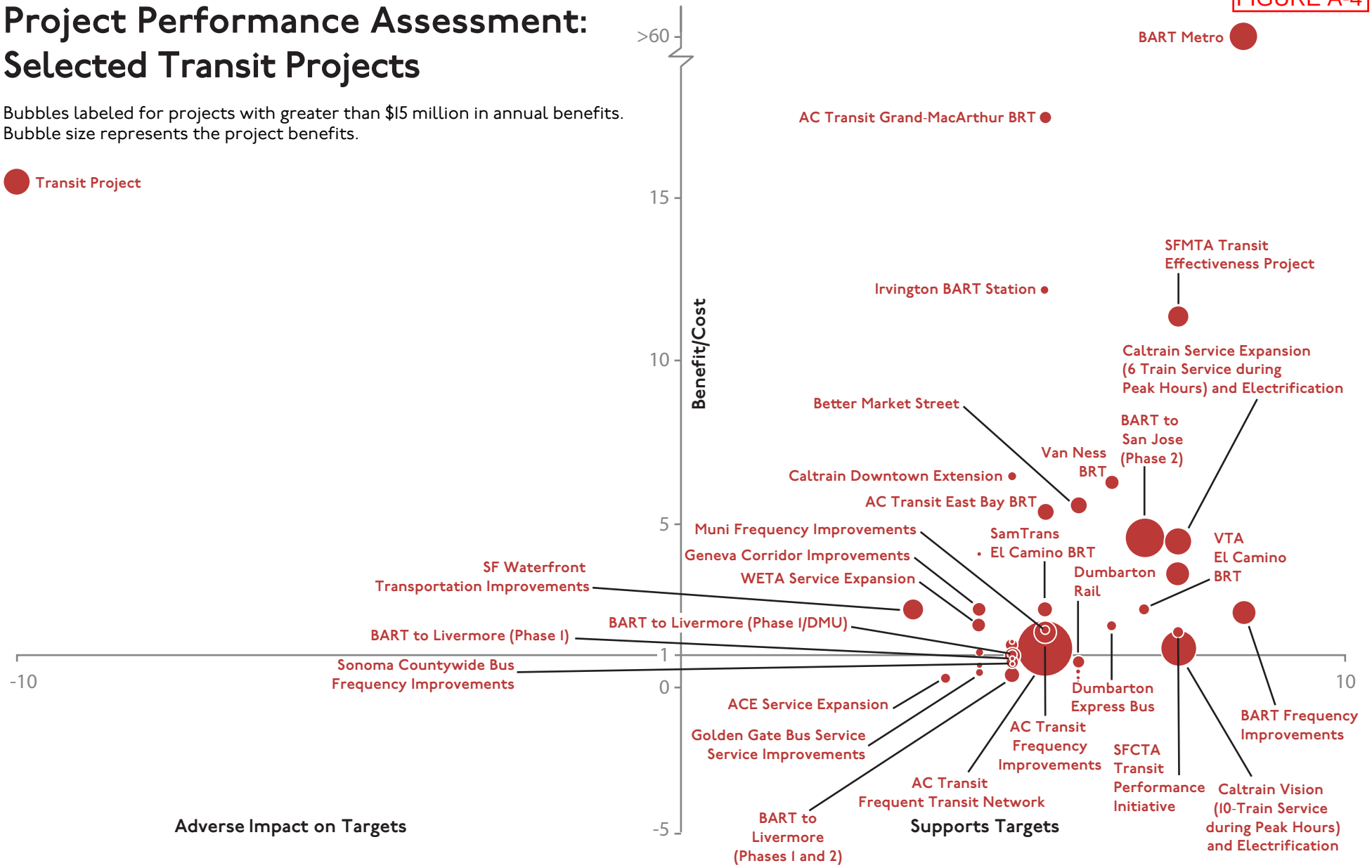


FIGURE A-4

Project Performance Assessment: Selected Transit Projects

Bubbles labeled for projects with greater than $15 million in annual benefits.
Bubble size represents the project benefits.



Row #	Project ID	Project Name	County	B/C Ratio	Overall Targets Score	Project Capital Costs*	Project Description	
HIGH-PERFORMING PROJECTS: HIGH B/C (>=10) and MODERATE Targets Score (>=2) OR HIGH Targets Score (>=6) and MODERATE B/C (between 5 and 10)**								
1	**240182**	**BART Metro Program (including Bay Fair Connection & Civic Center Turnback)**	Multi-County	**>60**	**8.5**	**650**	Increases the efficiency of BART in the urban core by constructing new turnbacks and providing new express train service.	**HIGH B/C (>=10)**
2	**240694**	**Treasure Island Congestion Pricing**	San Francisco	**59**	**4.0**	**59**	Charges a $5 toll for residents to enter/exit Treasure Island during peak hours; net revenues designated for transit service.	
3	**240522**	**Congestion Pricing Pilot**	San Francisco	**45**	**6.0**	**102**	Charges a $3 toll to enter/exit the northeast quadrant of San Francisco during peak hours; net revenues designated for transit service.	
4	**22780**	**AC Transit Grand-MacArthur BRT**	Alameda/ 3434	**18**	**5.5**	**36**	Constructs a bus rapid transit line along the Grand & MacArthur corridors in Oakland, providing faster service for AC Transit Line NR.	
5	**230419**	**Freeway Performance Initiative**	Regional	**16**	**4.0**	**2,991**	Maximizes the efficiency of the roadway network through arterial signal coordination and freeway ramp metering.	
6	**22274**	**ITS Improvements in San Mateo County**	San Mateo	**16**	**4.0**	**66**	Maximizes the efficiency of the roadway network through arterial signal coordination and freeway ramp metering.	
7	**240494**	**ITS Improvements in Santa Clara County**	Santa Clara	**16**	**4.0**	**320**	Maximizes the efficiency of the roadway network through arterial signal coordination and freeway ramp metering.	
8	**22062**	**Irvington BART Station**	Alameda	**12**	**5.5**	**123**	Constructs a new infill BART station in the Irvington district of Fremont.	
9	**240171**	**SFMTA Transit Effectiveness Project**	San Francisco	**11**	**7.5**	**157**	Improves reliability and reduces travel times on key Muni bus corridors through signal prioritization and bus lanes.	
10	**240134, 21627**	**Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)**	Multi-County	**5**	**7.5**	**848**	Electrifies the Caltrain line and purchases additional train vehicles to provide faster, more frequent service during peak hours.	**HIGH Targets (>=6) and MEDIUM-HIGH B/C (>=5)**
11	**240375**	**BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)**	Santa Clara/ 3434	**5**	**7.0**	**4,094**	Extends BART from the Phase 1 terminus in Berryessa (North San Jose) through a new BART subway to Alum Rock, Downtown San Jose, Diridon Station, and Santa Clara.	
12	**230161**	**Van Ness Avenue BRT**	San Francisco/ 3434	**6**	**6.5**	**140**	Constructs a bus rapid transit line with dedicated lanes along the Van Ness corridor in San Francisco (from Lombard to Mission).	
13	**240155**	**Better Market Street**	San Francisco	**6**	**6.0**	**200**	Increases transit speeds along San Francisco's Market Street between the Embarcadero & Octavia by restricting auto traffic on the corridor.	

* = shown in millions of 2013 dollars

Row #	Project ID	Project Name	County	B/C Ratio	Overall Targets Score	Project Capital Costs*	Project Description	
LOW-PERFORMING PROJECTS: LOW B/C (<1) OR LOW Targets Score (<-1)**								
1	**22415**	**Historic Streetcar Expansion Program**	San Francisco	**0.9**	**5.0**	**66**	Expands streetcar service with the new Muni E-line, connecting Fort Mason to Caltrain.	**LOW B/C (<1)**
2	**240216**	**Dumbarton Rail**	Multi-County/ 3434	**0.8**	**6.0**	**755**	Offers new rail service on the Dumbarton corridor between Union City & Redwood City.	
3	**240650**	**Sonoma Countywide Bus Service Frequency Improvements**	Sonoma	**0.8**	**5.0**	**428**	Increases bus service frequencies in Sonoma County by 50%.	
4	**240589**	**EV Solar Installation [BAAQMD program]**	Regional	**0.8**	**1.0**	**25**	Installs solar panels at electric vehicle charging stations to offset emissions.	
5	**240676, 240675, 240677**	**SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)**	Multi-County/ 3434	**0.7**	**5.0**	**283**	Constructs extensions to SMART's Initial Operating Segment, connecting Cloverdale to Larkspur and building deferred stations.	
6	**230252**	**Marin Countywide Bus Service Frequency Improvements**	Marin	**0.7**	**4.5**	**0**	Increases bus service frequencies on higher-demand Marin Transit routes.	
7	**230219, 230314**	**Golden Gate Bus Service Frequency Improvements**	Multi-County	**0.5**	**4.5**	**143**	Increases bus service frequencies on higher-demand Golden Gate bus routes.	
8	**22956**	**Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)**	Santa Clara	**0.5**	**6.0**	**276**	Extends VTA light rail in East San Jose from Alum Rock to Eastridge Transit Center.	
9	**230547**	**Monterey Highway BRT**	Santa Clara	**0.4**	**5.5**	**140**	Constructs a bus rapid transit line along Monterey Highway, connecting downtown San Jose to points south.	
10	**22667**	**BART to Livermore (Phases 1 & 2: Rail Extension)**	Alameda	**0.4**	**5.0**	**4,177**	Extends BART from Dublin/Pleasanton to Vasco Road via downtown Livermore.	
11	**22019**	**Downtown East Valley (Phase 2: LRT)**	Santa Clara/ 3434	**0.3**	**6.0**	**307**	Constructs a new light rail line along Santa Clara Avenue in San Jose, from downtown to Alum Rock.	
12	**98139**	**ACE Service Expansion**	Multi-County/ 3434	**0.3**	**4.0**	**600**	Provides hourly bidirectional train service between Stockton and San Jose, along with significantly reduced travel times.	
13	**230554**	**Sunnyvale-Cupertino BRT**	Santa Clara	**0.2**	**5.0**	**100**	Constructs a bus rapid transit line between Sunnyvale and Cupertino.	
14	**22978**	**Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)**	Santa Clara	**0.2**	**6.0**	**435**	Extends VTA light rail in East San Jose from Alum Rock to Nieman Boulevard.	
15	**240690**	**Lifeline Transportation Program**	Regional	**0.1**	**6.0**	**n/a**	Funds programs to address transportation gaps for low-income communities.	
16	**22009**	**Capitol Corridor Service Frequency Improvements (Oakland to San Jose)**	Multi-County/ 3434	**0.1**	**5.5**	**509**	Doubles the frequency of Capitol Corridor service between Oakland and San Jose, leading to approximately hourly service.	
17	**98119**	**Vasona Light Rail Extension (Phase 2)**	Santa Clara	**0.0**	**5.5**	**176**	Extends VTA light rail from Campbell to Vasona Junction in Los Gatos.	
18	**230101**	**Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements**	Alameda/ 3434	**0.0**	**5.0**	**180**	Constructs an infill commuter rail station in Union City to serve Capitol Corridor & Dumbarton Rail.	

* = shown in millions of 2013 dollars

Row #	Project ID	Project Name	County	B/C Ratio	Overall Targets Score	Project Capital Costs*	Project Description	
LOW-PERFORMING PROJECTS: LOW B/C (<1) OR LOW Targets Score (<-1)**								
19	**21998**	**SR-116 Widening & Rehabilitation (Elphick Road to Redwood Drive)**	Sonoma	**N/A**	**-1.5**	**90**	Widens SR-116 in Sebastopol and Cotati to add turn lanes and shoulders.	**LOW Target Score (<-1)**
20	**230294**	**New SR-152 Alignment**	Santa Clara	**4**	**-2.0**	**776**	Realigns SR-152 on a new, wider corridor east of Gilroy to accommodate greater traffic volumes.	
21	**21884**	**Petaluma Cross-Town Connector/Interchange**	Sonoma	**N/A**	**-2.0**	**62**	Constructs a new interchange on US-101 in Petaluma and provides a new east-west arterial.	
22	**240062, 22776**	**SR-84/I-680 Interchange Improvements + SR-84 Widening (Jack London to I-680)**	Alameda	**4**	**-2.5**	**381**	Builds aux lanes on I-680 near the SR-84 interchange and widens SR-84 from the I-680 interchange to Livermore.	
23	**22981**	**SR-4 Widening (Marsh Creek Road to San Joaquin County line)**	Contra Costa	**N/A**	**-2.5**	**110**	Widens SR-4 to four lanes from Brentwood to the San Joaquin County line.	
24	**22605**	**SR-4 Bypass Completion (SR-160 to Walnut Avenue)**	Contra Costa	**2**	**-2.5**	**150**	Constructs the remaining phases of the SR-4 Bypass freeway in Brentwood.	
25	**22207**	**Farmers Lane Extension (Bellevue Avenue to SR-12)**	Sonoma	**N/A**	**-2.5**	**54**	Builds a new arterial roadway in southeastern Santa Rosa.	
26	**98133**	**Pacheco Boulevard Widening (Blum Road to Arthur Road)**	Contra Costa	**N/A**	**-3.0**	**52**	Widens Pacheco Boulevard in Martinez to 4 lanes.	
27	**230477**	**SR-12 Widening (SR-29 to Sacramento County line)**	Solano	**N/A**	**-3.0**	**50**	Widens SR-12 throughout Solano County to increase safety and provide additional capacity.	
28	**22400**	**SR-239 Expressway Construction (Brentwood to Tracy)**	Contra Costa	**7**	**-3.5**	**373**	Constructs a new 4-lane expressway from SR-4 Bypass in Brentwood to I-205 in Tracy.	
29	**21714**	**US-101 Widening (Monterey Street to SR-129)**	Santa Clara	**N/A**	**-4.0**	**246**	Widens US-101 south of Gilroy to 6 lanes to accommodate greater traffic volumes.	
30	**94050**	**SR-4 Upgrade to Full Freeway (Phase 2: Cummings Skyway to I-80)**	Contra Costa	**N/A**	**-4.5**	**78**	Improves SR-4 between Hercules & Martinez by upgrading an expressway to freeway design standards.	
31	**240053**	**Whipple Road Widening (Mission Boulevard to I-880)**	Alameda	**N/A**	**-5.0**	**100**	Widens Whipple Road to 4 lanes between Union City and Hayward.	

* = shown in millions of 2013 dollars

Summary of Changes to Benefit-Cost Results (reflects revisions between November draft release and January revised release)

TABLE B-1 REVISED 1/24/2012

Project ID*	Project Name	County	Project Type	Project Capital Costs (in millions of 2013 dollars)	Total Annualized 2035 Benefits (in millions of 2013 dollars)	Total Annualized 2035 Costs (in millions of 2013 dollars)	Plan Bay Area B/C Ratio	B/C Ratio (Nov. 2011 Draft)
ADDITIONAL PROJECTS NOT PREVIOUSLY ASSESSED								
580_BUS	I-580 Express Bus (Dublin to Livermore)	Alameda	Transit Efficiency	150	**32**	**16**	**2**	n/a
240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Multi-County	Transit Efficiency	0	**108**	**65**	**2**	n/a
LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Alameda	Transit Expansion	555	**37**	**29**	**1**	n/a
UPDATED PROJECT COSTS BASED ON NEW INFORMATION FROM SPONSORS								
240119	VTA El Camino BRT	Santa Clara	Transit Efficiency	239	**28**	**12**	**2**	1
230164	Geary Boulevard BRT	San Francisco	Transit Efficiency	172	**15**	**9**	**2**	1
UPDATED PROJECT COSTS AND INCLUDED BENEFITS FROM HIGH-SPEED RAIL								
230290	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	San Francisco/ 3434	Transit Expansion	2,348	**108**	**31**	**4**	0.8
CORRECTED ANNUALIZATION FOR PROJECT BENEFITS								
240582	Truck & Motorcycle Retirement [BAAQMD program]	Regional	Climate	29	**55**	**6**	**9**	0.0
240577	Heavy-Duty Truck Replacement [BAAQMD program]	Regional	Climate	211	**42**	**44**	**1**	0.0
240589	EV Solar Installation [BAAQMD program]	Regional	Climate	25	**1**	**2**	**0.8**	0.0

*Projects with slight adjustments to monetized benefits and/or costs since November that did **not** result in changes to the B/C ratio are omitted from the list above.*

B/C RATIO - COLOR KEY	
High B/C (B/C ratio greater than 10)	
Medium-High B/C (B/C ratio between 5 and 9)	
Medium-Low B/C (B/C ratio between 1 and 4)	
Low B/C (B/C ratio less than 1)	

* = projects with updates to B/C ratio since November draft release marked in blue

Benefit-Cost Assessment - Nominal Annual Benefits (sorted by county and ranked by benefit-cost ratio)

TABLE B-2

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	Project Capital Costs [in millions]	Net Annual O&M Costs [in millions]	Total Annualized 2035 Benefits [in millions]	Total Annualized 2035 Costs [in millions]	B/C Ratio	TRAVEL TIME BENEFITS						TRAVEL COST BENEFITS		AIR POLLUTANT BENEFITS		COLLISIONS & ACTIVE TRANSPORT BENEFITS			
										Auto/Truck [in millions of hours]	Auto/ Truck (Non-Recurr. Delay) [in millions of hours]	Transit In-Vehicle [in millions of hours]	Transit Out-of-Vehicle [in millions of hours]	Walk/Bike [in millions of hours]	TOTAL	VMT [in millions]	Vehicles Owned	PM2.5 [in tons]	CO_2 [in thousands of metric tons]	Fatalities due to Collisions	Injuries due to Collisions	Property Damage Only (PDO) Collisions	Active Individuals
1	22780	AC Transit Grand-MacArthur BRT	ALA/3434	Transit Efficiency	$ 36.0	$ -	$ 31.5	$ 1.8	18	(1.4)	(0.1)	0.1	(0.1)	0.0	(1.5)	(6)	(53)	(0.9)	(8)	(0.1)	(4)	(7)	98
2	22062	Irvington BART Station	ALA	Transit Efficiency	$ 123.0	$ -	$ 18.7	$ 1.5	12	(0.6)	(0.1)	0.2	(0.1)	(0.0)	(0.6)	(6)	(357)	(0.5)	(4)	(0.1)	(4)	(6)	763
3	94506	Fremont/Union City East-West Connector	ALA	Arterial Expansion	$ 190.0	$ 0.5	$ 65.5	$ 10.0	7	(3.7)	(0.2)	0.0	0.0	0.0	(3.9)	2	164	(1.6)	(20)	(0.1)	(10)	3	(449)
4	98207T	Alameda-Oakland BRT + Transit Access Improvements	ALA	Transit Efficiency	$ 15.8	$ 1.3	$ 13.6	$ 2.1	6	(0.1)	0.0	(0.0)	(0.3)	0.0	(0.4)	(1)	12	0.0	0	(0.0)	(1)	(1)	(200)
5	22455	AC Transit East Bay BRT	ALA/3434	Transit Efficiency	$ 211.0	$ 1.0	$ 62.0	$ 11.6	5	(0.8)	(0.0)	(1.2)	(0.9)	(0.1)	(3.0)	6	187	(0.3)	(4)	0.0	3	8	(100)
6	240062, 22776	SR-84/I-680 Interchange Improvements + SR-84 Widening (Jack London to I-680)	ALA	Highway Expansion	$ 380.5	$ 1.7	$ 87.1	$ 20.7	4	(5.0)	(0.6)	(0.1)	0.1	(0.0)	(5.6)	16	446	(1.4)	(19)	(0.0)	(2)	23	(624)
7	580_BUS	I-580 Express Bus (Dublin to Livermore)	ALA	Transit Efficiency	$ 150.0	$ 8.1	$ 31.8	$ 16.4	2	(1.2)	(0.1)	0.5	(0.2)	(0.0)	(1.0)	(17)	(156)	(0.8)	(6)	(0.2)	(12)	(18)	329
8	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	ALA	Transit Expansion	$ 555.3	$ 10.1	$ 36.7	$ 28.6	1	(1.6)	(0.2)	1.3	(0.4)	(0.1)	(1.0)	(19)	(482)	(1.4)	(12)	(0.2)	(12)	(20)	486
9	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	ALA	Transit Expansion	$ 1,134.5	$ 14.6	$ 49.6	$ 52.4	1	(2.2)	(0.3)	1.8	(0.5)	(0.1)	(1.3)	(26)	(651)	(1.9)	(16)	(0.2)	(16)	(27)	657
10	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	ALA	Transit Expansion	$ 4,177.0	$ 14.2	$ 56.7	$ 153.4	0.4	(2.2)	(0.3)	1.4	(0.5)	(0.1)	(1.7)	(26)	(651)	(1.9)	(16)	(0.2)	(16)	(27)	657
11	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	ALA/3434	Transit Efficiency	$ 180.0	$ -	$ (0.1)	$ 2.3	0.0	(0.1)	0.1	0.0	0.0	(0.0)	0.0	(1)	(8)	0.0	0	(0.0)	(1)	(1)	29
12	22400	SR-239 Expressway Construction (Brentwood to Tracy)	CC	Highway Expansion	$ 372.7	$ 1.9	$ 143.8	$ 20.6	7	(8.5)	(0.2)	0.0	0.0	(0.0)	(8.6)	18	363	(2.7)	(38)	(0.4)	(32)	28	(553)
13	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello Avenue to SR-242)	CC	Highway Expansion	$ 396.3	$ 1.4	$ 65.4	$ 21.2	3	(2.8)	(0.5)	(0.4)	(0.3)	0.0	(4.0)	6	2,774	0.2	6	(0.1)	(6)	19	(244)
14	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	CC	Highway Expansion	$ 149.9	$ 1.1	$ 15.5	$ 8.6	2	(0.6)	(0.0)	0.0	(0.0)	(0.0)	(0.6)	(5)	(32)	0.2	8	(0.5)	(38)	(5)	(16)
15	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	CC	Transit Efficiency	$ 59.7	$ 6.4	$ 12.2	$ 10.7	1	(0.5)	0.0	0.2	(0.1)	(0.0)	(0.4)	(4)	(181)	(0.4)	(3)	(0.0)	(3)	(4)	333
16	230252	Marin Countywide Bus Service Frequency Improvements	MRN	Transit Efficiency	$ -	$ 12.3	$ 8.9	$ 12.3	0.7	(0.3)	(0.0)	0.5	(0.1)	(0.1)	0.0	(8)	(475)	(0.4)	(3)	(0.1)	(6)	(8)	1,439
17	240182	BART Metro Program (including Bay Fair Connection and Civic Center Turnback)	Multi-Cty.	Transit Efficiency	$ 650.0	$ (18.5)	$ 161.3	$ (10.4)	>60	(3.0)	(0.2)	0.9	(2.6)	(0.1)	(5.0)	(31)	(1,373)	(1.9)	(17)	(0.3)	(21)	(32)	2,735
18	240523, 240060	US-101 HOV Lanes (Whipple Avenue to Cesar Chavez Street)	Multi-Cty.	Road Efficiency	$ 330.7	$ 2.8	$ 122.7	$ 19.3	6	(5.0)	(1.2)	(0.4)	(0.0)	0.1	(6.5)	(29)	(451)	(0.8)	(1)	(0.2)	(14)	(5)	(281)
19	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network	Multi-Cty.	Express Lanes Network	$ 2,364.0	$ -	$ 601.6	$ 118.2	5	(15.7)	(24.3)	(2.7)	(0.6)	(0.3)	(43.5)	235	5,456	9.8	39	1.3	78	298	(5,050)
20	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-Cty.	Transit Efficiency	$ 847.7	$ 5.6	$ 152.5	$ 33.9	5	(3.3)	(0.3)	1.0	(1.5)	(0.0)	(4.1)	(69)	(2,438)	(3.0)	(23)	(0.6)	(42)	(70)	5,760
21	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Multi-Cty.	Transit Efficiency	$ 215.7	$ 3.7	$ 36.1	$ 14.5	2	(1.5)	(0.0)	(0.1)	(0.1)	(0.0)	(1.7)	(6)	(174)	(1.0)	(9)	(0.1)	(7)	(5)	(105)
22	00BART	BART Service Frequency Improvements	Multi-Cty.	Transit Efficiency	$ 1,274.7	$ 13.1	$ 126.0	$ 55.6	2	(3.2)	(0.4)	1.2	(1.5)	(0.0)	(3.8)	(42)	(1,390)	(2.6)	(23)	(0.4)	(28)	(43)	2,753
23	230604	Bay Bridge Contraflow Lane	Multi-Cty.	Road Efficiency	$ 610.5	$ -	$ 66.8	$ 30.5	2	(2.7)	0.1	(2.6)	0.3	0.1	(4.9)	(7)	317	(1.2)	(11)	0.4	32	4	(2,591)
24	240018	Dumbarton Corridor Express Bus	Multi-Cty.	Transit Efficiency	$ 101.0	$ 4.5	$ 22.6	$ 11.7	2	(0.5)	(0.1)	0.4	(0.4)	(0.0)	(0.6)	(6)	(200)	(0.4)	(4)	(0.1)	(4)	(6)	552
25	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Multi-Cty./ 3434	Transit Expansion	$ 320.2	$ 15.7	$ 41.3	$ 22.1	2	(2.8)	(0.3)	0.7	0.6	0.0	(1.8)	(27)	(790)	(1.9)	(16)	(0.3)	(18)	(28)	1,714
26	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Multi-Cty.	Transit Efficiency	$ -	$ 64.9	$ 108.5	$ 64.9	2	(1.8)	(0.2)	1.8	(2.4)	(0.2)	(2.6)	(29)	(1,847)	(1.4)	(11)	(0.3)	(20)	(28)	(4,761)
27	230055	Golden Gate Ferry Service Frequency Improvements	Multi-Cty.	Transit Efficiency	$ 34.4	$ 3.3	$ 5.8	$ 4.4	1	(0.4)	(0.0)	0.5	0.0	(0.0)	0.0	(4)	(286)	(0.4)	(3)	(0.1)	(4)	(4)	661
28	240521, 240134, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-Cty.	Transit Efficiency	$ 5,598.7	$ 33.7	$ 272.0	$ 220.3	1	(5.6)	(0.5)	2.3	(2.8)	(0.1)	(6.9)	(124)	(4,553)	(5.7)	(44)	(1.1)	(75)	(126)	10,025
29	00ACT1	AC Transit Frequent Transit Network	Multi-Cty.	Transit Efficiency	$ 654.3	$ 463.6	$ 605.7	$ 510.3	1	(12.7)	(1.3)	13.0	(11.6)	(0.6)	(13.2)	(173)	(9,548)	(8.7)	(72)	(1.7)	(118)	(171)	9,442

All benefits and costs are shown in 2013 dollars. For all benefit types except active transportation, a negative value shown above reflects a benefit.

Benefit-Cost Assessment - Nominal Annual Benefits (sorted by county and ranked by benefit-cost ratio)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	Project Capital Costs [in millions]	Net Annual O&M Costs [in millions]	Total Annualized 2035 Benefits [in millions]	Total Annualized 2035 Costs [in millions]	B/C Ratio	TRAVEL TIME BENEFITS						TRAVEL COST BENEFITS		AIR POLLUTANT BENEFITS		COLLISIONS & ACTIVE TRANSPORT BENEFITS			
										Auto/Truck [in millions of hours]	Auto/ Truck (Non-Recurr. Delay) [in millions of hours]	Transit In-Vehicle [in millions of hours]	Transit Out-of-Vehicle [in millions of hours]	Walk/Bike [in millions of hours]	TOTAL	VMT [in millions]	Vehicles Owned	PM2.5 [in tons]	CO_2 [in thousands of metric tons]	Fatalities due to Collisions	Injuries due to Collisions	Property Damage Only (PDO) Collisions	Active Individuals
30	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Multi-Cty.	Road Efficiency	$ 300.0	$ 2.7	$ 20.0	$ 17.7	1	(0.5)	(0.4)	(0.4)	(0.1)	0.0	(1.4)	14	235	0.5	9	0.1	8	17	(601)
31	240216	Dumbarton Rail	Multi-Cty./ 3434	Transit Expansion	$ 755.0	$ 11.1	$ 30.7	$ 36.3	0.8	(1.1)	(0.2)	0.4	(0.1)	(0.0)	(1.0)	(16)	(502)	(0.9)	(8)	(0.2)	(11)	(16)	942
32	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Multi-Cty./ 3434	Transit Expansion	$ 282.9	$ 3.8	$ 9.7	$ 13.2	0.7	(0.3)	(0.1)	0.1	(0.1)	(0.0)	(0.3)	(5)	(161)	(0.2)	(1)	(0.0)	(3)	(5)	252
33	230219, 230314	Golden Gate Bus Service Frequency Improvements	Multi-Cty.	Transit Efficiency	$ 143.2	$ 18.9	$ 15.7	$ 29.1	0.5	(0.3)	(0.0)	0.3	(0.3)	(0.0)	(0.4)	(5)	(144)	(0.3)	(2)	(0.0)	(4)	(5)	248
34	98139	ACE Service Expansion	Multi-Cty./ 3434	Transit Efficiency	$ 600.0	$ 46.5	$ 19.1	$ 66.5	0.3	(0.8)	(0.2)	(0.2)	0.3	(0.0)	(0.9)	(17)	(267)	(1.0)	(8)	(0.2)	(11)	(19)	537
35	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)	Multi-Cty./ 3434	Transit Efficiency	$ 508.5	$ 1.2	$ 1.0	$ 18.2	0.1	(0.1)	(0.0)	0.0	0.0	(0.0)	(0.1)	1	(12)	(0.0)	(0)	0.0	0	1	29
36	240617	SR-29 HOV Lanes and BRT (Napa Junction to Vallejo)	NAP	Road Efficiency	$ 60.0	$ 1.2	$ 10.9	$ 4.2	3	(0.4)	(0.2)	(0.0)	0.0	0.0	(0.5)	(1)	(45)	0.0	3	(0.1)	(11)	(0)	976
37	230419	Freeway Performance Initiative	Reg.	FPI	$ 2,991.0	$ 54.2	$ 3,174.9	$ 202.5	16	(155.9)	(9.8)	(2.9)	(0.9)	(0.5)	(170.0)	(65)	(5,163)	(100.1)	(2,100)	(29.0)	201	4	(3,021)
38	240582	Truck & Motorcycle Retirement [BAAQMD program]	Reg.	Climate	$ 5.7	$ 0.3	$ 54.5	$ 6.0	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	(63.0)	0	n/a	n/a	n/a	n/a
39	n/a	Local Streets and Roads Capital Maintenance Needs	Reg.	Maintenance	$ -	$ 280.0	$ 1,369.3	$ 280.0	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40	240410	Transportation for Livable Communities	Reg.	TLC	$ 7,131.3	$ 0.0	$ 874.8	$ 254.7	3	(15.3)	(0.6)	(1.5)	(1.7)	2.6	(16.5)	(392)	(27,961)	(7.7)	(174)	(4.2)	(298)	(461)	167,639
41	22247	Regional Bikeway Network	Reg.	Bike/Ped	$ 1,464.0	$ -	$ 124.5	$ 73.2	2	(1.2)	(0.1)	(0.1)	(0.1)	0.2	(1.4)	(34)	(2,417)	(0.7)	(15)	(0.4)	(26)	(40)	54,406
42	n/a	New Freedom Program	Reg.	Lifeline/New Freedom	$ -	$ 2.0	$ 3.3	$ 2.0	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
43	230550	Climate Initiatives (5-year program)	Reg.	Climate	$ 560.0	$ -	$ 158.0	$ 112.0	1	(0.8)	(0.0)	(0.1)	(0.1)	0.1	(0.9)	(21)	(1,497)	(0.4)	(2,216)	(0.2)	(16)	(25)	n/a
44	n/a	Transit Capital Maintenance Needs	Reg.	Maintenance	$ -	$ 1,285.7	$ 1,787.1	$ 1,285.7	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
45	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Reg.	Climate	$ 42.2	$ 1.8	$ 41.8	$ 44.0	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	(48.0)	0	n/a	n/a	n/a	n/a
46	240589	EV Solar Installation [BAAQMD program]	Reg.	Climate	$ 1.3	$ 0.3	$ 1.1	$ 1.5	0.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	0.0	(13)	n/a	n/a	n/a	n/a
47	240690	Lifeline Transportation Program	Reg.	Lifeline/New Freedom	$ -	$ 119.0	$ 10.0	$ 119.0	0.1	(0.2)	(0.0)	(0.0)	(0.0)	0.0	(0.2)	(6)	418	(0.1)	(3)	(0.1)	(4)	(7)	n/a
48	240694	Treasure Island Congestion Pricing	SF	Pricing	$ 58.9	$ -	$ 69.1	$ 1.2	59	(2.3)	(0.1)	1.3	(0.5)	0.0	(1.7)	(25)	(1,540)	(1.4)	(11)	(0.2)	(18)	(25)	2,483
49	240522	Congestion Pricing Pilot	SF	Pricing	$ 101.8	$ -	$ 227.4	$ 5.1	45	(6.3)	(0.2)	4.3	(1.5)	1.2	(2.4)	(85)	(9,583)	(4.6)	(40)	(1.0)	(75)	(91)	11,899
50	240171	SFMTA Transit Effectiveness Project	SF	Transit Efficiency	$ 156.9	$ -	$ 89.5	$ 7.8	11	(2.1)	(0.2)	1.0	(1.7)	(0.1)	(3.1)	(11)	(311)	(1.5)	(14)	(0.1)	(8)	(10)	(3,811)
51	230161	Van Ness Avenue BRT	SF/3434	Transit Efficiency	$ 139.5	$ -	$ 44.1	$ 7.0	6	(1.2)	(0.1)	(0.4)	(0.1)	(0.1)	(2.0)	(11)	(340)	(0.9)	(8)	(0.1)	(9)	(12)	895
52	240155	Better Market Street	SF	Transit Efficiency	$ 200.0	$ -	$ 56.5	$ 10.0	6	(2.0)	(0.4)	(0.9)	(0.2)	0.3	(3.1)	(12)	436	(0.4)	(1)	(0.2)	(14)	(2)	(423)
53	240557	Oakdale Caltrain Station	SF	Transit Efficiency	$ 51.2	$ -	$ 2.8	$ 0.6	4	(0.1)	0.0	0.1	(0.0)	(0.0)	(0.0)	(1)	(68)	(0.1)	(1)	(0.0)	(1)	(2)	76
54	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	SF/3434	Transit Expansion	$ 2,348.0	$ 1.4	$ 107.9	$ 30.8	4	(5.4)	(0.2)	1.8	(0.9)	(0.0)	(4.7)	(22)	(545)	(1.0)	(8)	(0.2)	(14)	(22)	942
55	240147	Southeast Waterfront Transportation Improvements	SF	Transit Efficiency	$ 397.0	$ 16.1	$ 88.1	$ 36.0	2	(1.7)	(0.1)	0.2	(1.4)	(0.1)	(3.0)	(12)	(558)	(1.0)	(9)	(0.2)	(13)	(11)	(756)
56	00MUNI	Muni Service Frequency Improvements	SF	Transit Efficiency	$ -	$ 14.0	$ 24.7	$ 14.0	2	(0.2)	0.0	0.2	(0.7)	0.0	(0.7)	(1)	(58)	(0.0)	(0)	(0.0)	(2)	(1)	(1,058)
57	230164	Geary Boulevard BRT	SF	Transit Efficiency	$ 172.3	$ -	$ 15.1	$ 8.6	2	(0.1)	0.0	0.1	(0.3)	(0.0)	(0.3)	(2)	(191)	(0.1)	(2)	(0.0)	(1)	(2)	463
58	240526	SFCTA Transit Performance Initiative	SF	Transit Efficiency	$ 489.8	$ -	$ 28.4	$ 16.3	2	(0.4)	(0.1)	(0.6)	(0.1)	(0.1)	(1.2)	(5)	(404)	(0.4)	(3)	(0.1)	(4)	(5)	338
59	240545	Parkmerced Light Rail Corridor	SF	Transit Efficiency	$ 76.0	$ 2.0	$ 6.3	$ 4.5	1	(0.2)	0.1	0.4	(0.2)	(0.1)	(0.0)	(0)	(168)	(0.1)	(1)	(0.0)	(1)	(0)	(135)
60	22415	Historic Streetcar Expansion Program	SF	Transit Efficiency	$ 66.4	$ 7.2	$ 8.6	$ 9.4	0.9	(0.3)	0.0	0.1	0.0	(0.2)	(0.3)	(1)	(306)	(0.2)	(1)	(0.0)	(1)	(0)	76
61	22274	ITS Improvements in San Mateo County	SM	Road Efficiency	$ 65.7	$ 0.3	$ 56.0	$ 3.6	16	(2.7)	(0.2)	(0.1)	(0.0)	(0.0)	(3.0)	(1)	(82)	(1.8)	(37)	(0.5)	4	0	(48)

All benefits and costs are shown in 2013 dollars. For all benefit types except active transportation, a negative value shown above reflects a benefit.

Row #	Project ID	Project Name	County	Project Type	Project Capital Costs [in millions]	Net Annual O&M Costs [in millions]	Total Annualized 2035 Benefits [in millions]	Total Annualized 2035 Costs [in millions]	B/C Ratio	TRAVEL TIME BENEFITS						TRAVEL COST BENEFITS		AIR POLLUTANT BENEFITS		COLLISIONS & ACTIVE TRANSPORT BENEFITS			
										Auto/Truck [in millions of hours]	Auto/ Truck (Non-Recurr. Delay) [in millions of hours]	Transit In-Vehicle [in millions of hours]	Transit Out-of-Vehicle [in millions of hours]	Walk/Bike [in millions of hours]	TOTAL	VMT [in millions]	Vehicles Owned	PM2.5 [in tons]	CO_2 [in thousands of metric tons]	Fatalities due to Collisions	Injuries due to Collisions	Property Damage Only (PDO) Collisions	Active Individuals
62	240026	SamTrans El Camino BRT	SM	Transit Efficiency	$ 120.0	$ 19.0	$ 59.1	$ 25.0	2	(2.9)	(0.2)	0.8	(0.2)	(0.0)	(2.4)	(14)	(593)	(1.7)	(17)	(0.1)	(10)	(13)	3,253
63	22268	San Mateo Countywide Shuttle Service Frequency Improvements	SM	Transit Efficiency	$ -	$ 6.3	$ 10.3	$ 6.3	2	(0.5)	0.0	0.4	(0.0)	(0.0)	(0.1)	(7)	(404)	(0.4)	(3)	(0.1)	(5)	(6)	1,321
64	240494	ITS Improvements in Santa Clara County	SCL	Road Efficiency	$ 319.5	$ 32.0	$ 752.2	$ 48.0	16	(36.9)	(2.3)	(0.7)	(0.2)	(0.1)	(40.3)	(15)	(1,230)	(23.7)	(498)	(6.9)	48	1	(715)
65	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	SCL	Road Efficiency	$ 197.8	$ 1.7	$ 81.0	$ 11.6	7	(3.7)	(1.1)	(0.1)	0.0	0.0	(4.9)	0	(179)	(0.3)	2	(0.1)	(9)	16	(125)
66	HOTd	Silicon Valley Express Lanes Network	SCL	Express Lanes Network	$ 1,398.0	$ -	$ 407.8	$ 69.9	6	(13.4)	(23.8)	(2.6)	(0.5)	(0.3)	(40.6)	471	13,292	17.6	78	3.2	208	544	(5,430)
67	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	SCL/3434	Transit Expansion	$ 4,094.3	$ 18.7	$ 323.5	$ 69.9	5	(8.5)	(1.0)	3.4	(2.9)	(0.1)	(9.1)	(161)	(6,667)	(7.7)	(63)	(1.5)	(106)	(164)	12,117
68	230294	New SR-152 Alignment	SCL	Highway Expansion	$ 775.8	$ 1.9	$ 147.8	$ 40.7	4	(8.0)	(0.1)	(0.1)	0.0	(0.0)	(8.1)	21	257	(1.3)	(6)	(1.9)	(152)	20	(194)
69	240119	VTA El Camino BRT	SCL	Transit Efficiency	$ 239.0	$ -	$ 28.1	$ 12.0	2	(0.9)	(0.1)	(0.0)	(0.0)	(0.1)	(1.0)	(12)	(638)	(0.8)	(6)	(0.1)	(8)	(12)	1,501
70	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	SCL	Transit Expansion	$ 276.0	$ 0.9	$ 3.8	$ 8.3	0.5	(0.3)	0.0	0.2	0.1	(0.0)	(0.0)	(5)	(297)	(0.2)	(1)	(0.1)	(4)	(5)	1,012
71	230547	Monterey Highway BRT	SCL	Transit Efficiency	$ 140.0	$ 29.6	$ 15.0	$ 36.6	0.4	(0.2)	0.0	0.3	(0.4)	0.0	(0.3)	(3)	(203)	(0.2)	(2)	(0.0)	(2)	(3)	297
72	22019	Downtown East Valley (Phase 2: LRT)	SCL/3434	Transit Expansion	$ 307.2	$ 5.4	$ 4.8	$ 15.6	0.3	(0.2)	0.0	0.3	(0.0)	(0.1)	0.0	(3)	(331)	(0.2)	(1)	(0.0)	(4)	(3)	755
73	230554	Sunnyvale-Cupertino BRT	SCL	Transit Efficiency	$ 100.0	$ 21.1	$ 4.8	$ 26.1	0.2	(0.1)	0.0	0.1	(0.1)	0.0	(0.0)	(0)	(147)	(0.1)	(1)	(0.0)	(0)	0	959
74	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	SCL	Transit Expansion	$ 434.8	$ 4.2	$ 2.8	$ 18.7	0.2	(0.3)	(0.0)	0.3	0.1	(0.0)	0.1	(6)	(414)	(0.3)	(2)	(0.1)	(4)	(6)	1,407
75	98119	Vasona Light Rail Extension (Phase 2)	SCL	Transit Expansion	$ 176.0	$ 0.6	$ 0.1	$ 6.5	0.0	(0.2)	0.1	0.2	0.0	(0.0)	0.1	(3)	(211)	(0.1)	(2)	(0.0)	(2)	(3)	622
76	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	SOL	Road Efficiency	$ 50.0	$ 1.0	$ 18.0	$ 3.5	5	(1.1)	(0.1)	0.1	0.0	0.0	(1.1)	3	(13)	0.1	2	(0.1)	(9)	4	(399)
77	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	SOL	Transit Efficiency	$ 54.0	$ -	$ 2.0	$ 0.7	3	(0.2)	0.0	0.0	(0.0)	(0.0)	(0.1)	1	(26)	(0.1)	(1)	0.0	0	1	26
78	240650	Sonoma Countywide Bus Service Frequency Improvements	SON	Transit Efficiency	$ 427.8	$ 10.4	$ 32.0	$ 41.0	0.8	(0.6)	(0.0)	0.6	(0.5)	(0.1)	(0.6)	(9)	(914)	(0.5)	(3)	(0.1)	(6)	(8)	2,594

All benefits and costs are shown in 2013 dollars. For all benefit types except active transportation, a negative value shown above reflects a benefit.

Benefit-Cost Assessment - Monetized Annual Benefits (sorted by county and ranked by benefit-cost ratio)

TABLE B-3

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	Project Capital Costs [in millions]	Net Annual O&M Costs [in millions]	Total Annualized 2035 Benefits [in millions]	Total Annualized 2035 Costs [in millions]	B/C Ratio	TRAVEL TIME BENEFITS						TRAVEL COST BENEFITS				AIR POLLUTANT REDUCTION BENEFITS				COLLISIONS, ACTIVE TRANSPORT, & NOISE REDUCTION BENEFITS					
										Auto/Truck	Auto/ Truck (Non-Recurr. Delay)	Transit In-Vehicle	Transit Out-of-Vehicle	Walk/Bike	TOTAL	Vehicle Operating	Vehicle Ownership	Parking	TOTAL	PM2.5	CO2	Other	TOTAL	Fatalities due to Collisions	Injuries due to Collisions	Property Damage Only (PDO) Collisions	Active Transport	Noise	TOTAL
1	22780	AC Transit Grand-MacArthur BRT	ALA/3434	Transit Efficiency	$ 36.0	$ -	$ 31.5	$ 1.8	18	$ 22.6	$ 2.2	$ (0.8)	$ 3.9	$ (0.1)	$ 27.7	$ 1.8	$ 0.3	$ 0.1	$ 2.3	$ 0.4	$ 0.5	$ 0.0	$ 0.9	$ 0.3	$ 0.3	$ 0.0	$ 0.1	$ 0.0	$ 0.7
2	22062	Irvington BART Station	ALA	Transit Efficiency	$ 123.0	$ -	$ 18.7	$ 1.5	12	$ 10.7	$ 1.3	$ (3.5)	$ 3.1	$ 0.2	$ 11.8	$ 1.8	$ 2.2	$ 1.0	$ 5.1	$ 0.2	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.2	$ 0.0	$ 0.9	$ 0.0	$ 1.5
3	94506	Fremont/Union City East-West Connector	ALA	Arterial Expansion	$ 190.0	$ 0.5	$ 65.5	$ 10.0	7	$ 62.1	$ 3.7	$ (0.2)	$ (0.8)	$ (0.2)	$ 64.6	$ (0.7)	$ (1.0)	$ (0.1)	$ (1.8)	$ 0.8	$ 1.1	$ 0.0	$ 1.9	$ 0.6	$ 0.7	$ (0.0)	$ (0.5)	$ (0.0)	$ 0.7
4	98207T	Alameda-Oakland BRT + Transit Access Improvements	ALA	Transit Efficiency	$ 15.8	$ 1.3	$ 13.6	$ 2.1	6	$ 1.9	$ (0.4)	$ 0.6	$ 11.5	$ (0.1)	$ 13.6	$ 0.2	$ (0.1)	$ (0.0)	$ 0.1	$ (0.0)	$ (0.0)	$ (0.0)	$ (0.0)	$ 0.1	$ 0.1	$ 0.0	$ (0.2)	$ 0.0	$ (0.1)
5	22455	AC Transit East Bay BRT	ALA/3434	Transit Efficiency	$ 211.0	$ 1.0	$ 62.0	$ 11.6	5	$ 13.3	$ 0.6	$ 19.6	$ 30.2	$ 1.6	$ 65.3	$ (1.8)	$ (1.2)	$ (0.1)	$ (3.1)	$ 0.1	$ 0.2	$ 0.0	$ 0.3	$ (0.2)	$ (0.2)	$ (0.0)	$ (0.1)	$ (0.0)	$ (0.5)
6	240062, 22776	SR-84/I-680 Interchange Improvements + SR-84 Widening (Jack London to I-680)	ALA	Highway Expansion	$ 380.5	$ 1.7	$ 87.1	$ 20.7	4	$ 83.4	$ 10.8	$ 1.5	$ (2.3)	$ 0.1	$ 93.5	$ (4.4)	$ (2.8)	$ (0.2)	$ (7.4)	$ 0.7	$ 1.0	$ (0.0)	$ 1.7	$ 0.0	$ 0.1	$ (0.1)	$ (0.7)	$ (0.0)	$ (0.7)
7	580_BUS	I-580 Express Bus (Dublin to Livermore)	ALA	Transit Efficiency	$ 150.0	$ 8.1	$ 31.8	$ 16.4	2	$ 20.9	$ 1.6	$ (8.1)	$ 5.5	$ 0.1	$ 20.0	$ 4.8	$ 2.9	$ 0.5	$ 8.3	$ 0.4	$ 0.4	$ (0.0)	$ 0.7	$ 0.8	$ 0.8	$ 0.0	$ 1.2	$ 0.0	$ 2.8
8	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	ALA	Transit Expansion	$ 555.3	$ 10.1	$ 36.7	$ 28.6	1	$ 26.9	$ 4.1	$ (21.5)	$ 13.0	$ 1.4	$ 23.9	$ 5.4	$ 3.0	$ 0.7	$ 9.2	$ 0.7	$ 0.7	$ 0.0	$ 1.4	$ 0.8	$ 0.8	$ 0.0	$ 0.6	$ 0.0	$ 2.2
9	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	ALA	Transit Expansion	$ 1,134.5	$ 14.6	$ 49.6	$ 52.4	1	$ 36.4	$ 5.6	$ (29.0)	$ 17.5	$ 1.9	$ 32.4	$ 7.3	$ 4.1	$ 1.0	$ 12.4	$ 0.9	$ 0.9	$ 0.0	$ 1.8	$ 1.0	$ 1.0	$ 0.1	$ 0.8	$ 0.1	$ 3.0
10	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	ALA	Transit Expansion	$ 4,177.0	$ 14.2	$ 56.7	$ 153.4	0.4	$ 36.4	$ 5.6	$ (21.9)	$ 17.5	$ 1.9	$ 39.5	$ 7.3	$ 4.1	$ 1.0	$ 12.4	$ 0.9	$ 0.9	$ 0.0	$ 1.8	$ 1.0	$ 1.0	$ 0.1	$ 0.8	$ 0.1	$ 3.0
11	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	ALA/3434	Transit Efficiency	$ 180.0	$ -	$ (0.1)	$ 2.3	0.0	$ 1.0	$ (1.2)	$ (0.1)	$ (0.2)	$ 0.0	$ (0.5)	$ 0.2	$ 0.1	$ 0.0	$ 0.3	$ (0.0)	$ (0.0)	$ 0.0	$ (0.0)	$ 0.1	$ 0.1	$ 0.0	$ 0.0	$ 0.0	$ 0.2
12	22400	SR-239 Expressway Construction (Brentwood to Tracy)	CC	Highway Expansion	$ 372.7	$ 1.9	$ 143.8	$ 20.6	7	$ 142.2	$ 3.6	$ (0.1)	$ (1.2)	$ 0.3	$ 144.8	$ (5.2)	$ (2.3)	$ -	$ (7.5)	$ 1.3	$ 2.1	$ (0.0)	$ 3.4	$ 1.8	$ 2.1	$ (0.1)	$ (0.7)	$ (0.0)	$ 3.1
13	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello Avenue to SR-242)	CC	Highway Expansion	$ 396.3	$ 1.4	$ 65.4	$ 21.2	3	$ 47.5	$ 7.8	$ 5.9	$ 10.9	$ (0.1)	$ 71.9	$ (1.5)	$ (3.4)	$ -	$ (4.9)	$ (0.1)	$ (0.3)	$ (0.1)	$ (0.5)	$ 0.2	$ 0.4	$ (0.0)	$ (1.5)	$ (0.0)	$ (1.0)
14	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	CC	Highway Expansion	$ 149.9	$ 1.1	$ 15.5	$ 8.6	2	$ 9.4	$ 0.2	$ (0.1)	$ 0.1	$ 0.1	$ 9.7	$ 1.5	$ 0.2	$ 0.0	$ 1.7	$ (0.1)	$ (0.4)	$ (0.0)	$ (0.6)	$ 2.2	$ 2.4	$ 0.0	$ (0.0)	$ 0.0	$ 4.6
15	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	CC	Transit Efficiency	$ 59.7	$ 6.4	$ 12.2	$ 10.7	1	$ 8.1	$ (0.1)	$ (2.5)	$ 3.1	$ 0.1	$ 8.7	$ 1.1	$ 1.1	$ 0.0	$ 2.3	$ 0.2	$ 0.2	$ 0.0	$ 0.4	$ 0.2	$ 0.2	$ 0.0	$ 0.4	$ 0.0	$ 0.8
16	230252	Marin Countywide Bus Service Frequency Improvements	MRN	Transit Efficiency	$ -	$ 12.3	$ 8.9	$ 12.3	0.7	$ 5.5	$ 0.1	$ (8.7)	$ 3.1	$ 1.0	$ 1.0	$ 2.4	$ 3.0	$ -	$ 5.3	$ 0.2	$ 0.2	$ 0.0	$ 0.3	$ 0.0	$ 0.4	$ 0.0	$ 1.8	$ 0.0	$ 2.2
17	240182	BART Metro Program (including Bay Fair Connection and Civic Center Turnback)	Multi-Cty.	Transit Efficiency	$ 650.0	$ (18.5)	$ 161.3	$ (10.4)	>60	$ 50.1	$ 3.8	$ (14.1)	$ 91.1	$ 1.3	$ 132.2	$ 8.8	$ 8.6	$ 3.6	$ 21.0	$ 0.9	$ 0.9	$ 0.0	$ 1.9	$ 1.3	$ 1.3	$ 0.1	$ 3.3	$ 0.1	$ 6.2
18	240523, 240060	US-101 HOV Lanes (Whipple Avenue to Cesar Chavez Street)	Multi-Cty.	Road Efficiency	$ 330.7	$ 2.8	$ 122.7	$ 19.3	6	$ 84.2	$ 19.6	$ 5.7	$ 1.2	$ (1.5)	$ 109.3	$ 8.0	$ 2.8	$ 0.9	$ 11.7	$ 0.4	$ 0.0	$ (0.2)	$ 0.2	$ 0.8	$ 0.9	$ 0.0	$ (0.3)	$ 0.1	$ 1.4
19	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network	Multi-Cty.	Express Lanes Network	$ 2,364.0	$ -	$ 601.6	$ 118.2	5	$ 252.7	$ 412.3	$ 43.2	$ 20.6	$ 4.3	$ 733.0	$ (66.0)	$ (34.3)	$ (5.3)	$ (105.5)	$ (4.8)	$ (2.2)	$ (0.7)	$ (7.6)	$ (5.9)	$ (5.0)	$ (0.7)	$ (6.2)	$ (0.6)	$ (18.3)
20	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-Cty.	Transit Efficiency	$ 847.7	$ 5.6	$ 152.5	$ 33.9	5	$ 54.3	$ 5.2	$ (16.7)	$ 52.8	$ 0.2	$ 96.0	$ 19.4	$ 15.3	$ 6.3	$ 41.1	$ 1.4	$ 1.3	$ 0.0	$ 2.7	$ 2.7	$ 2.7	$ 0.2	$ 7.0	$ 0.2	$ 12.8
21	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Multi-Cty.	Transit Efficiency	$ 215.7	$ 3.7	$ 36.1	$ 14.5	2	$ 25.2	$ 0.7	$ 1.1	$ 3.7	$ 0.0	$ 30.8	$ 1.8	$ 1.1	$ 0.7	$ 3.6	$ 0.5	$ 0.5	$ 0.0	$ 1.0	$ 0.4	$ 0.4	$ 0.0	$ (0.1)	$ 0.0	$ 0.7
22	00BART	BART Service Frequency Improvements	Multi-Cty.	Transit Efficiency	$ 1,274.7	$ 13.1	$ 126.0	$ 55.6	2	$ 53.6	$ 6.1	$ (20.0)	$ 51.5	$ 0.8	$ 92.0	$ 11.7	$ 8.7	$ 3.7	$ 24.1	$ 1.3	$ 1.3	$ 0.1	$ 2.6	$ 1.8	$ 1.8	$ 0.1	$ 3.4	$ 0.1	$ 7.2
23	230604	Bay Bridge Contraflow Lane	Multi-Cty.	Road Efficiency	$ 610.5	$ -	$ 66.8	$ 30.5	2	$ 47.0	$ (1.2)	$ 41.3	$ (11.5)	$ (0.9)	$ 74.7	$ 2.1	$ (2.0)	$ (2.1)	$ (2.0)	$ 0.6	$ 0.6	$ 0.0	$ 1.2	$ (1.9)	$ (2.1)	$ (0.0)	$ (3.2)	$ 0.0	$ (7.1)
24	240018	Dumbarton Corridor Express Bus	Multi-Cty.	Transit Efficiency	$ 101.0	$ 4.5	$ 22.6	$ 11.7	2	$ 8.0	$ 1.4	$ (6.8)	$ 14.7	$ 0.7	$ 18.1	$ 1.6	$ 1.3	$ 0.3	$ 3.2	$ 0.2	$ 0.2	$ 0.0	$ 0.4	$ 0.0	$ 0.3	$ 0.0	$ 0.7	$ 0.0	$ 1.0
25	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Multi-Cty./ 3434	Transit Expansion	$ 320.2	$ 15.7	$ 41.3	$ 22.1	2	$ 46.5	$ 4.6	$ (10.7)	$ (20.9)	$ (0.1)	$ 19.5	$ 7.7	$ 5.0	$ 4.0	$ 16.7	$ 0.9	$ 0.9	$ 0.0	$ 1.8	$ 0.0	$ 1.1	$ 0.1	$ 2.1	$ 0.1	$ 3.4
26	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Multi-Cty.	Transit Efficiency	$ -	$ 64.9	$ 108.5	$ 64.9	2	$ 29.4	$ 2.7	$ (29.5)	$ 84.9	$ 2.4	$ 89.8	$ 8.1	$ 11.6	$ 0.7	$ 20.4	$ 0.7	$ 0.6	$ 0.0	$ 1.3	$ 1.3	$ 1.3	$ 0.1	$ (5.8)	$ 0.1	$ (3.1)
27	230055	Golden Gate Ferry Service Frequency Improvements	Multi-Cty.	Transit Efficiency	$ 34.4	$ 3.3	$ 5.8	$ 4.4	1	$ 6.7	$ 0.4	$ (7.5)	$ (0.1)	$ 0.1	$ (0.4)	$ 1.2	$ 1.8	$ 1.4	$ 4.5	$ 0.2	$ 0.2	$ 0.0	$ 0.4	$ 0.2	$ 0.2	$ 0.0	$ 0.8	$ 0.0	$ 1.3
28	240521, 240134, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-Cty.	Transit Efficiency	$ 5,598.7	$ 33.7	$ 272.0	$ 220.3	1	$ 93.9	$ 9.3	$ (36.4)	$ 100.2	$ 1.9	$ 168.9	$ 34.8	$ 28.6	$ 11.8	$ 75.2	$ 2.8	$ 2.5	$ 0.1	$ 5.3	$ 5.0	$ 4.8	$ 0.3	$ 12.2	$ 0.3	$ 22.6
29	00ACT1	AC Transit Frequent Transit Network	Multi-Cty.	Transit Efficiency	$ 654.3	$ 463.6	$ 605.7	$ 510.3	1	$ 212.2	$ 21.7	$ (208.1)	$ 410.4	$ 10.2	$ 446.4	$ 48.6	$ 60.1	$ 14.7	$ 123.4	$ 4.3	$ 4.0	$ 0.1	$ 8.4	$ 7.6	$ 7.5	$ 0.4	$ 11.5	$ 0.4	$ 27.5
30	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Multi-Cty.	Road Efficiency	$ 300.0	$ 2.7	$ 20.0	$ 17.7	1	$ 11.2	$ 6.0	$ 6.3	$ 4.8	$ (0.1)	$ 28.2	$ (3.9)	$ (1.5)	$ (0.1)	$ (5.5)	$ (0.3)	$ (0.5)	$ (0.0)	$ (0.8)	$ (0.5)	$ (0.5)	$ (0.0)	$ (0.7)	$ (0.0)	$ (1.8)
31	240216	Dumbarton Rail	Multi-Cty./ 3434	Transit Expansion	$ 755.0	$ 11.1	$ 30.7	$ 36.3	0.8	$ 18.4	$ 2.6	$ (7.1)	$ 4.5	$ 0.0	$ 18.5	$ 4.4	$ 3.2	$ 1.1	$ 8.6	$ 0.4	$ 0.4	$ 0.0	$ 0.9	$ 0.7	$ 0.7	$ 0.0	$ 1.1	$ 0.0	$ 2.6
32	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Multi-Cty./ 3434	Transit Expansion	$ 282.9	$ 3.8	$ 9.7	$ 13.2	0.7	$ 4.1	$ 1.1	$ (2.2)	$ 3.2	$ 0.1	$ 6.2	$ 1.5	$ 1.0	$ 0.1	$ 2.6	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.2	$ 0.2	$ 0.0	$ 0.3	$ 0.0	$ 0.7
33	230219, 230314	Golden Gate Bus Service Frequency Improvements	Multi-Cty.	Transit Efficiency	$ 143.2	$ 18.9	$ 15.7	$ 29.1	0.5	$ 5.7	$ 0.2	$ (5.3)	$ 10.7	$ 0.7	$ 12.0	$ 1.4	$ 0.9	$ 0.6	$ 2.9	$ 0.1	$ 0.1	$ 0.0	$ 0.3	$ 0.0	$ 0.2	$ 0.0	$ 0.3	$ 0.0	$ 0.6
34	98139	ACE Service Expansion	Multi-Cty./ 3434	Transit Efficiency	$ 600.0	$ 46.5	$ 19.1	$ 66.5	0.3	$ 13.5	$ 3.8	$ 2.7	$ (11.0)	$ 0.1	$ 9.1	$ 4.9	$ 1.9	$ 0.1	$ 6.8	$ 0.5	$ 0.4	$ 0.0	$ 1.0	$ 0.8	$ 0.7	$ 0.0	$ 0.7	$ 0.0	$ 2.3
35	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)	Multi-Cty./ 3434	Transit Efficiency	$ 508.5	$ 1.2	$ 1.0	$ 18.2	0.1	$ 1.8	$ 0.4	$ (0.4)	$ (0.7)	$ 0.0	$ 1.2	$ (0.3)	$ 0.1	$ 0.0	$ (0.2)	$ 0.0	$ 0.0	$ 0.0	$ 0.0	$ (0.0)	$ (0.0)	$ (0.0)	$ 0.0	$ (0.0)	$ (0.0)
36	240617	SR-29 HOV Lanes and BRT (Napa Junction to Vallejo)	NAP	Road Efficiency	$ 60.0	$ 1.2	$ 10.9	$ 4.2	3	$ 6.1	$ 2.6	$ 0.2	$ (1.0)	$ (0.1)	$ 7.8	$ 0.4	$ 0.3	$ -	$ 0.7	$ (0.0)	$ (0.2)	$ (0.0)	$ (0.2)	$ 0.7	$ 0.7	$ 0.0	$ 1.2	$ 0.0	$ 2.6
37	230419	Freeway Performance Initiative	Reg.	FPI	$ 2,991.0	$ 54.2	$ 3,174.9	$ 202.5	16	$ 2,608.5	$ 166.9	$ 46.9	$ 30.0	$ 7.7	$ 2,860.0	$ 17.3	$ 19.0	$ (1.6)	$ 34.7	$ 48.8	$ 116.3	$ 1.2	$ 166.3	$ 133.0	$ (12.9)	$ (0.0)	$ (6.3)	$ 0.1	$ 113.9

All benefits and costs are shown in 2013 dollars.

Benefit-Cost Assessment - Monetized Annual Benefits (sorted by county and ranked by benefit-cost ratio)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	Project Capital Costs [in millions]	Net Annual O&M Costs [in millions]	Total Annualized 2035 Benefits [in millions]	Total Annualized 2035 Costs [in millions]	B/C Ratio	TRAVEL TIME BENEFITS						TRAVEL COST BENEFITS				AIR POLLUTANT REDUCTION BENEFITS				COLLISIONS, ACTIVE TRANSPORT, & NOISE REDUCTION BENEFITS					
										Auto/Truck	Auto/ Truck (Non-Recurr. Delay)	Transit In-Vehicle	Transit Out-of-Vehicle	Walk/Bike	TOTAL	Vehicle Operating	Vehicle Ownership	Parking	TOTAL	PM2.5	CO_2	Other	TOTAL	Fatalities due to Collisions	Injuries due to Collisions	Property Damage Only (PDO) Collisions	Active Transport	Noise	TOTAL
38	240582	Truck & Motorcycle Retirement [BAAQMD program]	Reg.	Climate	$ 5.7	$ 0.3	$ 54.5	$ 6.0	9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$ 30.9	$ -	$ 23.6	$ 54.5	n/a	n/a	n/a	n/a	n/a	n/a
39	n/a	Local Streets and Roads Capital Maintenance Needs	Reg.	Maintenance	$ -	$ 280.0	$ 1,369.3	$ 280.0	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
40	240410	Transportation for Livable Communities	Reg.	TLC	$ 7,131.3	$ 0.0	$ 874.8	$ 254.7	3	$ 256.1	$ 10.3	$ 23.8	$ 59.8	$ (41.2)	$ 308.8	$ 105.4	$ 175.9	$ 26.1	$ 307.4	$ 3.7	$ 9.7	$ 0.6	$ 14.0	$ 19.4	$ 19.1	$ 1.1	$ 204.5	$ 0.5	$ 244.6
41	22247	Regional Bikeway Network	Reg.	Bike/Ped	$ 1,464.0	$ -	$ 124.5	$ 73.2	2	$ 22.2	$ 0.9	$ 2.1	$ 5.2	$ (3.6)	$ 26.8	$ 9.1	$ 15.2	$ 2.3	$ 26.6	$ 0.3	$ 0.8	$ 0.1	$ 1.2	$ 1.7	$ 1.7	$ 0.1	$ 66.4	$ 0.0	$ 69.9
42	n/a	New Freedom Program	Reg.	Lifeline/New Freedom	$ -	$ 2.0	$ 3.3	$ 2.0	2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
43	230550	Climate Initiatives (5-year program)	Reg.	Climate	$ 560.0	$ -	$ 158.0	$ 112.0	1	$ 13.7	$ 0.6	$ 1.3	$ 3.2	$ (2.2)	$ 16.5	$ 5.6	$ 9.4	$ 1.4	$ 16.5	$ 0.2	$ 122.6	$ 0.0	$ 122.9	$ 1.0	$ 1.0	$ 0.1	n/a	$ 0.0	$ 2.1
44	n/a	Transit Capital Maintenance Needs	Reg.	Maintenance	$ -	$ 1,285.7	$ 1,787.1	$ 1,285.7	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
45	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Reg.	Climate	$ 42.2	$ 1.8	$ 41.8	$ 44.0	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$ 23.5	$ -	$ 18.3	$ 41.8	n/a	n/a	n/a	n/a	n/a	n/a
46	240589	EV Solar Installation [BAAQMD program]	Reg.	Climate	$ 1.3	$ 0.3	$ 1.1	$ 1.5	0.8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	$ -	$ 0.7	$ 0.4	$ 1.1	n/a	n/a	n/a	n/a	n/a	n/a
47	240690	Lifeline Transportation Program	Reg.	Lifeline/New Freedom	$ -	$ 119.0	$ 10.0	$ 119.0	0.1	$ 3.8	$ 0.2	$ 0.4	$ 0.9	$ (0.6)	$ 4.6	$ 1.6	$ 2.6	$ 0.4	$ 4.6	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.3	$ 0.3	$ 0.0	n/a	$ 0.0	$ 0.6
48	240694	Treasure Island Congestion Pricing	SF	Pricing	$ 58.9	$ -	$ 69.1	$ 1.2	59	$ 39.4	$ 2.2	$ (20.1)	$ 18.3	$ (0.1)	$ 39.7	$ 7.1	$ 9.7	$ 6.0	$ 22.7	$ 0.7	$ 0.6	$ 0.0	$ 1.3	$ 1.1	$ 1.1	$ 0.1	$ 3.0	$ 0.1	$ 5.4
49	240522	Congestion Pricing Pilot	SF	Pricing	$ 101.8	$ -	$ 227.4	$ 5.1	45	$ 105.7	$ 2.8	$ (68.2)	$ 52.3	$ (19.8)	$ 72.7	$ 23.7	$ 60.3	$ 41.6	$ 125.6	$ 2.2	$ 2.2	$ 0.1	$ 4.5	$ 4.8	$ 4.8	$ 0.2	$ 14.5	$ 0.2	$ 24.5
50	240171	SFMTA Transit Effectiveness Project	SF	Transit Efficiency	$ 156.9	$ -	$ 89.5	$ 7.8	11	$ 34.8	$ 3.1	$ (16.5)	$ 61.3	$ 2.3	$ 85.0	$ 3.0	$ 2.0	$ 1.6	$ 6.6	$ 0.7	$ 0.8	$ 0.0	$ 1.5	$ 0.5	$ 0.5	$ 0.0	$ (4.6)	$ 0.0	$ (3.6)
51	230161	Van Ness Avenue BRT	SF/3434	Transit Efficiency	$ 139.5	$ -	$ 44.1	$ 7.0	6	$ 20.8	$ 2.5	$ 6.8	$ 3.4	$ 1.4	$ 34.8	$ 3.1	$ 2.1	$ 1.4	$ 6.7	$ 0.5	$ 0.4	$ 0.0	$ 0.9	$ 0.0	$ 0.6	$ 0.0	$ 1.1	$ 0.0	$ 1.7
52	240155	Better Market Street	SF	Transit Efficiency	$ 200.0	$ -	$ 56.5	$ 10.0	6	$ 33.6	$ 6.5	$ 14.9	$ 5.6	$ (5.3)	$ 55.2	$ 3.4	$ (0.5)	$ (0.9)	$ 2.0	$ 0.2	$ 0.0	$ (0.0)	$ 0.2	$ 0.8	$ 0.9	$ 0.0	$ (2.7)	$ 0.0	$ (0.9)
53	240557	Oakdale Caltrain Station	SF	Transit Efficiency	$ 51.2	$ -	$ 2.8	$ 0.6	4	$ 2.4	$ (0.6)	$ (2.0)	$ 1.4	$ 0.1	$ 1.3	$ 0.4	$ 0.4	$ 0.2	$ 1.1	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.3
54	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	SF/3434	Transit Expansion	$ 2,348.0	$ 1.4	$ 107.9	$ 30.8	4	$ 87.9	$ 2.6	$ (29.2)	$ 31.4	$ 0.7	$ 93.3	$ 6.0	$ 3.4	$ 2.1	$ 11.5	$ 0.5	$ 0.4	$ 0.0	$ 0.9	$ 0.0	$ 0.9	$ 0.1	$ 1.1	$ 0.1	$ 2.1
55	240147	Southeast Waterfront Transportation Improvements	SF	Transit Efficiency	$ 397.0	$ 16.1	$ 88.1	$ 36.0	2	$ 28.1	$ 1.7	$ (3.9)	$ 50.2	$ 0.9	$ 77.0	$ 3.3	$ 3.5	$ 2.5	$ 9.3	$ 0.5	$ 0.5	$ 0.0	$ 1.0	$ 0.8	$ 0.8	$ 0.0	$ (0.9)	$ 0.0	$ 0.7
56	00MUNI	Muni Service Frequency Improvements	SF	Transit Efficiency	$ -	$ 14.0	$ 24.7	$ 14.0	2	$ 3.3	$ (0.3)	$ (2.6)	$ 25.1	$ (0.4)	$ 25.0	$ 0.2	$ 0.4	$ 0.3	$ 0.8	$ 0.0	$ 0.0	$ (0.0)	$ 0.0	$ 0.1	$ 0.1	$ 0.0	$ (1.3)	$ 0.0	$ (1.1)
57	230164	Geary Boulevard BRT	SF	Transit Efficiency	$ 172.3	$ -	$ 15.1	$ 8.6	2	$ 2.2	$ (0.7)	$ (1.9)	$ 11.2	$ 0.8	$ 11.5	$ 0.6	$ 1.2	$ 0.9	$ 2.7	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.1	$ 0.0	$ 0.6	$ 0.0	$ 0.8
58	240526	SFCTA Transit Performance Initiative	SF	Transit Efficiency	$ 489.8	$ -	$ 28.4	$ 16.3	2	$ 7.1	$ 0.9	$ 9.4	$ 2.6	$ 1.1	$ 21.1	$ 1.3	$ 2.5	$ 2.0	$ 5.9	$ 0.2	$ 0.2	$ 0.0	$ 0.4	$ 0.3	$ 0.3	$ 0.0	$ 0.4	$ 0.0	$ 1.0
59	240545	Parkmerced Light Rail Corridor	SF	Transit Efficiency	$ 76.0	$ 2.0	$ 6.3	$ 4.5	1	$ 3.7	$ (1.2)	$ (5.9)	$ 6.1	$ 1.5	$ 4.2	$ 0.1	$ 1.1	$ 0.8	$ 2.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.1	$ 0.1	$ 0.0	$ (0.2)	$ 0.0	$ (0.1)
60	22415	Historic Streetcar Expansion Program	SF	Transit Efficiency	$ 66.4	$ 7.2	$ 8.6	$ 9.4	0.9	$ 4.9	$ (0.1)	$ (1.4)	$ (1.6)	$ 2.6	$ 4.4	$ 0.2	$ 1.9	$ 1.6	$ 3.7	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.3
61	22274	ITS Improvements in San Mateo County	SM	Road Efficiency	$ 65.7	$ 0.3	$ 56.0	$ 3.6	16	$ 46.0	$ 2.9	$ 0.8	$ 0.5	$ 0.1	$ 50.4	$ 0.3	$ 0.3	$ (0.0)	$ 0.6	$ 0.9	$ 2.0	$ 0.0	$ 2.9	$ 2.3	$ (0.2)	$ (0.0)	$ (0.1)	$ 0.0	$ 2.0
62	240026	SamTrans El Camino BRT	SM	Transit Efficiency	$ 120.0	$ 19.0	$ 59.1	$ 25.0	2	$ 47.9	$ 3.1	$ (13.4)	$ 6.6	$ 0.4	$ 44.7	$ 3.9	$ 3.7	$ 0.3	$ 7.9	$ 0.8	$ 1.0	$ 0.0	$ 1.8	$ 0.0	$ 0.6	$ 0.0	$ 4.0	$ 0.0	$ 4.6
63	22268	San Mateo Countywide Shuttle Service Frequency Improvements	SM	Transit Efficiency	$ -	$ 6.3	$ 10.3	$ 6.3	2	$ 8.6	$ (0.3)	$ (6.9)	$ 1.2	$ 0.3	$ 3.0	$ 1.9	$ 2.5	$ 0.2	$ 4.7	$ 0.2	$ 0.1	$ 0.0	$ 0.3	$ 0.3	$ 0.3	$ 0.0	$ 1.6	$ 0.0	$ 2.2
64	240494	ITS Improvements in Santa Clara County	SCL	Road Efficiency	$ 319.5	$ 32.0	$ 752.2	$ 48.0	16	$ 618.0	$ 39.5	$ 11.1	$ 7.1	$ 1.8	$ 677.6	$ 4.1	$ 4.5	$ (0.4)	$ 8.2	$ 11.6	$ 27.5	$ 0.3	$ 39.4	$ 31.5	$ (3.0)	$ (0.0)	$ (1.5)	$ 0.0	$ 27.0
65	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	SCL	Road Efficiency	$ 197.8	$ 1.7	$ 81.0	$ 11.6	7	$ 61.9	$ 19.3	$ 1.3	$ (0.8)	$ (0.1)	$ 81.6	$ (0.1)	$ (1.1)	$ (0.0)	$ (1.2)	$ 0.1	$ (0.1)	$ (0.1)	$ (0.1)	$ 0.4	$ 0.6	$ (0.0)	$ (0.2)	$ (0.0)	$ 0.8
66	HOTd	Silicon Valley Express Lanes Network	SCL	Express Lanes Network	$ 1,398.0	$ -	$ 407.8	$ 69.9	6	$ 210.7	$ 404.0	$ 41.0	$ 18.5	$ 5.5	$ 679.6	$ (132.0)	$ (83.6)	$ (5.5)	$ (221.1)	$ (8.6)	$ (4.3)	$ (0.9)	$ (13.8)	$ (14.5)	$ (13.3)	$ (1.3)	$ (6.6)	$ (1.2)	$ (37.0)
67	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	SCL/3434	Transit Expansion	$ 4,094.3	$ 18.7	$ 323.5	$ 69.9	5	$ 142.3	$ 16.5	$ (55.1)	$ 101.8	$ 1.7	$ 207.3	$ 45.3	$ 33.7	$ 3.9	$ 82.9	$ 3.7	$ 3.5	$ 0.1	$ 7.3	$ 6.9	$ 6.8	$ 0.4	$ 11.6	$ 0.4	$ 26.0
68	230294	New SR-152 Alignment	SCL	Highway Expansion	$ 775.8	$ 1.9	$ 147.8	$ 40.7	4	$ 134.1	$ 1.0	$ 1.0	$ (0.1)	$ 0.4	$ 136.4	$ (6.0)	$ (1.6)	$ (0.0)	$ (7.6)	$ 0.6	$ 0.3	$ (0.0)	$ 0.9	$ 8.8	$ 9.7	$ (0.1)	$ (0.2)	$ (0.1)	$ 18.2
69	240119	VTA El Camino BRT	SCL	Transit Efficiency	$ 239.0	$ -	$ 28.1	$ 12.0	2	$ 14.9	$ 1.4	$ 0.1	$ 0.3	$ 0.9	$ 17.5	$ 3.4	$ 4.0	$ 0.1	$ 7.5	$ 0.4	$ 0.3	$ 0.0	$ 0.7	$ 0.0	$ 0.5	$ 0.0	$ 1.8	$ 0.0	$ 2.4
70	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	SCL	Transit Expansion	$ 276.0	$ 0.9	$ 3.8	$ 8.3	0.5	$ 5.1	$ (0.2)	$ (3.3)	$ (2.7)	$ 0.0	$ (1.1)	$ 1.3	$ 1.9	$ 0.1	$ 3.3	$ 0.1	$ 0.0	$ 0.0	$ 0.1	$ 0.0	$ 0.3	$ 0.0	$ 1.2	$ 0.0	$ 1.5
71	230547	Monterey Highway BRT	SCL	Transit Efficiency	$ 140.0	$ 29.6	$ 15.0	$ 36.6	0.4	$ 3.8	$ (0.4)	$ (4.8)	$ 14.0	$ (0.5)	$ 12.1	$ 0.7	$ 1.3	$ 0.0	$ 2.1	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.1	$ 0.0	$ 0.4	$ 0.0	$ 0.6
72	22019	Downtown East Valley (Phase 2: LRT)	SCL/3434	Transit Expansion	$ 307.2	$ 5.4	$ 4.8	$ 15.6	0.3	$ 2.9	$ (0.5)	$ (4.2)	$ 1.3	$ 0.8	$ 0.4	$ 0.9	$ 2.1	$ 0.1	$ 3.0	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.0	$ 0.2	$ 0.0	$ 0.9	$ 0.0	$ 1.2
73	230554	Sunnyvale-Cupertino BRT	SCL	Transit Efficiency	$ 100.0	$ 21.1	$ 4.8	$ 26.1	0.2	$ 2.5	$ (0.8)	$ (2.4)	$ 3.3	$ (0.1)	$ 2.5	$ 0.1	$ 0.9	$ 0.0	$ 1.0	$ 0.1	$ 0.1	$ 0.0	$ 0.1	$ 0.0	$ 0.0	$ (0.0)	$ 1.2	$ 0.0	$ 1.2
74	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	SCL	Transit Expansion	$ 434.8	$ 4.2	$ 2.8	$ 18.7	0.2	$ 4.8	$ 0.6	$ (5.3)	$ (4.2)	$ 0.1	$ (3.8)	$ 1.7	$ 2.6	$ 0.1	$ 4.4	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.0	$ 0.3	$ 0.0	$ 1.7	$ 0.0	$ 2.0
75	98119	Vasona Light Rail Extension (Phase 2)	SCL	Transit Expansion	$ 176.0	$ 0.6	$ 0.1	$ 6.5	0.0	$ 3.0	$ (1.8)	$ (2.9)	$ (1.6)	$ 0.1	$ (3.2)	$ 0.7	$ 1.3	$ 0.0	$ 2.1	$ 0.1	$ 0.1	$ 0.0	$ 0.2	$ 0.1	$ 0.1	$ 0.0	$ 0.8	$ 0.0	$ 1.1
76	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	SOL	Road Efficiency	$ 50.0	$ 1.0	$ 18.0	$ 3.5	5	$ 18.9	$ 2.1	$ (1.6)	$ (0.9)	$ (0.1)	$ 18.3	$ (0.8)	$ 0.1	$ (0.0)	$ (0.7)	$ (0.0)	$ (0.1)	$ (0.0)	$ (0.2)	$ 0.5	$ 0.6	$ (0.0)	$ (0.5)	$ (0.0)	$ 0.6
77	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	SOL	Transit Efficiency	$ 54.0	$ -	$ 2.0	$ 0.7	3	$ 2.8	$ (0.7)	$ (0.7)	$ 0.6	$ 0.0	$ 2.0	$ (0.3)	$ 0.2	$ 0.0	$ (0.1)	$ 0.0	$ 0.0	$ (0.0)	$ 0.1	$ (0.0)	$ (0.0)	$ (0.0)	$ 0.0	$ (0.0)	$ 0.0
78	240650	Sonoma Countywide Bus Service Frequency Improvements	SON	Transit Efficiency	$ 427.8	$ 10.4	$ 32.0	$ 41.0	0.8	$ 10.0	$ 0.2	$ (10.2)	$ 17.4	$ 1.4	$ 18.8	$ 2.5	$ 5.7	$ 0.9	$ 9.2	$ 0.2	$ 0.1	$ (0.0)	$ 0.4	$ 0.0	$ 0.4	$ 0.0	$ 3.2	$ 0.0	$ 3.6

All benefits and costs are shown in 2013 dollars.

EXHIBIT B-4

Memorandum

TO: Dave Vautin, MTC

FROM: Krista Jeannotte and Doug Sallman

DATE: January 23, 2012

RE: Plan Bay Area Project Assessment: Benefit-Cost Analysis Sensitivity Testing

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The following memorandum summarizes the sensitivity testing results for the Plan Bay Area Project Performance Assessment benefit-cost (B/C) analysis. The following sensitivity assessments were performed in order to measure how the analysis results could be affected by changes in methodological and technical assumptions:

1. Valuing nonrecurring delay at three (3) times the travel time value;
2. Adjusting transit operations and maintenance (O&M) costs to reflect potential cost savings;
3. Valuing CO_2 at a substantially higher value of $178.33 per ton;
4. Slightly adjusting collision valuations to match USDOT standards for the value of life;
5. Increasing the noise valuation;
6. Decreasing travel time valuations substantially.

For each sensitivity test, detailed tables (included in Appendix A) present the total annualized benefits, total annualized costs, B/C ratio, and ranking from highest B/C to lowest, for both the original B/C assessment and then adjusted to reflect the impact of the particular sensitivity test. The B/C ratios are color coded according to high, medium-high, medium-low, and low ratings as shown in the table to the right. In addition, summary tables are provided for each sensitivity test, highlighting projects with significant changes to their B/C ratios, B/C ranking, and/or B/C rating.

B/C RATIO - COLOR KEY	
High B/C (B/C ratio greater than 10)	
Medium-High B/C (B/C ratio between 5 and 9)	
Medium-Low B/C (B/C ratio between 1 and 4)	
Low B/C (B/C ratio less than 1)	

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(1) Valuing Nonrecurring Delay at Three Times the Value of Travel Time

Test Rationale

The previous RTP analysis (2007) used a value equal to three times the recurring in-vehicle travel time. More recent research under the Strategic Highway Research Program (SHRP) suggests a lower valuation – in the range of 0.9 to 1.2 times the value of recurring in-vehicle travel time – is more appropriate for application to non-recurring travel time. Therefore, the benefit valuation for non-recurring travel time delay for the Plan Bay Area performance assessment was set to a value equal to the value used for recurring travel time to reflect this new research. For this sensitivity test, nonrecurring delay was valued at three times the travel time value, consistent with the 2007 RTP performance assessment.

Key Impacts for Specific Projects

As visible in the Appendix Table A-1, this sensitivity test resulted in some shifting of projects within the B/C ratings and rankings:

- Three projects, SR-85 Auxiliary Lanes, Silicon Valley Express Lanes Network, and CTC Application + Alameda County Authorized Lanes Express Lanes Network, shifted from medium-high B/C rating to high with B/C ratios more than doubling the original B/C value for two of the cases. Two of these projects also realized the greatest movement in the rankings with the Silicon Valley Express Lanes project moving from a rank of 17 to 5 and CTC Application + Alameda County Authorized Lanes Express Lanes Network moving from 20 to 11.

- BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara) and SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680) also moved up in their tiering from medium-low to medium-high.

- Two of the project B/C ratings shifted downward, from medium-low to low, Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3) and Parkmerced Light Rail Corridor. The Fairfield/Vacaville station project decreased in rankings from 31 to 63. This degradation in project performance is due to both projects having substantial disbenefits from non-recurring delay.

- Dumbarton Transit Corridor (Phase 2: Commuter Rail) shifted from low to medium-low rating.

The key changes in B/C results are shown in Table 1.

Table 1. Key B/C Changes for Sensitivity Test – Three Times Non-Recurring Delay Value

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Network	Multi-County	$408	$1,216	$70	$70	6	17	198%	17	5
Alt49	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network	Express Lanes Network	Multi-County	$602	$1,426	$118	$118	5	12	137%	20	11
Alt61	22009	Capitol Corridor Service	Transit Efficiency	Multi-	$1	$2	$18	$18	0.1	0.1	84%	75	75
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$32	$18	$18	1	2	60%	58	43
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$120	$12	$12	7	10	48%	12	12
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$109	$21	$21	4	5	25%	26	22
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$36	$36	$36	0.8	1	17%	62	58
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$357	$70	$70	5	5	10%	23	23
Alt91	98207T	Access Improvements	Transit Efficiency	Alameda	$14	$13	$2	$2	6	6	-5%	14	20
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$4	$5	$5	1	0.9	-37%	52	62
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San	$3	$2	$1	$1	4	3	-42%	25	34
Alt51	21341	Fairfield/Vacaville Capitol	Transit Efficiency	Solano	$2	$1	$1	$1	3	0.8	-72%	31	63

Key Impacts by Project Type

Highway Expansion – B/C ratios increased nominally for all of the highway expansion projects. There were no significant changes in rankings, except for SR-239 Expressway Construction (Brentwood to Tracy) which decreased from a ranking of 11 to 15, mostly as a result of other projects improving.

Road Efficiency – B/C ratios increased moderately for road efficiency projects. The most significant improvement in ranking was for Marin-Sonoma Narrows (Phase 2: HOV Lanes) which increased in B/C from 1 to 2 and a ranking of 58 to 43.

Transit Efficiency – B/C ratio changes were mixed for transit efficiency as a result of this sensitivity test. Two projects ratings decreased from medium-low to low (Fairfield/Vacaville Capitol Corridor Station and Parkmerced Light Rail Corridor).

Transit Expansion – Impacts of the sensitivity text on transit expansion was nominal.

(2) Adjusted Transit O&M Costs

Test Rationale

For this test, O&M costs were adjusted to reflect a ten percent reduction in projects' gross O&M costs (due to potential cost savings from MTC's Transit Sustainability Project). Net O&M costs for these projects were then recalculated using the same farebox recovery ratios.

Key Impacts for Specific Projects

Appendix Table A-2 presents the results of this adjusted transit O&M cost sensitivity test. Few projects were impacted by this test but two projects did shift in rating, BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara) and Historic Streetcar Expansion Program, improved from the medium-high to high and low to medium-low rating, respectively. The Alameda-Oakland BRT + Transit Access Improvements project improved in ranking from 14 to 11. The key changes in B/C are shown in Table 2.

Table 2. Key B/C Changes for Sensitivity Test – Adjusted Transit O&M Costs

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt13	240375	BART to San Jose/Santa Clara	Transit Expansion	Santa Clara	$324	$324	$70	$64	5	5	-8%	23	22
Alt62	22415	Historic Streetcar Expansion	Transit Efficiency	San	$9	$9	$9	$9	0.9	1	-11%	61	59
Alt91	98207T	Alameda-Oakland BRT + Transit	Transit Efficiency	Alameda	$14	$14	$2	$2	6	7	-11%	14	11
Alt63	230055	Golden Gate Ferry Service	Transit Efficiency	Multi-	$6	$6	$4	$4	1	2	-16%	53	50
Alt86	00MUNI	Muni Service Frequency	Transit Efficiency	San	$25	$25	$14	$12	2	2	-17%	43	40
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$41	$22	$19	2	2	-18%	41	38
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$272	$220	$183	1	1	-21%	55	51

Key Impacts by Project Type

Highway Expansion – No impact.

Road Efficiency – No impact.

Transit Efficiency – The B/C ratios remained the same or had minor improvements for several of the transit efficiency projects. There were no significant changes in rankings with the most significant improvement coming from the Alameda-Oakland BRT + Transit Access Improvements project which increased from a ranking of 14 to 11.

Transit Expansion – This sensitivity test resulted in nominal improvements to transit expansion projects.

(3) Value CO_2 at $178.33

Test Rationale

The value of carbon dioxide emissions in the Transportation 2035 project assessment, conducted in 2008, was based on guidance issued in December 2007 by the United Kingdom Department for Environment, Food and Rural Affairs. For consistency with other regional plans, the current RTP performance assessment CO_2 valuation was obtained from the Bay Area Air Quality Management District (BAAQMD), and uprated for future years to reflect the additional damage caused by incremental accumulation of CO_2 over time. This sensitivity test reflects the substantially greater valuation of CO_2 developed in the United Kingdom ($178.33/metric ton), indicating how relying on a higher value of CO_2 emissions might affect B/C ratios.

Key Impacts for Specific Projects

B/C ratios and ranking changes were minimal as a result of this test, as seen in Appendix Table A-3. Climate Initiatives (5-year program) resulted in a significant change with a B/C increase from 1 to 4 and a ranking increase from 50 to 27. The EV Solar Installation [BAAQMD program] also realized an improvement in rating from low to medium-low, a B/C increase from 0.8 to 2, and an increase in ranking from 64 to 43. The key changes in B/C are shown in Table 3.

Table 3. Key B/C Changes for Sensitivity Test – Value CO_2 at $178.33

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$431	$112	$112	1	4	172%	50	27
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$0.4	$6	$6	0.0	0.1	163%	76	76
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$3	$2	$2	0.8	2	143%	64	43
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$10	$4	$4	3	2	-4%	32	34

Key Impacts by Project Type

Highway Expansion – The B/C impacts on the highway expansion projects were mixed with some projects slightly increasing and others decreasing. The most significant change is to the ranking of the SR-4 Bypass Completion project which decreased from 42 to 50.

Road Efficiency – Impacts were also mixed for road efficiency projects with almost no significant impact on the B/C ratios or rankings.

Transit Efficiency – All of the transit efficiency projects either remained the same or slightly improved the B/C ratio as a result of this sensitivity test.

Transit Expansion – This sensitivity test resulted in either no or nominal improvements to transit expansion projects.

(4) Collisions at U.S. DOT Value of Life Economic Values

Test Rationale

This sensitivity test involved adjusting the values of collisions to reflect those used for the U.S. DOT. Per the U.S. DOT's *Treatment of the Economic Value of a Statistical Life in Departmental Analysis- 2011 Interim Adjustment* memorandum dated July 2011, fatalities are valued at $6.2 million in 2011 dollars with a 1.6 percent annual growth rate. Injury and property damage only (PDO) rates are not directly provided, so the percentages of injury and PDO to fatal accidents from the Caltrans Life-Cycle Benefit-Cost Analysis - Economic Parameters 2010 were used to compute the values for injury and PDOs.

Key Impacts for Specific Projects

As shown in Appendix Table A-4, this sensitivity test had virtually no impact on the B/C ratios and rankings. SR-4 Bypass Completion (SR-160 to Walnut Avenue) resulted in the most substantial change, an improvement in rankings from 42 to 39. The key changes in B/C are shown in Table 4.

Table 4. Key B/C Changes for Sensitivity Test – Collisions

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$0.3	$6	$6	0.0	0.0	101%	76	76
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	-$0.03	$2	$2	(0.0)	(0.0)	67%	77	77
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$17	$9	$9	2	2	12%	42	39
Alt49	HOTe	Express Lanes Network E	Express Lanes Network	Multi-County	$602	$594	$118	$118	5	5	-1%	20	21
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Network	Multi-County	$408	$391	$70	$70	6	6	-4%	17	18

Key Impacts by Project Type

Highway Expansion – The collision valuation sensitivity test resulted in no or very little reductions in B/C ratios for highway expansion projects.

Road Efficiency – Impacts were mixed for road efficiency projects with almost no impact on the B/C ratios or rankings.

Transit Efficiency – The transit efficiency projects either remained the same or slightly decreased the B/C ratio as a result of this sensitivity test.

Transit Expansion – This sensitivity test resulted in either no or nominal disbenefits to the B/C of the transit expansion projects.

(5) Increased Noise Valuation

Noise benefits were valued at a level five times greater to reflect more of the health impacts associated with the projects. As there was no available literature indicating a specific higher value to use, we assumed a very significant increase noise benefit valuation to determine the maximum impact such a revision could cause. As shown in Appendix Table A-5, this test resulted in almost no impacts to the B/C ratios and rankings. The key changes in B/C are shown in Table 5.

Table 5. Key B/C Changes for Sensitivity Test – Increased Noise Valuation

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$0.2	$6	$6	0.0	0.0	19%	76	76
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	-$0.1	$2	$2	(0.0)	(0.0)	10%	77	77

(6) Decreased Travel Time Valuations by 30% and 50%

Test Rationale

The value of time used in the project performance assessment is equal to one half the median wage rate of Bay Area residents. The value of travel time was reduced first by 30 percent and then by 50 percent for this sensitivity test. The 30 percent reduction is approximately equivalent to half the median post-tax wage rate of Bay Area residents. The 50 percent test reduction attempted to see how a very significant reduction in travel time benefit valuations might affect benefit-cost ratios and project rankings.

Key Impacts for Specific Projects

Appendix Tables A-6a and A-6b present the results of this test. This test resulted in the most significant impacts to the B/C ratios and rankings:

- In the case of the 30 percent reduction test, two high rated projects were reduced to medium-high level and ten medium-high level projects decreased to medium-low (all but two of the projects in that B/C tier). Additionally, four projects shifted from medium-low to low.
- For the 50 percent travel time reduction test, six high level projects decreased to medium-high, ten medium-high rated projects decreased to medium-low, and eight medium-low projects shifted down to low.
- The Silicon Valley Express Lanes Network project realized the greatest impact as a result of the travel time adjustments with the B/C ratio in the 50 percent test decreasing from six to one, a reduction in the rankings from 17 to 51.

- The largest improvement in ranking is for the Local Streets and Roads Capital Maintenance Needs program which would increase from 22 to 12.

The key changes in B/C ratios are shown in Table 6; because the 50 percent reduction test impacts a greater number of total projects, this table solely focuses on the impacts of that test.

Key Impacts by Project Type

Highway Expansion – Reducing travel time valuation resulted in significant decreases in B/C for the highway expansion projects, especially under the 50 percent reduction sensitivity test. The SR-239 Expressway Construction (Brentwood to Tracy) project resulted in a reduction in B/C of 7 to 3, as well as a decrease in ranking of 11 to 15.

Road Efficiency – The roadway efficiency projects were significantly negatively impacted as a result of this sensitivity test, except the Bay Bridge Contraflow Lane which remained the same. The ITS Improvements projects in Santa Clara and San Mateo counties realized a shifting from the high rating to medium-high as a result of the 50 percent reduction in travel time valuation test.

Transit Efficiency – The transit efficiency projects were also significantly impacted by the travel time valuation sensitivity test, with benefits often decreasing by half in many of the 50 percent reduction test. The AC Transit Grand-MacArthur BRT, Irvington BART Station, and SFMTA Transit Effectiveness Projects all decreased from the high rating tier to the medium-high as a result of the 50 percent test.

Transit Expansion – This sensitivity test resulted in a mix of impacts to the B/C of the transit expansion projects with those seeing improvements being minor improvements. BART to Livermore (Phase 1) decreased from the medium-low to low rating as a result of the 50 percent test.

Table 6. Key B/C Changes for Sensitivity Test – Decreased Travel Time Valuations by 50%

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$2	$6	$6	0.0	0.3	1134%	76	70
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	$0.2	$2	$2	(0.0)	0.1	316%	77	76
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$188	$220	$220	1	0.9	-31%	55	56
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$13	$2	$2	12	8	-31%	8	9
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$33	$52	$52	1	0.6	-33%	60	62
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Transit Expansion	Alameda	$37	$25	$29	$29	1	0.9	-33%	54	55
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$4	$5	$5	1	0.9	-34%	52	53
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$37	$153	$153	0.4	0.2	-35%	70	73
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$8	$11	$11	1	0.7	-36%	57	59
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$382	$510	$510	1	0.7	-37%	56	58
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$27	$7	$7	6	4	-39%	16	13
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$18	$2	$2	18	10	-44%	4	4
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$68	$19	$19	6	4	-45%	15	14
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$31	$4	$4	16	9	-45%	5	6
Alt105	240494	ITS Improvements in Santa Clara	Road	Santa Clara	$752	$413	$48	$48	16	9	-45%	5	6
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$1,745	$202	$202	16	9	-45%	5	6
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$47	$8	$8	11	6	-47%	9	11
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$29	$10	$10	6	3	-49%	18	22
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$33	$10	$10	7	3	-49%	13	18
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$7	$2	$2	6	3	-50%	14	19
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$71	$21	$21	7	3	-50%	11	15
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$12	$14	$14	2	0.9	-50%	43	54
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway	Road	Solano	$18	$9	$4	$4	5	3	-51%	21	24
Alt8	22455	AC Transit East Bay BRT	Transit	Alameda	$62	$29	$12	$12	5	3	-53%	19	23
Alt49	HOTe	Express Lanes Network E	Express Lanes Network	Multi-County	$602	$235	$118	$118	5	2	-61%	20	27
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$6	$18	$18	1	0.3	-70%	58	67
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Network	Multi-County	$408	$68	$70	$70	6	1	-83%	17	51

APPENDIX A

Table A-1. Benefit-Cost Sensitivity Testing - Non-Recurring Delay at Three Times the Value of Travel Time

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt90	240182	BART Metro Program	Transit Efficiency	Multi-County	$161	$169	-$4	-$4	>60	>60	-	1	1
Alt93	240694	Treasure Island Congestion Pricing	Pricing	Regional	$69	$74	$1	$1	59	62	6%	2	2
Alt85	240522	Congestion Pricing Pilot	Pricing	San Francisco	$227	$233	$5	$5	45	46	2%	3	3
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$36	$2	$2	18	20	14%	4	4
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$3,509	$202	$202	16	17	11%	5	8
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$62	$4	$4	16	17	11%	5	6
Alt105	240494	ITS Improvements in Santa Clara County	Road Efficiency	Santa Clara	$752	$831	$48	$48	16	17	11%	5	6
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$21	$2	$2	12	14	14%	8	9
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$96	$8	$8	11	12	7%	9	10
Alt95	240582	Truck & Motorcycle Retirement [BAAQMD program]	Transit Efficiency	Regional	$55	$55	$6	$6	9	9	0%	10	13
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$151	$21	$21	7	7	5%	11	15
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$120	$12	$12	7	10	48%	12	12
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$73	$10	$10	7	7	11%	13	16
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$13	$2	$2	6	6	-5%	14	20
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$162	$19	$19	6	8	32%	15	14
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$49	$7	$7	6	7	11%	16	17
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Netwo	Multi-County	$408	$1,216	$70	$70	6	17	198%	17	5
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$69	$10	$10	6	7	23%	18	18
Alt8	22455	AC Transit East Bay BRT	Transit Efficiency	Alameda	$62	$63	$12	$12	5	5	2%	19	21
Alt49	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network	Express Lanes Netwo	Multi-County	$602	$1,426	$118	$118	5	12	137%	20	11
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Road Efficiency	Solano	$18	$22	$4	$4	5	6	23%	21	19
Alt96	n/a	Local Streets and Roads Capital Maintenance Needs	Maintenance	Regional	$1,369	$1,369	$280	$280	5	5	0%	22	24
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$357	$70	$70	5	5	10%	23	23
Alt47	240134	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (San Francisco To Tamien)	Transit Efficiency	Multi-County	$153	$163	$34	$34	5	5	7%	24	25
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San Francisco	$3	$2	$1	$1	4	3	-42%	25	34
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$109	$21	$21	4	5	25%	26	22
Alt38	230294	New SR-152 Alignment	Highway Expansion	Santa Clara	$148	$150	$41	$41	4	4	1%	27	28
Alt15	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown	Transit Expansion	Multi-County	$108	$113	$31	$31	4	4	5%	28	29
Alt97	240410	Transportation for Livable Communities	TLC	Regional	$875	$875	$255	$255	3	3	0%	29	30
Alt6	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello	Highway Expansion	Contra Costa	$65	$81	$21	$21	3	4	24%	30	26
Alt51	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Transit Efficiency	Solano	$2	$1	$1	$1	3	0.8	-72%	31	63
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$16	$4	$4	3	4	47%	32	27
Alt66	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Transit Efficiency	Multi-County	$36	$38	$15	$15	2	3	4%	33	32
Alt87	240147	Southeast Waterfront Transportation Improvements	Transit Efficiency	San Francisco	$88	$91	$36	$36	2	3	4%	34	35
Alt17	240026	SamTrans El Camino BRT	Transit Efficiency	San Mateo	$59	$65	$25	$25	2	3	11%	35	31
Alt24	240119	VTA El Camino BRT	Transit Efficiency	Santa Clara	$28	$31	$12	$12	2	3	10%	36	33
Alt77	00BART	BART Service Frequency Improvements	Transit Efficiency	Multi-County	$126	$138	$56	$56	2	2	10%	37	36
Alt84	230604	Bay Bridge Contraflow Lane	Road Efficiency	Multi-County	$67	$67	$31	$31	2	2	0%	38	38
Alt88	580_BUS	I-580 Express Bus (Dublin to Livermore)	Transit Efficiency	Alameda	$32	$35	$16	$16	2	2	10%	39	40
Alt33	240018	Dumbarton Transit Corridor (Phase 1: Express Bus)	Transit Efficiency	Alameda	$23	$25	$12	$12	2	2	12%	40	39
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$51	$22	$22	2	2	22%	41	37
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$16	$9	$9	2	2	2%	42	42
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$24	$14	$14	2	2	-3%	43	45
Alt2	230164	Geary Boulevard BRT	Transit Efficiency	San Francisco	$15	$14	$9	$9	2	2	-9%	44	48
Alt75	240526	SFCTA Transit Performance Initiative	Transit Efficiency	San Francisco	$28	$30	$16	$16	2	2	6%	45	41
Alt98	22247	Regional Bikeway Network	Bike/Ped	Regional	$124	$124	$73	$73	2	2	0%	46	46
Alt106	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Transit Efficiency	Alameda	$108	$114	$65	$65	2	2	5%	47	44
Alt99	n/a	New Freedom Program	Maintenance	Regional	$3	$3	$2	$2	2	2	0%	48	47
Alt43	22268	San Mateo Countywide Shuttle Service Frequency Improvements	Transit Efficiency	San Mateo	$10	$10	$6	$6	2	2	-5%	49	50
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$159	$112	$112	1	1	1%	50	52
Alt101	n/a	Transit Capital Maintenance Needs	Maintenance	Regional	$1,787	$1,787	$1,286	$1,286	1	1	0%	51	53
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$4	$5	$5	1	0.9	-37%	52	62
Alt63	230055	Golden Gate Ferry Service Frequency Improvements	Transit Efficiency	Multi-County	$6	$7	$4	$4	1	2	15%	53	51
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Transit Expansion	Alameda	$37	$45	$29	$29	1	2	22%	54	49
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$291	$220	$220	1	1	7%	55	54
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$649	$510	$510	1	1	7%	56	55
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$12	$11	$11	1	1	-1%	57	57
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$32	$18	$18	1	2	60%	58	43
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$61	$52	$52	1	1	22%	60	56
Alt102	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Climate	Regional	$42	$42	$44	$44	1	1	0%	59	59
Alt62	22415	Historic Streetcar Expansion Program	Transit Efficiency	San Francisco	$9	$8	$9	$9	0.9	0.9	-3%	61	61
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$36	$36	$36	0.8	1	17%	62	58
Alt41	240650	Sonoma Countywide Bus Service Frequency Improvements	Transit Efficiency	Sonoma	$32	$32	$41	$41	0.8	0.8	1%	63	64
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$1	$2	$2	0.8	0.8	0%	64	65
Alt16	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Transit Expansion	Multi-County	$10	$12	$13	$13	0.7	0.9	23%	65	60
Alt22	230252	Marin Countywide Bus Service Frequency Improvements	Transit Efficiency	Marin	$9	$9	$12	$12	0.7	0.7	3%	66	66
Alt40	230219, 230314	Golden Gate Bus Service Frequency Improvements	Transit Efficiency	Multi-County	$16	$16	$29	$29	0.5	0.6	3%	67	67
Alt10	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Transit Expansion	Santa Clara	$4	$3	$8	$8	0.5	0.4	-11%	68	69
Alt50	230547	Monterey Highway BRT	Transit Efficiency	Santa Clara	$15	$14	$37	$37	0.4	0.4	-5%	69	71
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$68	$153	$153	0.4	0.4	20%	70	68
Alt30	22019	Downtown East Valley (Phase 2: LRT)	Transit Expansion	Santa Clara	$5	$4	$16	$16	0.3	0.2	-20%	71	72
Alt79	98139	ACE Expansion	Transit Efficiency	Alameda	$19	$27	$67	$67	0.3	0.4	40%	72	70
Alt52	230554	Sunnyvale-Cupertino BRT	Transit Efficiency	Santa Clara	$5	$3	$26	$26	0.2	0.1	-32%	73	74
Alt19	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Transit Expansion	Santa Clara	$3	$4	$19	$19	0.2	0.2	45%	74	73
Alt61	22009	Capitol Corridor Service Frequency Improvements (Oakland to	Transit Efficiency	Multi-County	$1	$2	$18	$18	0.1	0.1	84%	75	75
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	-$4	$6	$6	0.0	(0.5)	-2600%	76	76
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	-$2	$2	$2	(0.0)	(1.1)	-2842%	77	77

APPENDIX A

Table A-2. Benefit-Cost Sensitivity Testing – Adjusted Transit O&M Costs

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt90	240182	BART Metro Program	Transit Efficiency	Multi-County	$161	$161	-$4	-$4	>60	>60	-	1	1
Alt93	240694	Treasure Island Congestion Pricing	Pricing	Regional	$69	$69	$1	$1	59	59	0%	2	2
Alt85	240522	Congestion Pricing Pilot	Pricing	San Francisco	$227	$227	$5	$5	45	45	0%	3	3
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$32	$2	$2	18	18	0%	4	4
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$3,175	$202	$202	16	16	0%	5	7
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$56	$4	$4	16	16	0%	5	5
Alt105	240494	ITS Improvements in Santa Clara County	Road Efficiency	Santa Clara	$752	$752	$48	$48	16	16	0%	5	5
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$19	$2	$2	12	12	0%	8	8
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$90	$8	$8	11	11	0%	9	9
Alt95	240582	Truck & Motorcycle Retirement [BAAQMD program]	Climate	Regional	$55	$55	$6	$6	9	9	0%	10	10
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$144	$21	$21	7	7	0%	11	12
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$81	$12	$12	7	7	0%	12	13
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$65	$10	$10	7	7	0%	13	14
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$14	$2	$2	6	7	-11%	14	11
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$123	$19	$19	6	6	0%	15	15
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$44	$7	$7	6	6	0%	16	16
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Netw	Multi-County	$408	$408	$70	$70	6	6	0%	17	17
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$56	$10	$10	6	6	0%	18	18
Alt8	22455	AC Transit East Bay BRT	Transit Efficiency	Alameda	$62	$62	$12	$11	5	5	-1%	19	19
Alt49	HOTe	Express Lanes Network E	Express Lanes Netw	Multi-County	$602	$602	$118	$118	5	5	0%	20	20
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Road Efficiency	Solano	$18	$18	$4	$4	5	5	0%	21	21
Alt96	n/a	Local Streets and Roads Capital Maintenance Needs	Maintenance	Regional	$1,369	$1,369	$280	$280	5	5	0%	22	23
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$324	$70	$64	5	5	-8%	23	22
Alt47	240134	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (San Francisco To Tamien)	Transit Efficiency	Multi-County	$153	$153	$34	$33	5	5	-3%	24	24
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San Francisco	$3	$3	$1	$1	4	4	0%	25	25
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$87	$21	$21	4	4	0%	26	26
Alt38	230294	New SR-152 Alignment	Highway Expansion	Santa Clara	$148	$148	$41	$41	4	4	0%	27	27
Alt15	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	Transit Expansion	Multi-County	$108	$108	$31	$31	4	4	0%	28	28
Alt97	240410	Transportation for Livable Communities	TLC	Regional	$875	$875	$255	$255	3	3	0%	29	29
Alt6	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening	Highway Expansion	Contra Costa	$65	$65	$21	$21	3	3	0%	30	30
Alt51	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Transit Efficiency	Solano	$2	$2	$1	$1	3	3	0%	31	31
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$11	$4	$4	3	3	-1%	32	33
Alt66	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Transit Efficiency	Multi-County	$36	$36	$15	$14	2	3	-4%	33	35
Alt87	240147	Southeast Waterfront Transportation Improvements	Transit Efficiency	San Francisco	$88	$88	$36	$34	2	3	-7%	34	32
Alt17	240026	SamTrans El Camino BRT	Transit Efficiency	San Mateo	$59	$59	$25	$23	2	3	-10%	35	34
Alt24	240119	VTA El Camino BRT	Transit Efficiency	Santa Clara	$28	$28	$12	$12	2	2	0%	36	37
Alt77	00BART	BART Service Frequency Improvements	Transit Efficiency	Multi-County	$126	$126	$56	$52	2	2	-7%	37	36
Alt84	230604	Bay Bridge Contraflow Lane	Road Efficiency	Multi-County	$67	$67	$31	$31	2	2	0%	38	39
Alt88	580_BUS	I-580 Express Bus (Dublin to Livermore)	Transit Efficiency	Alameda	$32	$32	$16	$16	2	2	0%	39	42
Alt33	240018	Dumbarton Transit Corridor (Phase 1: Express Bus)	Transit Efficiency	Alameda	$23	$23	$12	$11	2	2	-5%	40	41
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$41	$22	$19	2	2	-18%	41	38
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$15	$9	$9	2	2	0%	42	44
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$25	$14	$12	2	2	-17%	43	40
Alt2	230164	Geary Boulevard BRT	Transit Efficiency	San Francisco	$15	$15	$9	$9	2	2	0%	44	46
Alt75	240526	SFCTA Transit Performance Initiative	Transit Efficiency	San Francisco	$28	$28	$16	$16	2	2	0%	45	47
Alt98	22247	Regional Bikeway Network	Bike/Ped	Regional	$124	$124	$73	$73	2	2	0%	46	48
Alt106	240699	AC Transit Service Frequency Improvements (Restoration of	Transit Efficiency	Alameda	$108	$108	$65	$58	2	2	-11%	47	43
Alt99	n/a	New Freedom Program	Maintenance	Regional	$3	$3	$2	$2	2	2	0%	48	49
Alt43	22268	San Mateo Countywide Shuttle Service Frequency Improvements	Transit Efficiency	San Mateo	$10	$10	$6	$6	2	2	-10%	49	45
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$158	$112	$112	1	1	0%	50	53
Alt101	n/a	Transit Capital Maintenance Needs	Maintenance	Regional	$1,787	$1,787	$1,286	$1,286	1	1	0%	51	54
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$6	$5	$4	1	1	-7%	52	52
Alt63	230055	Golden Gate Ferry Service Frequency Improvements	Transit Efficiency	Multi-County	$6	$6	$4	$4	1	2	-16%	53	50
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus	Transit Expansion	Alameda	$37	$37	$29	$28	1	1	-3%	54	56
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$272	$220	$183	1	1	-21%	55	51
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$606	$510	$453	1	1	-13%	56	55
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$12	$11	$10	1	1	-8%	57	57
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$20	$18	$18	1	1	0%	58	58
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$50	$52	$51	1	1	-3%	60	60
Alt102	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Climate	Regional	$42	$42	$44	$44	1	1	0%	59	61
Alt62	22415	Historic Streetcar Expansion Program	Transit Efficiency	San Francisco	$9	$9	$9	$9	0.9	1	-11%	61	59
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$31	$36	$35	0.8	0.9	-4%	62	62
Alt41	240650	Sonoma Countywide Bus Service Frequency Improvements	Transit Efficiency	Sonoma	$32	$32	$41	$40	0.8	0.8	-3%	63	64
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$1	$2	$2	0.8	0.8	0%	64	66
Alt16	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Transit Expansion	Multi-County	$10	$10	$13	$13	0.7	0.8	-4%	65	65
Alt22	230252	Marin Countywide Bus Service Frequency Improvements	Transit Efficiency	Marin	$9	$9	$12	$11	0.7	0.8	-14%	66	63
Alt40	230219, 230314	Golden Gate Bus Service Frequency Improvements	Transit Efficiency	Multi-County	$16	$16	$29	$27	0.5	0.6	-8%	67	67
Alt10	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Transit Expansion	Santa Clara	$4	$4	$8	$8	0.5	0.5	-1%	68	68
Alt50	230547	Monterey Highway BRT	Transit Efficiency	Santa Clara	$15	$15	$37	$33	0.4	0.5	-10%	69	69
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$57	$153	$149	0.4	0.4	-3%	70	70
Alt30	22019	Downtown East Valley (Phase 2: LRT)	Transit Expansion	Santa Clara	$5	$5	$16	$15	0.3	0.3	-5%	71	71
Alt79	98139	ACE Expansion	Transit Efficiency	Alameda	$19	$19	$67	$60	0.3	0.3	-10%	72	72
Alt52	230554	Sunnyvale-Cupertino BRT	Transit Efficiency	Santa Clara	$5	$5	$26	$24	0.2	0.2	-10%	73	73
Alt19	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Transit Expansion	Santa Clara	$3	$3	$19	$18	0.2	0.2	-2%	74	74
Alt61	22009	Capitol Corridor Service Frequency Improvements (Oakland to	Transit Efficiency	Multi-County	$1	$1	$18	$18	0.1	0.1	-1%	75	75
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$0.1	$6	$6	0.0	0.0	-2%	76	76
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	-$0.1	$2	$2	(0.0)	(0.0)	0%	77	77

APPENDIX A

Table A-3. Benefit-Cost Sensitivity Testing – Value CO_2 at $178.33 per metric ton

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt90	240182	BART Metro Program	Transit Efficiency	Multi-County	$161	$163	-$4	-$4	>60	>60	-	1	1
Alt93	240694	Treasure Island Congestion Pricing	Pricing	Regional	$69	$70	$1	$1	59	60	2%	2	2
Alt85	240522	Congestion Pricing Pilot	Pricing	San Francisco	$227	$232	$5	$5	45	46	2%	3	3
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$33	$2	$2	18	18	3%	4	4
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$61	$4	$4	16	17	8%	5	5
Alt105	240494	ITS Improvements in Santa Clara County	Road Efficiency	Santa Clara	$752	$813	$48	$48	16	17	8%	5	6
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$3,433	$202	$202	16	17	8%	5	7
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$19	$2	$2	12	12	2%	8	8
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$91	$8	$8	11	12	2%	9	9
Alt95	240582	Truck & Motorcycle Retirement [BAAQMD program]	Transit Efficiency	Regional	$55	$55	$6	$6	9	9	0%	10	10
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$148	$21	$21	7	7	3%	11	11
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$81	$12	$12	7	7	0%	12	12
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$68	$10	$10	7	7	4%	13	13
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$14	$2	$2	6	6	0%	14	14
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$123	$19	$19	6	6	0%	15	16
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$45	$7	$7	6	6	2%	16	15
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Netw	Multi-County	$408	$398	$70	$70	6	6	-2%	17	17
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$57	$10	$10	6	6	0%	18	18
Alt8	22455	AC Transit East Bay BRT	Transit Efficiency	Alameda	$62	$62	$12	$12	5	5	1%	19	19
Alt49	HOTe	Express Lanes Network E	Express Lanes Netw	Multi-County	$602	$597	$118	$118	5	5	-1%	20	20
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Road Efficiency	Solano	$18	$18	$4	$4	5	5	-1%	21	21
Alt96	n/a	Local Streets and Roads Capital Maintenance Needs	Maintenance	Regional	$1,369	$1,369	$280	$280	5	5	0%	22	22
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$331	$70	$70	5	5	2%	23	23
Alt47	240134	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (San Francisco To Tamien)	Transit Efficiency	Multi-County	$153	$155	$34	$34	5	5	2%	24	25
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San Francisco	$3	$3	$1	$1	4	5	6%	25	24
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$89	$21	$21	4	4	3%	26	26
Alt38	230294	New SR-152 Alignment	Highway Expansion	Santa Clara	$148	$149	$41	$41	4	4	1%	27	28
Alt15	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown	Transit Expansion	Multi-County	$108	$109	$31	$31	4	4	1%	28	29
Alt97	240410	Transportation for Livable Communities	TLC	Regional	$875	$875	$255	$255	3	3	0%	29	30
Alt6	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening	Highway Expansion	Contra Costa	$65	$65	$21	$21	3	3	-1%	30	31
Alt51	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Transit Efficiency	Solano	$2	$2	$1	$1	3	3	4%	31	32
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$10	$4	$4	3	2	-4%	32	34
Alt66	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Transit Efficiency	Multi-County	$36	$37	$15	$15	2	3	3%	33	33
Alt87	240147	Southeast Waterfront Transportation Improvements	Transit Efficiency	San Francisco	$88	$89	$36	$36	2	2	1%	34	35
Alt17	240026	SamTrans El Camino BRT	Transit Efficiency	San Mateo	$59	$61	$25	$25	2	2	4%	35	36
Alt24	240119	VTA El Camino BRT	Transit Efficiency	Santa Clara	$28	$29	$12	$12	2	2	3%	36	37
Alt77	00BART	BART Service Frequency Improvements	Transit Efficiency	Multi-County	$126	$129	$56	$56	2	2	2%	37	38
Alt84	230604	Bay Bridge Contraflow Lane	Road Efficiency	Multi-County	$67	$67	$31	$31	2	2	0%	38	39
Alt88	580_BUS	I-580 Express Bus (Dublin to Livermore)	Transit Efficiency	Alameda	$32	$33	$16	$16	2	2	2%	39	40
Alt33	240018	Dumbarton Transit Corridor (Phase 1: Express Bus)	Transit Efficiency	Alameda	$23	$23	$12	$12	2	2	2%	40	41
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$43	$22	$22	2	2	5%	41	42
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$14	$9	$9	2	2	-6%	42	50
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$25	$14	$14	2	2	0%	43	45
Alt2	230164	Geary Boulevard BRT	Transit Efficiency	San Francisco	$15	$15	$9	$9	2	2	2%	44	44
Alt75	240526	SFCTA Transit Performance Initiative	Transit Efficiency	San Francisco	$28	$29	$16	$16	2	2	1%	45	46
Alt98	22247	Regional Bikeway Network	Bike/Ped	Regional	$124	$124	$73	$73	2	2	0%	46	47
Alt106	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Transit Efficiency	Alameda	$108	$110	$65	$65	2	2	1%	47	49
Alt99	n/a	New Freedom Program	Maintenance	Regional	$3	$3	$2	$2	2	2	0%	48	51
Alt43	22268	San Mateo Countywide Shuttle Service Frequency Improvements	Transit Efficiency	San Mateo	$10	$11	$6	$6	2	2	3%	49	48
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$431	$112	$112	1	4	172%	50	27
Alt101	n/a	Transit Capital Maintenance Needs	Maintenance	Regional	$1,787	$1,787	$1,286	$1,286	1	1	0%	51	53
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$6	$5	$5	1	1	2%	52	52
Alt63	230055	Golden Gate Ferry Service Frequency Improvements	Transit Efficiency	Multi-County	$6	$6	$4	$4	1	1	7%	53	54
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Transit Expansion	Alameda	$37	$38	$29	$29	1	1	4%	54	55
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$278	$220	$220	1	1	2%	55	56
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$615	$510	$510	1	1	1%	56	57
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$13	$11	$11	1	1	3%	57	58
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$19	$18	$18	1	1	-5%	58	59
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$52	$52	$52	1	1	4%	60	60
Alt102	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Climate	Regional	$41.80	$42	$44	$44	1	1	0%	59	61
Alt62	22415	Historic Streetcar Expansion Program	Transit Efficiency	San Francisco	$9	$9	$9	$9	0.9	0.9	2%	61	62
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$32	$36	$36	0.8	0.9	3%	62	63
Alt41	240650	Sonoma Countywide Bus Service Frequency Improvements	Transit Efficiency	Sonoma	$32	$32	$41	$41	0.8	0.8	1%	63	64
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$3	$2	$2	0.8	2	143%	64	43
Alt16	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Transit Expansion	Multi-County	$10	$10	$13	$13	0.7	0.7	2%	65	66
Alt22	230252	Marin Countywide Bus Service Frequency Improvements	Transit Efficiency	Marin	$9	$9	$12	$12	0.7	0.8	4%	66	65
Alt40	230219, 230314	Golden Gate Bus Service Frequency Improvements	Transit Efficiency	Multi-County	$16	$16	$29	$29	0.5	0.5	2%	67	67
Alt10	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Transit Expansion	Santa Clara	$4	$4	$8	$8	0.5	0.5	3%	68	68
Alt50	230547	Monterey Highway BRT	Transit Efficiency	Santa Clara	$15	$15	$37	$37	0.4	0.4	1%	69	69
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$59	$153	$153	0.4	0.4	3%	70	70
Alt30	22019	Downtown East Valley (Phase 2: LRT)	Transit Expansion	Santa Clara	$5	$5	$16	$16	0.3	0.3	4%	71	71
Alt79	98139	ACE Expansion	Transit Efficiency	Alameda	$19	$20	$67	$67	0.3	0.3	5%	72	72
Alt52	230554	Sunnyvale-Cupertino BRT	Transit Efficiency	Santa Clara	$5	$5	$26	$26	0.2	0.2	3%	73	73
Alt19	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Transit Expansion	Santa Clara	$3	$3	$19	$19	0.2	0.2	8%	74	74
Alt61	22009	Capitol Corridor Service Frequency Improvements (Oakland to	Transit Efficiency	Multi-County	$1	$1	$18	$18	0.1	0.1	3%	75	75
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$0.4	$6	$6	0.0	0.1	163%	76	76
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	-$0.1	$2	$2	(0.0)	(0.0)	-11%	77	77

APPENDIX A

Table A-4. Benefit-Cost Sensitivity Testing – Crashes at U.S. DOT Value of Life Economic Values

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt90	240182	BART Metro Program	Transit Efficiency	Multi-County	$161	$163	-$4	-$4	>60	>60	-	1	1
Alt93	240694	Treasure Island Congestion Pricing	Pricing	Regional	$69	$70	$1	$1	59	60	2%	2	2
Alt85	240522	Congestion Pricing Pilot	Pricing	San Francisco	$227	$232	$5	$5	45	46	2%	3	3
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$32	$2	$2	18	18	1%	4	4
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$57	$4	$4	16	16	1%	5	5
Alt105	240494	ITS Improvements in Santa Clara County	Road Efficiency	Santa Clara	$752	$763	$48	$48	16	16	1%	5	5
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$3,222	$202	$202	16	16	1%	5	7
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$19	$2	$2	12	12	1%	8	8
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$90	$8	$8	11	11	1%	9	9
Alt95	240582	Truck & Motorcycle Retirement [BAAQMD program]	Transit Efficiency	Regional	$55	$55	$6	$6	9	9	0%	10	10
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$145	$21	$21	7	7	1%	11	11
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$81	$12	$12	7	7	0%	12	12
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$66	$10	$10	7	7	1%	13	13
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$14	$2	$2	6	7	0%	14	14
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$123	$19	$19	6	6	1%	15	15
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$44	$7	$7	6	6	1%	16	16
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Netw	Multi-County	$408	$391	$70	$70	6	6	-4%	17	18
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$57	$10	$10	6	6	1%	18	17
Alt8	22455	AC Transit East Bay BRT	Transit Efficiency	Alameda	$62	$62	$12	$12	5	5	0%	19	19
Alt49	HOTe	Express Lanes Network E	Express Lanes Netw	Multi-County	$602	$594	$118	$118	5	5	-1%	20	21
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Road Efficiency	Solano	$18	$18	$4	$4	5	5	2%	21	20
Alt96	n/a	Local Streets and Roads Capital Maintenance Needs	Maintenance	Regional	$1,369	$1,369	$280	$280	5	5	0%	22	22
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$331	$70	$70	5	5	2%	23	23
Alt47	240134	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (San Francisco To Tamien)	Transit Efficiency	Multi-County	$153	$155	$34	$34	5	5	2%	24	24
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San Francisco	$3	$3	$1	$1	4	5	3%	25	25
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$87	$21	$21	4	4	0%	26	26
Alt38	230294	New SR-152 Alignment	Highway Expansion	Santa Clara	$148	$155	$41	$41	4	4	5%	27	27
Alt15	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown	Transit Expansion	Multi-County	$108	$109	$31	$31	4	4	1%	28	28
Alt97	240410	Transportation for Livable Communities	TLC	Regional	$875	$875	$255	$255	3	3	0%	29	29
Alt6	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening	Highway Expansion	Contra Costa	$65	$65	$21	$21	3	3	0%	30	30
Alt51	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Transit Efficiency	Solano	$2	$2	$1	$1	3	3	-1%	31	31
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$11	$4	$4	3	3	5%	32	32
Alt66	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Transit Efficiency	Multi-County	$36	$36	$15	$15	2	3	1%	33	33
Alt87	240147	Southeast Waterfront Transportation Improvements	Transit Efficiency	San Francisco	$88	$89	$36	$36	2	2	1%	34	34
Alt17	240026	SamTrans El Camino BRT	Transit Efficiency	San Mateo	$59	$59	$25	$25	2	2	1%	35	36
Alt24	240119	VTA El Camino BRT	Transit Efficiency	Santa Clara	$28	$28	$12	$12	2	2	1%	36	35
Alt77	00BART	BART Service Frequency Improvements	Transit Efficiency	Multi-County	$126	$128	$56	$56	2	2	2%	37	37
Alt84	230604	Bay Bridge Contraflow Lane	Road Efficiency	Multi-County	$67	$67	$31	$31	2	2	0%	38	38
Alt88	580_BUS	I-580 Express Bus (Dublin to Livermore)	Transit Efficiency	Alameda	$32	$33	$16	$16	2	2	3%	39	40
Alt33	240018	Dumbarton Transit Corridor (Phase 1: Express Bus)	Transit Efficiency	Alameda	$23	$23	$12	$12	2	2	1%	40	41
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$42	$22	$22	2	2	2%	41	42
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$17	$9	$9	2	2	12%	42	39
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$25	$14	$14	2	2	0%	43	43
Alt2	230164	Geary Boulevard BRT	Transit Efficiency	San Francisco	$15	$15	$9	$9	2	2	1%	44	44
Alt75	240526	SFCTA Transit Performance Initiative	Transit Efficiency	San Francisco	$28	$29	$16	$16	2	2	1%	45	45
Alt98	22247	Regional Bikeway Network	Bike/Ped	Regional	$124	$124	$73	$73	2	2	0%	46	46
Alt106	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Transit Efficiency	Alameda	$108	$110	$65	$65	2	2	1%	47	47
Alt99	n/a	New Freedom Program	Maintenance	Regional	$3	$3	$2	$2	2	2	0%	48	49
Alt43	22268	San Mateo Countywide Shuttle Service Frequency Improvements	Transit Efficiency	San Mateo	$10	$11	$6	$6	2	2	3%	49	48
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$159	$112	$112	1	1	1%	50	50
Alt101	n/a	Transit Capital Maintenance Needs	Maintenance	Regional	$1,787	$1,787	$1,286	$1,286	1	1	0%	51	52
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$6	$5	$5	1	1	1%	52	51
Alt63	230055	Golden Gate Ferry Service Frequency Improvements	Transit Efficiency	Multi-County	$6	$6	$4	$4	1	1	4%	53	53
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Transit Expansion	Alameda	$37	$38	$29	$29	1	1	2%	54	54
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$277	$220	$220	1	1	2%	55	55
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$613	$510	$510	1	1	1%	56	56
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$12	$11	$11	1	1	2%	57	57
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$19	$18	$18	1	1	-3%	58	58
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$51	$52	$52	1	1	2%	60	59
Alt102	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Climate	Regional	$42	$42	$44	$44	1	1	0%	59	60
Alt62	22415	Historic Streetcar Expansion Program	Transit Efficiency	San Francisco	$9	$9	$9	$9	0.9	0.9	1%	61	61
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$31	$36	$36	0.8	0.9	2%	62	62
Alt41	240650	Sonoma Countywide Bus Service Frequency Improvements	Transit Efficiency	Sonoma	$32	$32	$41	$41	0.8	0.8	1%	63	63
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$1	$2	$2	0.8	0.8	0%	64	64
Alt16	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Transit Expansion	Multi-County	$10	$10	$13	$13	0.7	0.7	2%	65	66
Alt22	230252	Marin Countywide Bus Service Frequency Improvements	Transit Efficiency	Marin	$9	$9	$12	$12	0.7	0.7	3%	66	65
Alt40	230219, 230314	Golden Gate Bus Service Frequency Improvements	Transit Efficiency	Multi-County	$16	$16	$29	$29	0.5	0.5	1%	67	67
Alt10	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Transit Expansion	Santa Clara	$4	$4	$8	$8	0.5	0.5	4%	68	68
Alt50	230547	Monterey Highway BRT	Transit Efficiency	Santa Clara	$15	$15	$37	$37	0.4	0.4	1%	69	69
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$58	$153	$153	0.4	0.4	2%	70	70
Alt30	22019	Downtown East Valley (Phase 2: LRT)	Transit Expansion	Santa Clara	$5	$5	$16	$16	0.3	0.3	3%	71	71
Alt79	98139	ACE Expansion	Transit Efficiency	Alameda	$19	$20	$67	$67	0.3	0.3	4%	72	72
Alt52	230554	Sunnyvale-Cupertino BRT	Transit Efficiency	Santa Clara	$5	$5	$26	$26	0.2	0.2	0%	73	73
Alt19	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Transit Expansion	Santa Clara	$3	$3	$19	$19	0.2	0.2	6%	74	74
Alt61	22009	Capitol Corridor Service Frequency Improvements (Oakland to	Transit Efficiency	Multi-County	$1	$1	$18	$18	0.1	0.1	-3%	75	75
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$0.3	$6	$6	0.0	0.0	101%	76	76
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	-$0.03	$2	$2	(0.0)	(0.0)	67%	77	77

APPENDIX A

Table A-5. Benefit-Cost Sensitivity Testing – Increased Noise Valuation

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt90	240182	BART Metro Program	Transit Efficiency	Multi-County	$161	$162	-$4	-$4	>60	>60	-	1	1
Alt93	240694	Treasure Island Congestion Pricing	Pricing	Regional	$69	$69	$1	$1	59	59	0%	2	2
Alt85	240522	Congestion Pricing Pilot	Pricing	San Francisco	$227	$228	$5	$5	45	45	0%	3	3
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$32	$2	$2	18	18	0%	4	4
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$56	$4	$4	16	16	0%	5	5
Alt105	240494	ITS Improvements in Santa Clara County	Road Efficiency	Santa Clara	$752	$752	$48	$48	16	16	0%	5	5
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$3,175	$202	$202	16	16	0%	5	7
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$19	$2	$2	12	12	0%	8	8
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$90	$8	$8	11	11	0%	9	9
Alt95	240582	Truck & Motorcycle Retirement [BAAQMD program]	Transit Efficiency	Regional	$55	$55	$6	$6	9	9	0%	10	10
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$144	$21	$21	7	7	0%	11	11
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$81	$12	$12	7	7	0%	12	12
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$65	$10	$10	7	7	0%	13	13
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$14	$2	$2	6	7	0%	14	14
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$123	$19	$19	6	6	0%	15	15
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$44	$7	$7	6	6	0%	16	16
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Netw	Multi-County	$408	$403	$70	$70	6	6	-1%	17	17
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$57	$10	$10	6	6	0%	18	18
Alt8	22455	AC Transit East Bay BRT	Transit Efficiency	Alameda	$62	$62	$12	$12	5	5	0%	19	19
Alt49	HOTe	Express Lanes Network E	Express Lanes Netw	Multi-County	$602	$599	$118	$118	5	5	0%	20	21
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Road Efficiency	Solano	$18	$18	$4	$4	5	5	0%	21	20
Alt96	n/a	Local Streets and Roads Capital Maintenance Needs	Maintenance	Regional	$1,369	$1,369	$280	$280	5	5	0%	22	22
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$325	$70	$70	5	5	0%	23	23
Alt47	240134	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (San Francisco To Tamien)	Transit Efficiency	Multi-County	$153	$153	$34	$34	5	5	0%	24	24
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San Francisco	$3	$3	$1	$1	4	4	1%	25	25
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$87	$21	$21	4	4	0%	26	26
Alt38	230294	New SR-152 Alignment	Highway Expansion	Santa Clara	$148	$148	$41	$41	4	4	0%	27	27
Alt15	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown	Transit Expansion	Multi-County	$108	$108	$31	$31	4	4	0%	28	28
Alt97	240410	Transportation for Livable Communities	TLC	Regional	$875	$875	$255	$255	3	3	0%	29	29
Alt6	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening	Highway Expansion	Contra Costa	$65	$65	$21	$21	3	3	0%	30	30
Alt51	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Transit Efficiency	Solano	$2	$2	$1	$1	3	3	-1%	31	31
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$11	$4	$4	3	3	0%	32	32
Alt66	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Transit Efficiency	Multi-County	$36	$36	$15	$15	2	2	0%	33	33
Alt87	240147	Southeast Waterfront Transportation Improvements	Transit Efficiency	San Francisco	$88	$88	$36	$36	2	2	0%	34	34
Alt17	240026	SamTrans El Camino BRT	Transit Efficiency	San Mateo	$59	$59	$25	$25	2	2	0%	35	35
Alt24	240119	VTA El Camino BRT	Transit Efficiency	Santa Clara	$28	$28	$12	$12	2	2	0%	36	36
Alt77	00BART	BART Service Frequency Improvements	Transit Efficiency	Multi-County	$126	$126	$56	$56	2	2	0%	37	37
Alt84	230604	Bay Bridge Contraflow Lane	Road Efficiency	Multi-County	$67	$67	$31	$31	2	2	0%	38	38
Alt88	580_BUS	I-580 Express Bus (Dublin to Livermore)	Transit Efficiency	Alameda	$32	$32	$16	$16	2	2	1%	39	39
Alt33	240018	Dumbarton Transit Corridor (Phase 1: Express Bus)	Transit Efficiency	Alameda	$23	$23	$12	$12	2	2	0%	40	40
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$42	$22	$22	2	2	1%	41	41
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$16	$9	$9	2	2	0%	42	42
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$25	$14	$14	2	2	0%	43	43
Alt2	230164	Geary Boulevard BRT	Transit Efficiency	San Francisco	$15	$15	$9	$9	2	2	0%	44	44
Alt75	240526	SFCTA Transit Performance Initiative	Transit Efficiency	San Francisco	$28	$28	$16	$16	2	2	0%	45	45
Alt98	22247	Regional Bikeway Network	Bike/Ped	Regional	$124	$124	$73	$73	2	2	0%	46	46
Alt106	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Transit Efficiency	Alameda	$108	$109	$65	$65	2	2	0%	47	47
Alt99	n/a	New Freedom Program	Maintenance	Regional	$3	$3	$2	$2	2	2	0%	48	48
Alt43	22268	San Mateo Countywide Shuttle Service Frequency Improvements	Transit Efficiency	San Mateo	$10	$10	$6	$6	2	2	1%	49	49
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$158	$112	$112	1	1	0%	50	50
Alt101	n/a	Transit Capital Maintenance Needs	Maintenance	Regional	$1,787	$1,787	$1,286	$1,286	1	1	0%	51	51
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$6	$5	$5	1	1	0%	52	52
Alt63	230055	Golden Gate Ferry Service Frequency Improvements	Transit Efficiency	Multi-County	$6	$6	$4	$4	1	1	1%	53	53
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Transit Expansion	Alameda	$37	$37	$29	$29	1	1	1%	54	54
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$273	$220	$220	1	1	0%	55	55
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$607	$510	$510	1	1	0%	56	56
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$12	$11	$11	1	1	0%	57	57
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$20	$18	$18	1	1	-1%	58	58
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$50	$52	$52	1	1	1%	60	59
Alt102	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Climate	Regional	$42	$42	$44	$44	1	1	0%	59	60
Alt62	22415	Historic Streetcar Expansion Program	Transit Efficiency	San Francisco	$9	$9	$9	$9	0.9	0.9	0%	61	61
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$31	$36	$36	0.8	0.9	1%	62	62
Alt41	240650	Sonoma Countywide Bus Service Frequency Improvements	Transit Efficiency	Sonoma	$32	$32	$41	$41	0.8	0.8	0%	63	63
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$1	$2	$2	0.8	0.8	0%	64	64
Alt16	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Transit Expansion	Multi-County	$10	$10	$13	$13	0.7	0.7	1%	65	65
Alt22	230252	Marin Countywide Bus Service Frequency Improvements	Transit Efficiency	Marin	$9	$9	$12	$12	0.7	0.7	1%	66	66
Alt40	230219, 230314	Golden Gate Bus Service Frequency Improvements	Transit Efficiency	Multi-County	$16	$16	$29	$29	0.5	0.5	0%	67	67
Alt10	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Transit Expansion	Santa Clara	$4	$4	$8	$8	0.5	0.5	1%	68	68
Alt50	230547	Monterey Highway BRT	Transit Efficiency	Santa Clara	$15	$15	$37	$37	0.4	0.4	0%	69	69
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$57	$153	$153	0.4	0.4	0%	70	70
Alt30	22019	Downtown East Valley (Phase 2: LRT)	Transit Expansion	Santa Clara	$5	$5	$16	$16	0.3	0.3	1%	71	71
Alt79	98139	ACE Expansion	Transit Efficiency	Alameda	$19	$19	$67	$67	0.3	0.3	1%	72	72
Alt52	230554	Sunnyvale-Cupertino BRT	Transit Efficiency	Santa Clara	$5	$5	$26	$26	0.2	0.2	0%	73	73
Alt19	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Transit Expansion	Santa Clara	$3	$3	$19	$19	0.2	0.2	2%	74	74
Alt61	22009	Capitol Corridor Service Frequency Improvements (Oakland to	Transit Efficiency	Multi-County	$1	$1	$18	$18	0.1	0.1	-1%	75	75
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$0.2	$6	$6	0.0	0.0	19%	76	76
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	-$0.1	$2	$2	(0.0)	(0.0)	10%	77	77

APPENDIX A

Table A-6a. Benefit-Cost Sensitivity Testing – Decreased Travel Time Valuation by 30 Percent

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt90	240182	BART Metro Program	Transit Efficiency	Multi-County	$161	$122	-$4	-$4	>60	>60	-	1	1
Alt93	240694	Treasure Island Congestion Pricing	Pricing	Regional	$69	$57	$1	$1	59	49	-17%	2	2
Alt85	240522	Congestion Pricing Pilot	Pricing	San Francisco	$227	$206	$5	$5	45	40	-10%	3	3
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$23	$2	$2	18	13	-26%	4	4
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$41	$4	$4	16	11	-27%	5	5
Alt105	240494	ITS Improvements in Santa Clara County	Road Efficiency	Santa Clara	$752	$549	$48	$48	16	11	-27%	5	6
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$2,317	$202	$202	16	11	-27%	5	7
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$15	$2	$2	12	10	-19%	8	8
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$64	$8	$8	11	8	-28%	9	10
Alt95	240582	Truck & Motorcycle Retirement [BAAQMD program]	Transit Efficiency	Regional	$55	$55	$6	$6	9	9	0%	10	9
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$100	$21	$21	7	5	-30%	11	13
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$75	$12	$12	7	6	-7%	12	11
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$46	$10	$10	7	5	-30%	13	16
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$9	$2	$2	6	5	-30%	14	17
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$90	$19	$19	6	5	-27%	15	15
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$34	$7	$7	6	5	-24%	16	14
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Netw	Multi-County	$408	$204	$70	$70	6	3	-50%	17	26
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$40	$10	$10	6	4	-29%	18	18
Alt8	22455	AC Transit East Bay BRT	Transit Efficiency	Alameda	$62	$42	$12	$12	5	4	-32%	19	21
Alt49	HOTe	Express Lanes Network E	Express Lanes Netw	Multi-County	$602	$382	$118	$118	5	3	-37%	20	25
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Road Efficiency	Solano	$18	$13	$4	$4	5	4	-30%	21	23
Alt96	n/a	Local Streets and Roads Capital Maintenance Needs	Maintenance	Regional	$1,369	$1,369	$280	$280	5	5	0%	22	12
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$261	$70	$70	5	4	-19%	23	20
Alt47	240134	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (San Francisco To Tamien)	Transit Efficiency	Multi-County	$153	$124	$34	$34	5	4	-19%	24	22
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San Francisco	$3	$2	$1	$1	4	4	-14%	25	19
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$59	$21	$21	4	3	-32%	26	27
Alt38	230294	New SR-152 Alignment	Highway Expansion	Santa Clara	$148	$107	$41	$41	4	3	-28%	27	28
Alt15	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown	Transit Expansion	Multi-County	$108	$80	$31	$31	4	3	-26%	28	29
Alt97	240410	Transportation for Livable Communities	TLC	Regional	$875	$875	$255	$255	3	3	0%	29	24
Alt6	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening	Highway Expansion	Contra Costa	$65	$44	$21	$21	3	2	-33%	30	31
Alt51	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Transit Efficiency	Solano	$2	$1	$1	$1	3	2	-30%	31	32
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$9	$4	$4	3	2	-22%	32	33
Alt66	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Transit Efficiency	Multi-County	$36	$27	$15	$15	2	2	-26%	33	35
Alt87	240147	Southeast Waterfront Transportation Improvements	Transit Efficiency	San Francisco	$88	$65	$36	$36	2	2	-26%	34	37
Alt17	240026	SamTrans El Camino BRT	Transit Efficiency	San Mateo	$59	$46	$25	$25	2	2	-23%	35	36
Alt24	240119	VTA El Camino BRT	Transit Efficiency	Santa Clara	$28	$23	$12	$12	2	2	-19%	36	34
Alt77	00BART	BART Service Frequency Improvements	Transit Efficiency	Multi-County	$126	$98	$56	$56	2	2	-22%	37	38
Alt84	230604	Bay Bridge Contraflow Lane	Road Efficiency	Multi-County	$67	$67	$31	$31	2	2	0%	38	30
Alt88	580_BUS	I-580 Express Bus (Dublin to Livermore)	Transit Efficiency	Alameda	$32	$26	$16	$16	2	2	-19%	39	42
Alt33	240018	Dumbarton Transit Corridor (Phase 1: Express Bus)	Transit Efficiency	Alameda	$23	$17	$12	$12	2	1	-24%	40	44
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$35	$22	$22	2	2	-14%	41	41
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$13	$9	$9	2	1	-19%	42	45
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$17	$14	$14	2	1	-30%	43	52
Alt2	230164	Geary Boulevard BRT	Transit Efficiency	San Francisco	$15	$12	$9	$9	2	1	-23%	44	48
Alt75	240526	SFCTA Transit Performance Initiative	Transit Efficiency	San Francisco	$28	$22	$16	$16	2	1	-22%	45	49
Alt98	22247	Regional Bikeway Network	Bike/Ped	Regional	$124	$124	$73	$73	2	2	0%	46	39
Alt106	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Transit Efficiency	Alameda	$108	$82	$65	$65	2	1	-25%	47	51
Alt99	n/a	New Freedom Program	Maintenance	Regional	$3	$3	$2	$2	2	2	0%	48	40
Alt43	22268	San Mateo Countywide Shuttle Service Frequency Improvements	Transit Efficiency	San Mateo	$10	$9	$6	$6	2	1	-9%	49	43
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$153	$112	$112	1	1	-3%	50	47
Alt101	n/a	Transit Capital Maintenance Needs	Maintenance	Regional	$1,787	$1,787	$1,286	$1,286	1	1	0%	51	46
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$5	$5	$5	1	1	-20%	52	53
Alt63	230055	Golden Gate Ferry Service Frequency Improvements	Transit Efficiency	Multi-County	$6	$6	$4	$4	1	1	2%	53	50
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Transit Expansion	Alameda	$37	$30	$29	$29	1	1	-20%	54	54
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$221	$220	$220	1	1	-19%	55	55
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$472	$510	$510	1	0.9	-22%	56	57
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$10	$11	$11	1	0.9	-22%	57	58
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$12	$18	$18	1	0.7	-42%	58	64
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$40	$52	$52	1	0.8	-20%	60	60
Alt102	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Climate	Regional	$42	$42	$44	$44	1	1	0%	59	56
Alt62	22415	Historic Streetcar Expansion Program	Transit Efficiency	San Francisco	$9	$7	$9	$9	0.9	0.8	-16%	61	59
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$25	$36	$36	0.8	0.7	-18%	62	63
Alt41	240650	Sonoma Countywide Bus Service Frequency Improvements	Transit Efficiency	Sonoma	$32	$26	$41	$41	0.8	0.6	-18%	63	65
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$1	$2	$2	0.8	0.8	0%	64	61
Alt16	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Transit Expansion	Multi-County	$10	$8	$13	$13	0.7	0.6	-19%	65	66
Alt22	230252	Marin Countywide Bus Service Frequency Improvements	Transit Efficiency	Marin	$9	$9	$12	$12	0.7	0.7	-3%	66	62
Alt40	230219, 230314	Golden Gate Bus Service Frequency Improvements	Transit Efficiency	Multi-County	$16	$12	$29	$29	0.5	0.4	-23%	67	68
Alt10	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Transit Expansion	Santa Clara	$4	$4	$8	$8	0.5	0.5	9%	68	67
Alt50	230547	Monterey Highway BRT	Transit Efficiency	Santa Clara	$15	$11	$37	$37	0.4	0.3	-24%	69	69
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$45	$153	$153	0.4	0.3	-21%	70	71
Alt30	22019	Downtown East Valley (Phase 2: LRT)	Transit Expansion	Santa Clara	$5	$5	$16	$16	0.3	0.3	-2%	71	70
Alt79	98139	ACE Expansion	Transit Efficiency	Alameda	$19	$16	$67	$67	0.3	0.2	-14%	72	72
Alt52	230554	Sunnyvale-Cupertino BRT	Transit Efficiency	Santa Clara	$5	$4	$26	$26	0.2	0.2	-15%	73	75
Alt19	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Transit Expansion	Santa Clara	$3	$4	$19	$19	0.2	0.2	41%	74	73
Alt61	22009	Capitol Corridor Service Frequency Improvements (Oakland to	Transit Efficiency	Multi-County	$1	$1	$18	$18	0.1	0.0	-36%	75	76
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$1	$6	$6	0.0	0.2	681%	76	74
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	$0.1	$2	$2	(0.0)	0.0	190%	77	77

APPENDIX A

Table A-6b. Benefit-Cost Sensitivity Testing – Decreased Travel Time Valuation by 50 Percent

Alt	RTPID#	Alternative	Mode	County	Original Total Annualized Benefits (in millions of 2013 dollars)	Adjusted Total Annualized Benefits (in millions of 2013 dollars)	Original Total Annualized Costs (in millions of 2013 dollars)	Adjusted Total Annualized Costs (in millions of 2013 dollars)	Original B/C	Adjusted B/C	Percent Change B/C	Original Rank	Adjusted Rank
Alt90	240182	BART Metro Program	Transit Efficiency	Multi-County	$161	$95	-$4	-$4	>60	>60	-	1	1
Alt93	240694	Treasure Island Congestion Pricing	Pricing	Regional	$69	$49	$1	$1	59	42	-29%	2	2
Alt85	240522	Congestion Pricing Pilot	Pricing	San Francisco	$227	$191	$5	$5	45	38	-16%	3	3
Alt71	22780	AC Transit Grand-MacArthur BRT	Transit Efficiency	Alameda	$32	$18	$2	$2	18	10	-44%	4	4
Alt104	22274	ITS Improvements in San Mateo County	Road Efficiency	San Mateo	$56	$31	$4	$4	16	9	-45%	5	6
Alt105	240494	ITS Improvements in Santa Clara County	Road Efficiency	Santa Clara	$752	$413	$48	$48	16	9	-45%	5	6
Alt5	230419	Freeway Performance Initiative	FPI	Regional	$3,175	$1,745	$202	$202	16	9	-45%	5	6
Alt53	22062	Irvington BART Station	Transit Efficiency	Alameda	$19	$13	$2	$2	12	8	-31%	8	9
Alt57	240171	SFMTA Transit Effectiveness Project	Transit Efficiency	San Francisco	$90	$47	$8	$8	11	6	-47%	9	11
Alt95	240582	Truck & Motorcycle Retirement [BAAQMD program]	Transit Efficiency	Regional	$55	$55	$6	$6	9	9	0%	10	5
Alt44	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Highway Expansion	Santa Clara	$144	$71	$21	$21	7	3	-50%	11	15
Alt25	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Road Efficiency	Santa Clara	$81	$71	$12	$12	7	6	-12%	12	10
Alt27	94506	Fremont/Union City East-West Connector	Arterial Expansion	Alameda	$65	$33	$10	$10	7	3	-49%	13	18
Alt91	98207T	Alameda-Oakland BRT + Transit Access Improvements	Transit Efficiency	Alameda	$14	$7	$2	$2	6	3	-50%	14	19
Alt14	240060, 240523	US-101 Express Lanes - Whipple to County Line	Road Efficiency	Multi-County	$123	$68	$19	$19	6	4	-45%	15	14
Alt21	230161	Van Ness Avenue BRT	Transit Efficiency	San Francisco	$44	$27	$7	$7	6	4	-39%	16	13
Alt36	HOTd	Silicon Valley Express Lanes Network	Express Lanes Netw	Multi-County	$408	$68	$70	$70	6	1	-83%	17	51
Alt80	240155	Better Market Street	Transit Efficiency	San Francisco	$56	$29	$10	$10	6	3	-49%	18	22
Alt8	22455	AC Transit East Bay BRT	Transit Efficiency	Alameda	$62	$29	$12	$12	5	3	-53%	19	23
Alt49	HOTe	Express Lanes Network E	Express Lanes Netw	Multi-County	$602	$235	$118	$118	5	2	-61%	20	27
Alt32	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Road Efficiency	Solano	$18	$9	$4	$4	5	3	-51%	21	24
Alt96	n/a	Local Streets and Roads Capital Maintenance Needs	Maintenance	Regional	$1,369	$1,369	$280	$280	5	5	0%	22	12
Alt13	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Transit Expansion	Santa Clara	$324	$220	$70	$70	5	3	-32%	23	20
Alt47	240134	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (San Francisco To Tamien)	Transit Efficiency	Multi-County	$153	$105	$34	$34	5	3	-31%	24	21
Alt56	240557	Oakdale Caltrain Station	Transit Efficiency	San Francisco	$3	$2	$1	$1	4	3	-23%	25	17
Alt23	240062	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)	Highway Expansion	Alameda	$87	$40	$21	$21	4	2	-54%	26	29
Alt38	230294	New SR-152 Alignment	Highway Expansion	Santa Clara	$148	$80	$41	$41	4	2	-46%	27	28
Alt15	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown	Transit Expansion	Multi-County	$108	$61	$31	$31	4	2	-43%	28	26
Alt97	240410	Transportation for Livable Communities	TLC	Regional	$875	$875	$255	$255	3	3	0%	29	16
Alt6	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening	Highway Expansion	Contra Costa	$65	$29	$21	$21	3	1	-55%	30	40
Alt51	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Transit Efficiency	Solano	$2	$1	$1	$1	3	1	-51%	31	35
Alt58	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Road Efficiency	Napa	$11	$7	$4	$4	3	2	-36%	32	32
Alt66	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Transit Efficiency	Multi-County	$36	$21	$15	$15	2	1	-43%	33	38
Alt87	240147	Southeast Waterfront Transportation Improvements	Transit Efficiency	San Francisco	$88	$50	$36	$36	2	1	-44%	34	42
Alt17	240026	SamTrans El Camino BRT	Transit Efficiency	San Mateo	$59	$37	$25	$25	2	1	-38%	35	34
Alt24	240119	VTA El Camino BRT	Transit Efficiency	Santa Clara	$28	$19	$12	$12	2	2	-31%	36	33
Alt77	00BART	BART Service Frequency Improvements	Transit Efficiency	Multi-County	$126	$80	$56	$56	2	1	-37%	37	36
Alt84	230604	Bay Bridge Contraflow Lane	Road Efficiency	Multi-County	$67	$67	$31	$31	2	2	0%	38	25
Alt88	580_BUS	I-580 Express Bus (Dublin to Livermore)	Transit Efficiency	Alameda	$32	$22	$16	$16	2	1	-31%	39	45
Alt33	240018	Dumbarton Transit Corridor (Phase 1: Express Bus)	Transit Efficiency	Alameda	$23	$14	$12	$12	2	1	-40%	40	47
Alt9	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Transit Expansion	Multi-County	$41	$32	$22	$22	2	1	-24%	41	37
Alt73	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Highway Expansion	Contra Costa	$15	$11	$9	$9	2	1	-31%	42	46
Alt86	00MUNI	Muni Service Frequency Improvements	Transit Efficiency	San Francisco	$25	$12	$14	$14	2	0.9	-50%	43	54
Alt2	230164	Geary Boulevard BRT	Transit Efficiency	San Francisco	$15	$9	$9	$9	2	1	-38%	44	49
Alt75	240526	SFCTA Transit Performance Initiative	Transit Efficiency	San Francisco	$28	$18	$16	$16	2	1	-37%	45	48
Alt98	22247	Regional Bikeway Network	Bike/Ped	Regional	$124	$124	$73	$73	2	2	0%	46	30
Alt106	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Transit Efficiency	Alameda	$108	$64	$65	$65	2	1	-41%	47	50
Alt99	n/a	New Freedom Program	Maintenance	Regional	$3	$3	$2	$2	2	2	0%	48	31
Alt43	22268	San Mateo Countywide Shuttle Service Frequency Improvements	Transit Efficiency	San Mateo	$10	$9	$6	$6	2	1	-15%	49	39
Alt100	230550	Climate Initiatives (5-year program)	Climate	Regional	$158	$150	$112	$112	1	1	-5%	50	44
Alt101	n/a	Transit Capital Maintenance Needs	Maintenance	Regional	$1,787	$1,787	$1,286	$1,286	1	1	0%	51	41
Alt55	240545	Parkmerced Light Rail Corridor	Transit Efficiency	San Francisco	$6	$4	$5	$5	1	0.9	-34%	52	53
Alt63	230055	Golden Gate Ferry Service Frequency Improvements	Transit Efficiency	Multi-County	$6	$6	$4	$4	1	1	3%	53	43
Alt107	LBART	BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)	Transit Expansion	Alameda	$37	$25	$29	$29	1	0.9	-33%	54	55
Alt34	240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)	Transit Efficiency	Multi-County	$272	$188	$220	$220	1	0.9	-31%	55	56
Alt83	00ACT1	AC Transit Frequent Transit Network	Transit Efficiency	Multi-County	$606	$382	$510	$510	1	0.7	-37%	56	58
Alt67	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Transit Efficiency	Contra Costa	$12	$8	$11	$11	1	0.7	-36%	57	59
Alt1	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Road Efficiency	Multi-County	$20	$6	$18	$18	1	0.3	-70%	58	67
Alt54	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Transit Expansion	Alameda	$50	$33	$52	$52	1	0.6	-33%	60	62
Alt102	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Climate	Regional	$42	$42	$44	$44	1	1	0%	59	52
Alt62	22415	Historic Streetcar Expansion Program	Transit Efficiency	San Francisco	$9	$6	$9	$9	0.9	0.7	-26%	61	61
Alt74	240216	Dumbarton Transit Corridor (Phase 2: Commuter Rail)	Transit Expansion	Alameda	$31	$21	$36	$36	0.8	0.6	-30%	62	63
Alt41	240650	Sonoma Countywide Bus Service Frequency Improvements	Transit Efficiency	Sonoma	$32	$23	$41	$41	0.8	0.6	-29%	63	64
Alt103	240589	EV Solar Installation [BAAQMD program]	Climate	Regional	$1	$1	$2	$2	0.8	0.8	0%	64	57
Alt16	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Transit Expansion	Multi-County	$10	$7	$13	$13	0.7	0.5	-32%	65	66
Alt22	230252	Marin Countywide Bus Service Frequency Improvements	Transit Efficiency	Marin	$9	$8	$12	$12	0.7	0.7	-6%	66	60
Alt40	230219, 230314	Golden Gate Bus Service Frequency Improvements	Transit Efficiency	Multi-County	$16	$10	$29	$29	0.5	0.3	-38%	67	68
Alt10	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Transit Expansion	Santa Clara	$4	$4	$8	$8	0.5	0.5	15%	68	65
Alt50	230547	Monterey Highway BRT	Transit Efficiency	Santa Clara	$15	$9	$37	$37	0.4	0.2	-40%	69	72
Alt39	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Transit Expansion	Alameda	$57	$37	$153	$153	0.4	0.2	-35%	70	73
Alt30	22019	Downtown East Valley (Phase 2: LRT)	Transit Expansion	Santa Clara	$5	$5	$16	$16	0.3	0.3	-4%	71	69
Alt79	98139	ACE Expansion	Transit Efficiency	Alameda	$19	$15	$67	$67	0.3	0.2	-24%	72	74
Alt52	230554	Sunnyvale-Cupertino BRT	Transit Efficiency	Santa Clara	$5	$4	$26	$26	0.2	0.1	-26%	73	75
Alt19	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Transit Expansion	Santa Clara	$3	$5	$19	$19	0.2	0.3	68%	74	71
Alt61	22009	Capitol Corridor Service Frequency Improvements (Oakland to	Transit Efficiency	Multi-County	$1	$0.4	$18	$18	0.1	0.0	-59%	75	77
Alt48	98119	Vasona Light Rail Extension (Phase 2)	Transit Expansion	Santa Clara	$0.1	$2	$6	$6	0.0	0.3	1134%	76	70
Alt45	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Transit Efficiency	Alameda	-$0.1	$0.2	$2	$2	(0.0)	0.1	316%	77	76

Considerations Applicable to All Projects

Three issues affect the benefit-cost performance for all projects analyzed.

Land Use Pattern

ABAG's Current Regional Plans land use was selected for the project performance assessment, as the other land use scenarios were not developed until after the analysis began. While some projects may perform better (or worse) given a particular land use pattern, selecting a single land use pattern for analysis creates a level playing field between projects. The Current Regional Plans land use represents a "middle ground" between a highly focused growth scenario and a more dispersed Outer Bay Area growth scenario. The scenario assessment will give a sense of how projects perform under different land use assumptions.

Interaction among Projects

In general, projects were evaluated individually. Projects serving related travel markets could, if evaluated as a package, increase or decrease the benefits of an individual project. For example, expanded local bus service may increase the projected ridership and benefits of metro/commuter rail projects, while expanding a freeway and building a new transit line in the same corridor may cause the improvements' combined benefits to be lower than estimated. The scenario assessment will help us understand the interaction among projects.

"Mode Choice" Modeling Approach

When forecasting project benefits, MTC staff ran the regional travel model's tour mode choice, stop frequency, stop location, trip departure time choice, trip mode choice, and trip assignment components – but not tour generation or tour destination choice. This is an improvement from T-2035 and allowed us to gain a better understanding of the mode changes caused by all projects. This approach has two distinct impacts:

1. The approach does not capture changes in tour destinations (e.g., people may decide to take a new job in a new location when the commute to that new location is improved). An individual project is not likely to generate changes of regional significance in most cases, given the mature state of the region's transportation system. This approach (to exclude changes in tour destinations) is consistent with project level assessments done elsewhere, most notably the FTA New Starts program. To include this step in the project assessment would have tripled analysis time, without necessarily providing meaningful information. The choice of where one works is extremely complex and one that travel models do not understand particularly well. MTC will, however, include this step in the scenario assessment, in which the collective changes in land use and transportation infrastructure are significant enough that the model can provide insight.
2. The approach does not consider the land use impacts of a particular project. For example, an urban transit expansion project might, when combined with supportive land use policies, encourage increased high-density development in the urban core – allowing people to live closer to job centers. Running the full travel model would not have solved this problem, however. This issue can only be dealt with by constructing unique land use scenarios to tie land use to transportation and/or using an integrated land use/travel model – both approaches are best suited for the scenario level of analysis.

Project-Specific Considerations

The attached table illustrates some of the project-specific confidence considerations; key criteria utilized for this assessment are detailed in the box below. Several common themes emerged from this project-specific review:

1. A subset of projects, including bus rapid transit (BRT) systems, transit frequency improvements, and infill stations, can be implemented quickly. Because 2035 was identified as the analysis year (based on the Plan Bay Area planning horizon), the B/C ratio does not fully capture the advantages of attaining for near-term benefits.
2. The travel model is unable to fully capture particular types of travel behavior (which only impacts a small subset of projects). Tourist and recreational trips, as well as trips headed to airports or seaports, may be underrepresented in the travel model.
3. Model forecasts exhibit some level of deviation from historical observed ridership and may lead to under- or over-estimation of existing ridership (and corresponding benefits). For example, forecasts of year 2005 SFMTA ridership are lower than actual 2005 systemwide ridership counts. Note that these deviations are typical of a regional travel model when utilized to examine performance of individual agency or route; furthermore, these deviations are unlikely to affect whether a project falls into the high or low outlier categories.

Key Criteria for Project-Specific Confidence Assessment

- **Travel Model Output**
  - *Does the travel model have limitations in understanding a particular type of travel behavior (e.g. weaving)?*
  - *Does the travel model lack an understanding of specific travel conditions (e.g. ridership or traffic volumes)?*
- **Framework Completeness**
  - *Does the travel model output capture all of the primary benefits of the project?*
  - *Are we capturing all of the real-world limitations of relevant transportation systems (e.g. transit vehicle crowding)?*
- **Timeframe Inclusiveness**
  - *Is the project an "early winner" (i.e. can be implemented quickly and provides key benefits in the short term)?*
  - *Is the project a "late bloomer" (i.e. benefits will not be realized until the final years of the planning horizon)?*

Confidence Assessment of Benefit-Cost Results (listed by benefit-cost ratio)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	Plan Bay Area B/C Ratio	T-2035 B/C Ratio	CONFIDENCE ASSESSMENT CRITERIA *if marked with a star, see comments to the right*			Starred Comments
							Travel Model Output	Framework Completeness	Timeframe Inclusiveness	
1	240182	**BART Metro Program (including Bay Fair Connection & Civic Center Turnback)**	Multi-County	Transit Efficiency	**>60**	n/a	✓	✓	✓	
2	240694	**Treasure Island Congestion Pricing**	San Francisco	Pricing	**59**	n/a	✓	✓	✓	
3	240522	**Congestion Pricing Pilot**	San Francisco	Pricing	**45**	n/a	✓	✓	✓	
4	22780	**AC Transit Grand-MacArthur BRT**	Alameda/ 3434	Transit Efficiency	**18**	n/a	✓	✓	*	BRT project can be implemented quickly for near-term benefits.
5	230419	**Freeway Performance Initiative**	Regional	FPI	**16**	28	✓	✓	✓	
6	22274	**ITS Improvements in San Mateo County**	San Mateo	Road Efficiency	**16**	n/a	**n/a**	✓	✓	
7	240494	**ITS Improvements in Santa Clara County**	Santa Clara	Road Efficiency	**16**	n/a	**n/a**	✓	✓	
8	22062	**Irvington BART Station**	Alameda	Transit Efficiency	**12**	n/a	✓	✓	*	Infill stations can be implemented quickly to achieve benefits in the near-term.
9	240171	**SFMTA Transit Effectiveness Project**	San Francisco	Transit Efficiency	**11**	n/a	*	*	*	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. B/C framework doesn't consider transit crowding, which may result in underestimate of emissions and VMT reductions and overestimate of travel time reductions; bus frequency improvements can be implemented quickly for near-term benefits.
10	240582	**Truck & Motorcycle Retirement [BAAQMD program]**	Regional	Climate	**9**	n/a	**n/a**	✓	✓	
11	22400	**SR-239 Expressway Construction (Brentwood to Tracy)**	Contra Costa	Highway Expansion	**7**	1	*	✓	✓	Because the land uses outside of the 9-county Bay Area are not explicitly represented, the model does not fully understand the likely impact of projects located near the boundaries of the planning region.
12	240431	**SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)**	Santa Clara	Road Efficiency	**7**	n/a	*	✓	✓	The model does not explicitly represent weaving (thus ignoring the benefits of longer weaving sections or other improvements).
13	94506	**Fremont/Union City East-West Connector**	Alameda	Arterial Expansion	**7**	1	*	✓	✓	Due to their relative proximity, the travel model has difficulty assigning travelers who could use either I-680 or I-880 to the correct facility. This route choice decision is important to the performance of the East-West Connector.
14	98207T	**Alameda-Oakland BRT + Transit Access Improvements**	Alameda	Transit Efficiency	**6**	n/a	✓	✓	*	BRT project can be implemented quickly to achieve benefits in the near-term.
15	240523, 240060	**US-101 HOV Lanes (Whipple Avenue to Cesar Chavez Street)**	Multi-County	Road Efficiency	**6**	n/a	✓	✓	✓	
16	230161	**Van Ness Avenue BRT**	San Francisco/ 3434	Transit Efficiency	**6**	n/a	*	*	*	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. Project can be implemented quickly for near-term benefits.
17	HOTd	**Silicon Valley Express Lanes Network**	Santa Clara	Express Lanes Network	**6**	n/a	*	✓	*	The travel model has difficulty representing the benefits of an operational strategy that relies on real-time price changes throughout the morning and evening commute periods. Some portions of the project may be implemented early and accrue benefits over a long period in the Plan, the Network likely will not be complete until near the end of the Plan period.
18	240155	**Better Market Street**	San Francisco	Transit Efficiency	**6**	n/a	*	*	✓	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. B/C framework doesn't consider transit crowding, which may result in underestimate of emissions and VMT reductions and overestimate of travel time reductions.
19	22455	**AC Transit East Bay BRT**	Alameda/ 3434	Transit Efficiency	**5**	n/a	✓	✓	*	BRT project can be implemented quickly for near-term benefits.
20	HOTe	**CTC Application + Alameda County Authorized Lanes Express Lanes Network**	Multi-County	Express Lanes Network	**5**	n/a	*	✓	*	The travel model has difficulty representing the benefits of an operational strategy that relies on real-time price changes throughout the morning and evening commute periods. Some portions of the project may be implemented early and accrue benefits over a long period in the Plan, the Network likely will not be complete until near the end of the Plan period.

Row #	Project ID	Project Name	County	Project Type	Plan Bay Area B/C Ratio	T-2035 B/C Ratio	CONFIDENCE ASSESSMENT CRITERIA (*if marked with a star, see comments to the right*) Travel Model Output	Framework Completeness	Timeframe Inclusiveness	Starred Comments
21	**230468**	**I-80 Auxiliary Lanes (Airbase Parkway to I-680)**	Solano	Road Efficiency	**5**	2†	*	*	✓	The model does not explicitly represent weaving (thus ignoring the benefits of longer weaving sections or other improvements). Analysis is performed for a typical weekday, but many of the project's benefits will be accrued on weekends due to recreational traffic.
22	**n/a**	**Local Streets and Roads Capital Maintenance Needs**	Regional	Maintenance	**5**	5	**n/a**	*	✓	The benefit-cost framework doesn't consider the impacts that state of repair has on air quality, goods movement, transit operations and emergency services. Furthermore, the assessment does not capture travel time savings from avoided delays (e.g. potholes leading to slower vehicle travel speeds).
23	**240375**	**BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)**	Santa Clara/ 3434	Transit Expansion	**5**	n/a	*	✓	*	The travel model does not forecast air passenger trips or special events, which are markets served by this project. The project is likely to be complete toward the end of the Plan so much of the benefits would likely be accrued after the Plan period.
24	**240134, 21627**	**Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)**	Multi-County	Transit Efficiency	**5**	n/a	✓	✓	✓	
25	**240557**	**Oakdale Caltrain Station**	San Francisco	Transit Efficiency	**4**	n/a	✓	✓	*	Infill stations can be implemented quickly to achieve benefits in the near-term.
26	**240062, 22776**	**SR-84/I-680 Interchange Improvements + SR-84 Widening (Jack London to I-680)**	Alameda	Highway Expansion	**4**	n/a	*	✓	✓	The model does not explicitly represent weaving (thus ignoring the benefits of longer weaving sections or other improvements), acceleration or deceleration behavior (thus ignoring the benefits of longer ramps), or queue spillback.
27	**230294**	**New SR-152 Alignment**	Santa Clara	Highway Expansion	**4**	n/a	*	*	✓	Because the land uses outside of the 9-county Bay Area are not explicitly represented, the model does not fully understand the likely impact of projects located near the boundaries of the planning region. Analysis also underestimates the freight benefits of this project, both in terms of the number of truck trips and the impacts of steep grades on trucks. Furthermore, the route serves a large number of interregional trips, which are not captured very well in the travel model.
28	**230290**	**Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)**	San Francisco/ 3434	Transit Expansion	**4**	n/a	✓	✓	*	The project is likely to be complete toward the end of the Plan, so much of the benefits would likely be accrued after the Plan period. (Note: since November draft release, project benefits were revised to reflect associated benefits of high-speed rail.)
29	**240410**	**Transportation for Livable Communities**	Regional	TLC	**3**	2	✓	✓	✓	
30	**21205, 22350**	**I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello Avenue to SR-242)**	Contra Costa	Highway Expansion	**3**	1	*	✓	✓	The model does not explicitly represent weaving (thus ignoring the benefits of longer weaving sections or other improvements), acceleration or deceleration behavior (thus ignoring the benefits of longer ramps), or queue spillback.
31	**21341**	**Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)**	Solano	Transit Efficiency	**3**	n/a	*	✓	*	Greater TOD around the station (as included in the Fairfield General Plan but not in the Current Regional Plans land use) could significantly increase ridership and the corresponding B/C ratio. Infill stations can be implemented quickly for near-term benefits
32	**240617**	**SR-29 HOV Lanes and BRT (Napa Junction to Vallejo)**	Napa	Road Efficiency	**3**	n/a	✓	✓	✓	
33	**22227, 240328, 240334**	**Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)**	Multi-County	Transit Efficiency	**2**	n/a	*	✓	*	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. BRT project can be implemented quickly to achieve benefits in the near-term.
34	**240147**	**Southeast Waterfront Transportation Improvements**	San Francisco	Transit Efficiency	**2**	n/a	*	✓	*	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. Project can be implemented quickly for near-term benefits.
35	**240026**	**SamTrans El Camino BRT**	San Mateo	Transit Efficiency	**2**	n/a	✓	✓	*	BRT can be implemented quickly for near-term benefits.
36	**240119**	**VTA El Camino BRT**	Santa Clara	Transit Efficiency	**2**	n/a	✓	✓	*	BRT can be implemented quickly for near-term benefits.
37	**00BART**	**BART Service Frequency Improvements**	Multi-County	Transit Efficiency	**2**	n/a	✓	*	✓	B/C framework doesn't consider transit crowding, which may result in underestimate of emissions and VMT reductions and overestimate of travel time reductions.
38	**230604**	**Bay Bridge Contraflow Lane**	Multi-County	Pricing	**2**	n/a	✓	*	✓	Modeling for this project doesn't fully capture the transit benefits of such a project. Because the project was represented as an HOV lane, rather than a bus-only lane, many of the benefits are accruing due to increased carpooling. A bus-only lane would provide faster speeds for buses and increase transit ridership more substantially.
39	**580_BUS**	**I-580 Express Bus (Dublin to Livermore)**	Alameda	Transit Efficiency	**2**	n/a	✓	✓	*	Express bus service can be implemented quickly for near-term benefits.

Row #	Project ID	Project Name	County	Project Type	Plan Bay Area B/C Ratio	T-2035 B/C Ratio	CONFIDENCE ASSESSMENT CRITERIA (*if marked with a star, see comments to the right*) Travel Model Output	Framework Completeness	Timeframe Inclusiveness	Starred Comments
40	**240018**	**Dumbarton Corridor Express Bus**	Multi-County	Transit Efficiency	**2**	n/a	✓	✓	✓	
41	**22511, 22512, 22122, 230613, 22120, 230581**	**WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)**	Multi-County/ 3434	Transit Expansion	**2**	n/a	✓	✓	✓	
42	**22605**	**SR-4 Bypass Completion (SR-160 to Walnut Avenue)**	Contra Costa	Highway Expansion	**2**	1†	✓	✓	✓	
43	**00MUNI**	**Muni Service Frequency Improvements**	San Francisco	Transit Efficiency	**2**	n/a	*	*	*	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. B/C framework doesn't consider transit crowding, which may result in underestimate of emissions and VMT reductions and overestimate of travel time reductions; bus frequency improvements can be implemented quickly for near-term benefits.
44	**230164**	**Geary Boulevard BRT**	San Francisco	Transit Efficiency	**2**	7	*	*	*	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. B/C framework doesn't consider transit crowding, which may result in underestimate of emissions and VMT reductions and overestimate of travel time reductions; BRT improvements can be implemented quickly for near-term benefits.
45	**240526**	**SFCTA Transit Performance Initiative**	San Francisco	Transit Efficiency	**2**	n/a	*	*	✓	Model may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. B/C framework doesn't consider transit crowding, which may result in underestimate of emissions and VMT reductions and overestimate of travel time reductions.
46	**22247**	**Regional Bikeway Network**	Regional	Bike/Ped	**2**	0.5	**n/a**	✓	✓	
47	**240699**	**AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)**	Multi-County	Transit Efficiency	**2**	n/a	✓	✓	*	Bus frequency improvements can be implemented quickly for near-term benefits.
48	**n/a**	**New Freedom Program**	Regional	Lifeline/New Freedom	**2**	n/a	**n/a**	✓	✓	
49	**22268**	**San Mateo Countywide Shuttle Service Frequency Improvements**	San Mateo	Transit Efficiency	**2**	n/a	✓	✓	*	Shuttle service can be implemented quickly for near-term benefits.
50	**230550**	**Climate Initiatives (5-year program)**	Regional	Climate	**1**	0	**n/a**	✓	✓	
51	**n/a**	**Transit Capital Maintenance Needs**	Regional	Maintenance	**1**	1	**n/a**	*	✓	The benefit-cost framework doesn't consider many impacts state of repair has on maintaining an operable transit system, such as maintaining or increasing transit ridership, reducing congestion and emissions and increasing mobility.
52	**240545**	**Parkmerced Light Rail Corridor**	San Francisco	Transit Efficiency	**1**	n/a	*	✓	✓	
53	**230055**	**Golden Gate Ferry Service Frequency Improvements**	Multi-County	Transit Efficiency	**1**	n/a	✓	✓	*	Ferry frequency improvements can be implemented quickly for near-term benefits.
54	**LBART**	**BART to Livermore (Phase 1: 1-Station DMU Extension with Bus Enhancements)**	Alameda	Transit Expansion	**1**	n/a	**n/a**	✓	✓	Project's quantative results reflect a sketch-level planning adjustment to the BART to Livermore (Phase 1) project, reflecting the slower travel speeds of DMU technology. This was due to the model's inability to reflect the unique proposed bus/rail transfer station without auto, ped, or bike access.
55	**240521, 240134, 21627**	**Caltrain Vision (10-Train Service during Peak Hours) + Electrification (SF to Tamien)**	Multi-County/ 3434	Transit Efficiency	**1**	n/a	✓	✓	✓	
56	**00ACT1**	**AC Transit Frequent Transit Network**	Multi-County	Transit Efficiency	**1**	n/a	*	✓	✓	Project includes a wide range of services; some service improvements may have higher benefit-cost ratios and some may have lower benefit-cost ratios.
57	**22343**	**I-680 Express Bus Service Frequency Improvements (Phase 2)**	Contra Costa	Transit Efficiency	**1**	1	✓	✓	*	Bus frequency improvements can be implemented quickly for near-term benefits.

Confidence Assessment of Benefit-Cost Results (listed by benefit-cost ratio)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	Plan Bay Area B/C Ratio	T-2035 B/C Ratio	CONFIDENCE ASSESSMENT CRITERIA *if marked with a star, see comments to the right*			Starred Comments
							Travel Model Output	Framework Completeness	Timeframe Inclusiveness	
58	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)	Multi-County	Road Efficiency	1	8†	✓	*	✓	Analysis is performed for a typical weekday, but many of the project's benefits will be accrued on weekends due to recreational traffic.
59	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Regional	Climate	1	n/a	n/a	✓	✓	
60	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Alameda	Transit Expansion	1	4†	n/a	✓	✓	Project's quantative results were based on the full BART to Livemore extension model results. This was due to the model's inability to reflect the unique proposed bus/rail transfer station without auto, ped, or bike access.
61	22415	Historic Streetcar Expansion Program	San Francisco	Transit Efficiency	0.9	2	*	✓	*	Model doesn't capture tourist ridership and may underestimate travel time benefits for existing MTA riders, as the model's year 2005 Muni systemwide estimates are about 20% less than observed ridership levels. Project can be implemented quickly for near-term benefits.
62	240216	Dumbarton Rail	Multi-County/ 3434	Transit Expansion	0.8	n/a	✓	✓	✓	
63	240589	EV Solar Installation [BAAQMD program]	Regional	Climate	0.8	n/a	n/a	*	*	Most project benefits accrue in the near term before widespread electric vehicle adoption.
64	240650	Sonoma Countywide Bus Service Frequency Improvements	Sonoma	Transit Efficiency	0.8	n/a	✓	✓	*	Bus frequency improvements can be implemented quickly for near-term benefits.
65	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Multi-County/ 3434	Transit Expansion	0.7	n/a	*	✓	✓	The travel model does not forecast tourist trips, which are served by this project.
66	230252	Marin Countywide Bus Service Frequency Improvements	Marin	Transit Efficiency	0.7	1	✓	✓	*	Bus frequency improvements can be implemented quickly for near-term benefits.
67	230219, 230314	Golden Gate Bus Service Frequency Improvements	Multi-County	Transit Efficiency	0.5	n/a	✓	✓	*	Bus frequency improvements can be implemented quickly for near-term benefits.
68	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Santa Clara	Transit Expansion	0.5	n/a	✓	✓	✓	
69	230547	Monterey Highway BRT	Santa Clara	Transit Efficiency	0.4	n/a	✓	✓	*	BRT can be implemented quickly for near-term benefits.
70	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Alameda	Transit Expansion	0.4	n/a	✓	✓	✓	
71	22019	Downtown East Valley (Phase 2: LRT)	Santa Clara/ 3434	Transit Expansion	0.3	n/a	✓	✓	✓	
72	98139	ACE Service Expansion	Multi-County/ 3434	Transit Efficiency	0.3	n/a	✓	✓	*	The project is likely to be complete toward the end of the Plan so much of the benefits would likely be accrued after the Plan period.
73	230554	Sunnyvale-Cupertino BRT	Santa Clara	Transit Efficiency	0.2	n/a	✓	✓	*	BRT can be implemented quickly for near-term benefits.
74	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Santa Clara	Transit Expansion	0.2	n/a	✓	✓	✓	
75	240690	Lifeline Transportation Program	Regional	Lifeline/New Freedom	0.1	0	n/a	*	✓	The benefit-cost framework doesn't reflect the primary justifications for this program, which revolve around providing basic mobility rather than travel time or emissions reductions.
76	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)	Multi-County/ 3434	Transit Efficiency	0.1	n/a	✓	✓	✓	
77	98119	Vasona Light Rail Extension (Phase 2)	Santa Clara	Transit Expansion	0.0	n/a	*	✓	✓	Model may not fully capture benefits from this relatively short extension.
78	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Alameda/ 3434	Transit Efficiency	0.0	n/a	✓	✓	*	Infill stations can be implemented quickly to achieve benefits in the near-term.

Targets Assessment Methodology EXHIBIT C-1

Overview

The targets assessment considers the extent to which projects and programs support the ten Plan Bay Area targets adopted by the Commission and ABAG. These criteria were developed with input from MTC'S Partnership Technical Advisory Committee (PTAC), the Regional Advisory Working Group, and the Ad Hoc Project Performance Assessment Technical Committee.

MTC staff measured support for each of the ten adopted targets on a five-point scale:

- strong support (1)
- moderate support (0.5)
- minimal impact (0)
- moderate adverse impact (-0.5)
- strong adverse impact (-1)

The targets assessment is summarized by combining the scores for all the targets into a "targets net score" while also noting subtotals for targets supported and targets where the impact is adverse. Each of the ten targets counts equally toward the total since the Commission has not assigned relative weights. Target number 3, which related to particulate matter emissions, is comprised of three sub-elements but counts as a single target in this assessment. Likewise, Target number 9, which calls for improving/increasing non-auto travel and decreasing VMT, has two sub-elements and counts as a single target in this analysis.

Staff had originally intended to use quantitative output from the travel demand model where available from the benefit cost assessment. However, it was challenging to integrate the quantitative model results, which are available for only some projects and targets, with qualitative assessment criteria. In the end, we chose to apply the qualitative criteria in to all projects.

MTC conducted the targets assessment for all uncommitted projects. We looked at about 180 larger projects (costs greater than $50 million) on an individual basis; this total includes the 100 projects subject to benefit cost assessment plus 80 additional large projects that could not be represented in the regional travel demand model. For projects assessed on an individual basis, we were able to consider particulars such as geography, which is important for targets such as Housing, Open Space/Agricultural Preservation, and Economic Vitality.

<u>Smaller Project Assessment</u>

We grouped the remaining 700 smaller projects into 9 types based on mode and project purpose/function (e.g., expansion, operations, safety). These groupings capture many important distinctions relative to the targets but do not allow us to consider geography. A complete list of the 700 small projects sorted by type can be provided upon request.

Example projects were selected for each project category and were scored with numeric values to assess the impact on Plan Bay Area targets. These representative projects served as the benchmark for each project category.

Priority Development Areas
While not explicitly addressed in the targets, the relationship of projects to Priority Development Areas is clearly of interest. To inform the trade-off discussion, MTC staff have identified whether projects are located in PDAs. Projects that are located in PDAs and have strong support for the targets can generally be considered supportive of PDAs.

Application of Criteria to Targets
The following section details the specific guidelines for assessing projects and provides examples for each target. Unless otherwise noted below, projects likely to impact more people or trips were judged to have a stronger impact – positive or negative. Projects impacting fewer people or trips were judged to have a moderate impact.

1. Climate Protection (CO2 Reduction)

Criteria
Reduce per-capita CO2 emissions from cars and light-duty trucks by 15%
Projects support the target if they result in a VMT reduction; provide an alternative to driving alone; or advance clean fuel vehicles. Projects are likely to increase VMT are assumed to have an adverse impact on the target.

Guidelines for Applying Criteria
Transit, bicycle and pedestrian projects are expected to reduce VMT and were rated as supportive of the target. Larger projects, those likely to serve more trips or serve longer trips, were rated as strongly supportive. Smaller projects, those likely to serve fewer trips or shorter trips, were rated as moderately supportive.

Projects that increase roadway capacity are expected to increase VMT and were generally rated as having strong adverse impacts on the target. Operational roadway projects, such as highway interchange projects, are not expected to increase VMT significantly and were generally rated as having minimal impact. Roadway projects that include transit, bicycle and pedestrian elements were uprated to minimal or moderate support to recognize the impacts of these multi-modal elements.

2. Adequate Housing

Criteria
House 100% of the region's projected 25-year growth by income level without displacing current low-income resident

The assessment of a project's impact on housing was dependent upon two criteria: potential for housing growth and past track record on affordable housing of the jurisdictions in which the project is located. The strongest support were for projects in jurisdictions that had: (1) above average track record for permitting low and very low income housing relative to their Regional Housing Needs Assessment (RHNA) targets; and (2) potential for a high amount of housing growth in the future, as measured by units included the Focused Growth scenario.

Guidelines for Applying Criteria

Potential for Housing Growth
Based on the housing growth from the Focused Growth Scenario, a project would receive support based on the numbers below and as shown in Table 1, attached:

- Cities below 1,500 units of production were awarded **minimal (0)**
- 1,500 to 10,000 **support of target (0.5)**

Support for Affordable Housing
Based on feedback the Adequate Housing Target, the assessment was revised from the original approach to sufficiently consider how projects support production of low income units in Bay Area jurisdictions. With input from ABAG staff, the Adequate Housing target has been re-evaluated to consider jurisdictions' track records in meeting their Regional Housing Needs Allocation (RHNA) targets for the past production of Very Low and Low income housing units. These results are reflected in revised Targets Assessment scores.

With data compiled from ABAG's housing report in 2007 "A Place to Call Home – Housing in the San Francisco Bay Area," we calculated the number of permitted units as a share of each jurisdiction's RHNA target by income level for years 1999 through 2006. Overall, 23 cities were identified that performed better than the regional averages for both very low (above 44%) and low (above 75%) income housing and 53 that were below the regional averages.

Projects that were multi-county projects were given a score for both housing production and RHNA based on the individual cities and unincorporated areas. The overall county RHNA score was determined by the majority of projects in one category (Above average, neither above or below and below average). If 2/3 of the cities in a county had below average production, then the county would receive a -0.5. If there was not a clear majority of cities in one category, then the county would be scored minimal or 0 points.

RHNA Rating (See Table 2, attached)

- **Strong** rating if above the regional average for both very low and low income housing categories **(0.5)**
- **Minimal** rating if not above or below the regional average for both categories **(0)**
- **Adverse** rating if below the regional average for very low and low income housing categories **(-0.5)**

Some projects that were multi-county such as BART, Capital Corridor or ACE were scored based upon the cities served by the projects in the same manner as described above.

3. Healthy and Safe Communities (*3a. PM2.5, 3b. PM10, and 3c. PM in CARE Communities)*

Targets 3a, 3b and 3c are very closely related and counted as one rating for the purposes of calculating a target net score

Criteria

3a-Reduce premature deaths from exposure to PM2.5 by 10%
3b-Reduce premature deaths from exposure to PM10 by 30%
3c-Achieve greater reductions of PM in CARE communities

Projects support the target if they have potential to reduce particulate (PM) emissions from vehicles by reducing VMT or providing an alternative to driving alone. Projects likely to increase VMT are assumed to have an adverse impact on the target. For target 3c, projects are supportive they reduce VMT in a CARE community (as described below) and adverse if increase VMT in a CARE community.

Guidelines for Applying Criteria

Because the criteria for 3a and 3b are nearly identical to those for the CO2 reduction target and because the particulate targets are focused largely on tailpipe emissions which correlate with CO2 emissions, projects generally received the same rating for these targets as they did for CO2 reduction.

The results for target 3c are reported separately in the Project Assessment Equity Considerations. Projects were mapped against the Bay Area Air Quality Management District (BAAQMD) six Community Air Risk Evaluation (CARE) Impacted Communities. These are areas that are highly impacted from outdoor Toxic Air Contaminants (TAC) due to their proximity to ports or freeways and a high density of sensitive populations (seniors, children and low income residents). Projects likely to increase transit, biking or walking and are located in a CARE community are considered to support the target. Conversely, projects that increase VMT and are located in a CARE community are considered to adversely affect this target. The degree of support or adverse impact is a function of the project scale and likely increase or decrease in VMT. Projects receive a minimal rating if they do not affect VMT substantially, even if they are located in a CARE community. Projects that are not located in a CARE community also receive a minimal rating.

4. **Healthy and Safe Communities Collision reduction and Active Transportation**

Collision Reduction Criteria

Reduce by 50% the number of injuries and fatalities from all collisions

There is a positive correlation between increased VMT and collisions for all modes of transportation. Projects that reduce VMT or explicitly provided a safety benefit by providing infrastructure that reduced vehicle to vehicle collisions and bicycle and pedestrian collisions are supportive of the target.

Guidelines for Applying Criteria
See discussion under CO2 target for guidelines used to assess whether a project was likely to increase VMT.

5. Active Transportation Criteria
Increase the average daily time walking and biking per person for transportation by 60%

Projects that provide infrastructure for bicycles and pedestrians such as on and off street bicycle facilities, bike parking and sidewalks are supportive of this target. Projects that are expected to increase auto trips have an adverse impact.

Guidelines for Applying Criteria
See discussion under CO2 target for guidelines used to assess whether a project was likely to increase VMT. Roadway projects received support for this target if they had significant bicycle and pedestrian facilities as part of the project. Examples would include interchange projects that included bicycle and pedestrian overcrossings, improved on and off ramp crossings that reduced conflicts and on and off street bicycle facilities.

6. <u>Open Space and Agricultural Preservation</u>

Criteria
Direct all non-agricultural development within the urban footprint (existing urban development and urban growth boundaries)

Projects that do not consume open space or agricultural lands support the target. Projects that improve access to agricultural lands support the target because they maintain economic viability of those lands; this is consistent with requirements in SB 375. Projects that directly consume open space or agricultural land have an adverse impact.

Guidelines for Applying Criteria
Support for the target was also given for improved access to agricultural lands. If a project would require new right-of-way in previously undeveloped open space or agricultural land, then it would be rated as having an adverse impact for the target. This target did not consider the development pressure from conversion of agricultural land to housing. Only the direct effects of the projects were considered, such as the amount of open space or agricultural land being consumed by the project.

7. <u>Equitable Access (Low Income Household Transportation Cost)-</u>
Criteria

Decrease by 10% the share of low-income and lower middle income residents' household income consumed by transportation and housing

Projects were supportive of the target if they included transit enhancements that provided a lower cost transportation alternative to driving. The degree of support would vary by the operator's current low-income ridership.

Guidelines for Applying Criteria
Transit projects were determined to provide a lower cost alternative to auto ownership and were supportive of this target. Transit projects were assessed based on the percentage of the total region's low income riders and the total number of low income riders served by the operator. The percentages of low income riders were based on the Transit Demographics Survey and the 2011 Statistical Summary of Bay Area Transit Operators. The points breakdown is shown below and in Table 3, attached:

- **Strong** – Low income riders constitute over 40% of total ridership or operator serves over 10% of the region's total low income transit riders
- **Moderate** – Operator serves over 0.5% of the region's total low income transit riders
- **Minimal** – Operator serves less than 0.5% of the region's total low income transit riders

By awarding strong support to operators that have a high share (over 40%) of low income riders, this acknowledges that many small operators provide service to low income groups but carry a smaller share of the region's total low income ridership. It also rewards the larger operators that carry a high number of the region's low income population.

No adverse rating was given for highway projects that did not provide low-cost options since these projects did not take away choices for low and middle income residents.

8. <u>Economic Vitality</u>

Criteria
Increase gross regional product (GRP) by 90%
Currently congested corridors are detrimental to economic vitality; economic studies show projects that provide congestion relief and improve access to employment centers have the strongest long-term impact on productivity, and thus are rated as supportive of the target. Improved access to ports or truck corridors is also supportive of the target.

Guidelines for Applying Criteria
Highway projects that were expected to provide relief by either providing expansion or operational improvements received strong or moderate support depending upon the level of current congestion. Transit projects that would be expected to remove vehicles from the congested corridor were supportive of the target.

<u>Transportation System Effectiveness</u>

9. Non-Auto Travel Time/VMT Reduction

Criteria

9a - Decrease average per-trip travel time by 10% for non-auto modes
9b - Decrease auto vehicle miles traveled per capita by 10%

Criteria for this target are similar to those for the CO_2 and PM target. Projects that improve transit or provided bicycle and pedestrian infrastructure are determined to be supportive. Projects that increase the use of single occupancy vehicles are determined to have an adverse impact.

Guidelines for Applying Criteria

See discussion under CO2 target for guidelines used to assess whether a project was likely to increase VMT. Transit projects received support for this target if they provided frequency or operational improvements that would make transit service faster. Projects that included bicycle and pedestrian projects that would provide an alternative the auto were also supportive.

10. Maintenance

Criteria

Maintain the system in a state of good repair

- *Increase local roadway pavement condition index (PCI) to 75 or better*
- *Decrease distressed lane-miles on the state highways to less than 10% of the system*
- *Reduce average transit asset age to 50% of useful life*

Projects that specifically improve the roadway condition or replace transit assets are supportive of this target.

Guidelines for Applying Criteria

Most projects received a minimal rating for this target. Only projects that were specific maintenance projects such as road rehabilitation or transit maintenance facilities were supportive of the target. The increased burden of additional maintenance from expanded transit service or additional lane miles of roadways resulting from highway expansion was not considered.

Table 1: Potential for Housing Growth — Focused Growth

County	Jurisdiction	Jurisdiction Growth 2010-2040	Rating for Growth Component of Housing Target
Alameda	Alameda	5,812	Support
Alameda	Alameda County Unincorporated	11,540	Support
Alameda	Albany	955	Minimal
Alameda	Berkeley	8,370	Support
Alameda	Dublin	13,811	Support
Alameda	Emeryville	5,235	Support
Alameda	Fremont	17,381	Support
Alameda	Hayward	15,477	Support
Alameda	Livermore	11,213	Support
Alameda	Newark	5,802	Support
Alameda	Oakland	57,721	Support
Alameda	Piedmont	627	Minimal
Alameda	Pleasanton	7,381	Support
Alameda	San Leandro	7,119	Support
Alameda	Union City	4,549	Support
Contra Costa	Antioch	6,891	Support
Contra Costa	Brentwood	8,157	Support
Contra Costa	Clayton	532	Minimal
Contra Costa	Concord	17,280	Support
Contra Costa	Contra Costa County Unincorporated	9,923	Support
Contra Costa	Danville	2,879	Support
Contra Costa	El Cerrito	1,843	Support
Contra Costa	Hercules	4,653	Support
Contra Costa	Lafayette	1,645	Support
Contra Costa	Martinez	2,549	Support
Contra Costa	Moraga	1,103	Minimal
Contra Costa	Oakley	3,868	Support
Contra Costa	Orinda	976	Minimal
Contra Costa	Pinole	2,633	Support
Contra Costa	Pittsburg	10,197	Support
Contra Costa	Pleasant Hill	5,771	Support
Contra Costa	Richmond	12,253	Support
Contra Costa	San Pablo	2,347	Support
Contra Costa	San Ramon	8,094	Support
Contra Costa	Walnut Creek	7,334	Support
Marin	Belvedere	60	Minimal
Marin	Corte Madera	561	Minimal
Marin	Fairfax	237	Minimal
Marin	Larkspur	528	Minimal
Marin	Marin County Unincorporated	3,917	Support
Marin	Mill Valley	504	Minimal
Marin	Novato	1,599	Support

County	Jurisdiction	Jurisdiction Growth 2010-2040	Rating for Growth Component of Housing Target
Marin	Ross	69	Minimal
Marin	San Anselmo	410	Minimal
Marin	San Rafael	2,792	Support
Marin	Sausalito	279	Minimal
Marin	Tiburon	303	Minimal
Napa	American Canyon	1,745	Support
Napa	Calistoga	121	Minimal
Napa	Napa	3,162	Support
Napa	Napa County Unincorporated	993	Minimal
Napa	St. Helena	116	Minimal
Napa	Yountville	151	Minimal
San Francisco	San Francisco	90,467	Support
San Mateo	Atherton	399	Minimal
San Mateo	Belmont	1,387	Minimal
San Mateo	Brisbane	1,582	Support
San Mateo	Burlingame	3,928	Support
San Mateo	Colma	521	Minimal
San Mateo	Daly City	7,469	Support
San Mateo	East Palo Alto	3,050	Support
San Mateo	Foster City	1,667	Support
San Mateo	Half Moon Bay	702	Minimal
San Mateo	Hillsborough	820	Minimal
San Mateo	Menlo Park	3,048	Support
San Mateo	Millbrae	2,178	Support
San Mateo	Pacifica	1,106	Minimal
San Mateo	Portola Valley	243	Minimal
San Mateo	Redwood City	9,070	Support
San Mateo	San Bruno	4,669	Support
San Mateo	San Carlos	2,402	Support
San Mateo	San Mateo	11,805	Support
San Mateo	San Mateo County Unincorporated	5,911	Support
San Mateo	South San Francisco	6,304	Support
San Mateo	Woodside	307	Minimal
Santa Clara	Campbell	2,944	Support
Santa Clara	Cupertino	3,960	Support
Santa Clara	Gilroy	6,441	Support
Santa Clara	Los Altos	2,157	Support
Santa Clara	Los Altos Hills	728	Minimal
Santa Clara	Los Gatos	2,333	Support
Santa Clara	Milpitas	12,807	Support
Santa Clara	Monte Sereno	304	Minimal
Santa Clara	Morgan Hill	4,153	Support
Santa Clara	Mountain View	12,458	Support
Santa Clara	Palo Alto	12,250	Support

County	Jurisdiction	Jurisdiction Growth 2010-2040	Rating for Growth Component of Housing Target
Santa Clara	San Jose	130,887	Support
Santa Clara	Santa Clara	21,129	Support
Santa Clara	Santa Clara County Unincorporated	10,484	Support
Santa Clara	Saratoga	2,249	Support
Santa Clara	Sunnyvale	16,781	Support
Solano	Benicia	1,192	Minimal
Solano	Dixon	1,681	Support
Solano	Fairfield	12,519	Support
Solano	Rio Vista	1,904	Support
Solano	Solano County Unincorporated	1,176	Minimal
Solano	Suisun City	1,435	Minimal
Solano	Vacaville	5,316	Support
Solano	Vallejo	5,641	Support
Sonoma	Cloverdale	1,045	Minimal
Sonoma	Cotati	471	Minimal
Sonoma	Healdsburg	977	Minimal
Sonoma	Petaluma	2,801	Support
Sonoma	Rohnert Park	3,211	Support
Sonoma	Santa Rosa	18,154	Support
Sonoma	Sebastopol	525	Minimal
Sonoma	Sonoma	519	Minimal
Sonoma	Sonoma County Unincorporated	8,327	Support
Sonoma	Windsor	1,355	Minimal

Table 2: Support for Affordable Housing
Bay Area Affordable Housing, 1999 to 2006

		Very Low			Low			
City	County	RHNA Allocation	Permits Issued	Allocation Permitted	RHNA Allocation	Permits Issued	Allocation Permitted	Rating
ACE	Alameda							Minimal
Alameda	Alameda	443	300	68%	265	36	14%	Minimal
Alameda Countywide	Alameda							Minimal
Albany	Alameda	64	5	8%	33	10	30%	Adverse
BART to Livermore	Alameda							Adverse
Berkeley	Alameda	354	239	68%	150	257	171%	Support
Dublin	Alameda	796	263	33%	531	243	46%	Adverse
Emeryville	Alameda	178	124	70%	95	63	66%	Minimal
Fremont	Alameda	1,079	361	33%	636	142	22%	Adverse
Hayward	Alameda	625	40	6%	344	17	5%	Adverse
Livermore	Alameda	875	202	23%	482	259	54%	Adverse
Newark	Alameda	205	0	0%	111	0	0%	Adverse
Oakland	Alameda	2,238	610	27%	969	690	71%	Adverse
Piedmont	Alameda	6	0	0%	4	0	0%	Adverse
Pleasanton	Alameda	729	120	16%	455	410	90%	Minimal
San Leandro	Alameda	195	108	55%	107	0	0%	Minimal
Unincorporated	Alameda	1,785	50	3%	767	253	33%	Adverse
Union City	Alameda	338	177	52%	189	55	29%	Minimal
Martinez Subdivision	Alameda/Contra Costa							Minimal
BART	Bay Area							Minimal
Capital Corridor	Bay Area							Minimal
WETA	Bay Area							Minimal
Antioch	Contra Costa	921	435	47%	509	403	79%	Support
Brentwood	Contra Costa	906	376	42%	476	238	50%	Adverse
Clayton	Contra Costa	55	67	122%	33	17	52%	Minimal
Concord	Contra Costa	453	171	38%	273	115	42%	Adverse
Contra Costa County Unicorp	Contra Costa	1,101	372	34%	642	177	28%	Adverse
Contra Costa Countywide	Contra Costa							Minimal
Danville	Contra Costa	140	85	61%	88	56	64%	Minimal
El Cerrito	Contra Costa	37	0	0%	23	5	22%	Adverse
Hercules	Contra Costa	101	96	95%	62	68	110%	Support
Lafayette	Contra Costa	30	15	50%	17	2	12%	Minimal
Martinez	Contra Costa	248	0	0%	139	0	0%	Adverse
Moraga	Contra Costa	32	21	66%	17	0	0%	Minimal
Oakley	Contra Costa	209	168	80%	125	293	234%	Support
Orinda	Contra Costa	31	0	0%	18	0	0%	Adverse
Pinole	Contra Costa	48	34	71%	35	6	17%	Minimal
Pittsburg	Contra Costa	534	247	46%	296	381	129%	Support
Pleasant Hill	Contra Costa	129	95	74%	79	69	87%	Support
Richmond	Contra Costa	471	200	42%	273	1,093	400%	Minimal
San Pablo	Contra Costa	147	214	146%	69	70	101%	Support
San Ramon	Contra Costa	599	157	26%	372	407	109%	Minimal
Walnut Creek	Contra Costa	289	99	34%	195	80	41%	Adverse
Belvedere	Marin	1	0	0%	1	0	0%	Adverse
Corte Madera	Marin	29	0	0%	17	0	0%	Adverse
Fairfax	Marin	12	0	0%	7	0	0%	Adverse
Larkspur	Marin	56	7	13%	29	6	21%	Adverse
Marin Countywide	Marin							Adverse
Mill Valley	Marin	40	69	173%	21	28	133%	Support
Novato	Marin	476	297	62%	242	527	218%	Support
Ross	Marin	3	0	0%	2	0	0%	Adverse
San Anselmo	Marin	32	0	0%	13	0	0%	Adverse
San Rafael	Marin	445	25	6%	207	87	42%	Adverse
Sausalito	Marin	36	22	61%	17	0	0%	Minimal
Tiburon	Marin	26	4	15%	14	3	21%	Adverse
Unincorporated	Marin	85	104	122%	48	100	208%	Support
American Canyon	Napa	230	114	50%	181	60	33%	Minimal
Calistoga	Napa	44	3	7%	31	15	48%	Adverse
Napa	Napa	703	177	25%	500	351	70%	Adverse
Napa Countywide	Napa							Adverse
St. Helena	Napa	31	10	32%	20	10	50%	Adverse
Unincorporated	Napa	405	30	7%	272	45	17%	Adverse
Yountville	Napa	21	0	0%	15	2	13%	Adverse
San Francisco	San Francisco	5,244	4,203	80%	2,126	1,101	52%	Minimal
Atherton	San Mateo	22	0	0%	10	0	0%	Adverse

Bay Area Affordable Housing, 1999 to 2006

		Very Low			Low			
City	County	RHNA Allocation	Permits Issued	Allocation Permitted	RHNA Allocation	Permits Issued	Allocation Permitted	Rating
Belmont	San Mateo	57	24	42%	30	20	67%	Adverse
Brisbane	San Mateo	107	7	7%	43	1	2%	Adverse
Burlingame	San Mateo	110	0	0%	56	0	0%	Adverse
Colma	San Mateo	17	0	0%	8	73	913%	Minimal
Daly City	San Mateo	282	11	4%	139	22	16%	Adverse
East Palo Alto	San Mateo	358	57	16%	148	155	105%	Minimal
Foster City	San Mateo	96	88	92%	53	0	0%	Minimal
Half Moon Bay	San Mateo	86	0	0%	42	106	252%	Minimal
Hillsborough	San Mateo	11	0	0%	5	15	300%	Minimal
Menlo Park	San Mateo	184	0	0%	90	0	0%	Adverse
Millbrae	San Mateo	67	0	0%	32	0	0%	Adverse
Pacifica	San Mateo	120	0	0%	60	10	17%	Adverse
Portola Valley	San Mateo	13	12	92%	5	3	60%	Minimal
Redwood City	San Mateo	534	36	7%	256	70	27%	Adverse
San Bruno	San Mateo	72	138	192%	39	187	479%	Support
San Carlos	San Mateo	65	0	0%	32	0	0%	Adverse
San Mateo	San Mateo	479	125	26%	239	85	36%	Adverse
San Mateo Countywide	San Mateo							Minimal
So. San Francisco	San Mateo	277	121	44%	131	71	54%	Minimal
Unincorporated	San Mateo	252	31	12%	146	0	0%	Adverse
Woodside	San Mateo	5	0	0%	3	0	0%	Adverse
Campbell	Santa Clara	165	2	1%	77	14	18%	Adverse
Cupertino	Santa Clara	412	36	9%	198	12	6%	Adverse
Gilroy	Santa Clara	906	189	21%	334	327	98%	Minimal
Los Altos	Santa Clara	38	24	63%	20	16	80%	Support
Los Altos Hills	Santa Clara	10	26	260%	5	6	120%	Support
Los Gatos	Santa Clara	72	13	18%	35	73	209%	Minimal
Milpitas	Santa Clara	698	524	75%	351	177	50%	Minimal
Monte Sereno	Santa Clara	10	12	120%	5	7	140%	Support
Morgan Hill	Santa Clara	455	258	57%	228	298	131%	Support
Mountain View	Santa Clara	698	118	17%	331	5	2%	Adverse
Palo Alto	Santa Clara	265	214	81%	116	130	112%	Support
San Jose	Santa Clara	5,337	4,415	83%	2,364	3,886	164%	Support
Santa Clara	Santa Clara	1,294	279	22%	590	479	81%	Minimal
Santa Clara Countywide	Santa Clara							Minimal
Saratoga	Santa Clara	75	60	80%	36	1	3%	Minimal
Sunnyvale	Santa Clara	736	55	7%	361	57	16%	Adverse
Unincorporated	Santa Clara	325	325	100%	158	158	100%	Support
Benicia	Solano	70	54	77%	49	128	261%	Support
Dixon	Solano	268	0	0%	237	0	0%	Adverse
Fairfield	Solano	761	57	7%	573	192	34%	Adverse
Rio Vista	Solano	357	12	3%	190	27	14%	Adverse
Solano County Unincorporate	Solano	500	0	0%	363	71	20%	Adverse
Solano Countywide	Solano							Minimal
Suisun City	Solano	191	16	8%	123	64	52%	Adverse
Vacaville	Solano	860	87	10%	629	691	110%	Minimal
Vallejo	Solano	690	84	12%	474	1,065	225%	Minimal
Cloverdale	Sonoma	95	104	109%	51	59	116%	Support
Cotati	Sonoma	113	74	65%	63	40	63%	Minimal
Healdsburg	Sonoma	112	76	68%	78	112	144%	Support
Petaluma	Sonoma	206	250	121%	124	201	162%	Support
Rohnert Park	Sonoma	401	293	73%	270	467	173%	Support
Santa Rosa	Sonoma	1,539	591	38%	970	1,338	138%	Minimal
Sebastapol	Sonoma	58	0	0%	35	5	14%	Adverse
Sonoma	Sonoma	146	111	76%	90	68	76%	Minimal
Sonoma Countywide	Sonoma							Minimal
Unincorporated	Sonoma	1,311	650	50%	1,116	339	30%	Minimal
Windsor	Sonoma	430	161	37%	232	171	74%	Adverse

Table 3: Equitable Access
Transit Operators Low Income Riders FY 2005-2006

Operators	Share of Low Income Riders	Total Ridership (000)	Operator's Total Low Income Riders	% of Region's Low Income Riders	Target Rating Share of LI Riders	Target Rating % of Regional Total LI Riders	Overall Rating	Notes
SC Transit	74.1%	1,360	1,008	0.7%	**STRONG**	**MODERATE**	**STRONG**	Operator's Low Income % served over 40%
VINE	66.7%	754	503	0.4%	**STRONG**	**MINIMAL**	**STRONG**	Operator's Low Income % served over 40%
SR CityBus	65.1%	2,678	1,743	1.2%	**STRONG**	**MODERATE**	**STRONG**	Operator's Low Income % served over 40%
VTA Total	52.7%	40,935	21,562	15.3%	**STRONG**	**STRONG**	**STRONG**	Operator's Low Income % served over 40%
Benicia Breeze	49.3%	138	68	0.0%	**STRONG**	**MINIMAL**	**STRONG**	Operator's Low Income % served over 40%
Vacaville	46.0%	212	97	0.1%	**STRONG**	**MINIMAL**	**STRONG**	Operator's Low Income % served over 40%
SamTrans	41.7%	14,507	6,045	4.3%	**STRONG**	**MODERATE**	**STRONG**	Operator's Low Income % served over 40%
AC Total	40.2%	67,416	27,086	19.2%	**MODERATE**	**STRONG**	**STRONG**	Operator's Low Income % served over 40%
Wheels	40.2%	2,104	845	0.6%	**STRONG**	**MODERATE**	**STRONG**	Operator's Low Income % served over 40%
Muni Total	27.2%	216,764	58,985	41.9%	**MINIMAL**	**STRONG**	**STRONG**	Regional Low Income people served above 10%
BART	14.5%	104,230	15,099	10.7%	**MINIMAL**	**STRONG**	**STRONG**	Regional Low Income people served above 10%
Tri Delta	36.1%	2,544	919	0.7%	**MODERATE**	**MODERATE**	**MODERATE**	Regional Low Income people served above 0.5%
CCCTA	34.8%	4,280	1,487	1.1%	**MODERATE**	**MODERATE**	**MODERATE**	Regional Low Income people served above 0.5%
GGT Total	23.8%	9,403	2,238	1.6%	**MINIMAL**	**MODERATE**	**MODERATE**	Regional Low Income people served above 0.5%
Caltrain	16.6%	10,149	1,684	1.2%	**MINIMAL**	**MODERATE**	**MODERATE**	Regional Low Income people served above 0.5%
FST	33.3%	797	265	0.2%	**MODERATE**	**MINIMAL**	**MINIMAL**	Regional Low Income people served less than 0.5%
WestCat	31.9%	1,260	402	0.3%	**MODERATE**	**MINIMAL**	**MINIMAL**	Regional Low Income people served less than 0.5%
Vallejo Total	22.0%	3,044	669	0.5%	**MINIMAL**	**MINIMAL**	**MINIMAL**	Regional Low Income people served less than 0.5%
Union City	20.2%	418	84	0.1%	**MINIMAL**	**MINIMAL**	**MINIMAL**	Regional Low Income people served less than 0.5%
ACE	7.5%	637	48	0.0%	**MINIMAL**	**MINIMAL**	**MINIMAL**	Regional Low Income people served less than 0.5%
Alameda Ferry	4.3%	394	17	0.0%	**MINIMAL**	**MINIMAL**	**MINIMAL**	Regional Low Income people served less than 0.5%
Totals		**484,024**	**140,855**	**100%**				

*Low income riders defined as income less than $25,000/year
*From Transit Demographics Survey 2006
*Stastical Summary of Bay Area Operators FY 05-06 Total passengers

Revised Targets Scores since November Draft Release

TABLE C-2

Changes to Specific Projects

Alameda County

Dumbarton Corridor Express Bus 240018/Dumbarton Rail 240216	
Target	**Description of Change**
CO2 and PM Moderate to Strong	Consistent with other transit projects with similar magnitudes

Dumbarton Rail 240216	
Target	**Description of Change**
Active Transportation/Economic Vitality Moderate to Strong	Consistent with Phase I

BART to Livermore (Phases 1 & 2: Rail Extension) 24667	
Target	**Description of Change**
Economic Vitality Moderate to Strong	Consistent with Phase I

BART Service Frequency Improvements 00BART/BART Metro Program 240182	
Target	**Description of Change**
Economic Vitality Moderate to Strong	Increased access to jobs and relives high congested areas

Fremont/Union City East-West Connector 94506	
Target	**Description of Change**
Active Transportation Moderate Adverse to Moderate	Includes Class I bike path and Class II lanes with connections to existing facilities
Open Space Moderate Adverse to Minimal	The project goes through existing right of way
Non-Auto Travel Time Moderate Adverse to Minimal	The bicycle facilities will improve cycling conditions

Contra Costa County

Hercules Intermodal Station (Phases 2,3 and 4) 230321	
Target	**Description of Change**
Active Transportation – Moderate to Strong	Project is consistent with other transit stations

SR -4 Widening (Marsh Creek Road to San Joaquin County Line) 22981	
Target	**Description of Change**
Open Space and Agricultural Preservation – Strongly Adverse to Minimal	Project would be within existing right of way

Pacheco Boulevard Widening (Blum Road to Arthur Road) 98133	
Target	**Description of Change**
Active Transportation - Minimal to Moderate Open Space and Agricultural Preservation – Strongly Adverse to Minimal	Project would add bicycle infrastructure Project does not consume open space or ag resources

Solano County

I-80/I-680/SR-12 Widening and Interchange Improvements 230326, 230327	
Target	**Description of Change**
CO2 Moderate Adverse to Minimal	This project was evaluated as an interchange operations project
PM Moderate Adverse to Minimal	Similar to CO2
Active Transportation Moderate Adverse to Moderate	Bicycle and pedestrian overcrossings are included in the project as a gap closure
Non-Auto Travel Time/VMT – Moderate Adverse to Moderate	New bike/ped infrastructure and improvements that will benefit express bus service are included

Jepson Parkway Construction (SR-12 to I-80) 94151	
Target	**Description of Change**
CO2 Moderate Adverse to Minimal	This project was evaluated as an interchange operations project
PM Moderate Adverse to Minimal	Similar to CO2
Collisions- Minimal to Moderate	Improvements to reduce conflicts results in less crashes
Active Transportation Moderate Adverse to Moderate	Class I path is part of the project
Non-Auto Travel Time/VMT – Moderate Adverse to Moderate	The complete streets improvements will encourage non-auto modes

Redwood Parkway - 230313	
Target	**Description of Change**
Active Transportation – Moderate Adverse to Minimal	This project was evaluated as an interchange and operations project and would not make conditions worse for active transportation modes

SR-12 Widening (SR-29 to Sacramento County Line) - 230477	
Target	**Description of Change**
Active Transportation – Moderate Adverse to Minimal	This project was evaluated as an interchange and operations project and would not make conditions worse for active transportation modes
Collisions- Strong Adverse to Strong	Improvements to reduce conflicts results in less crashes

SR-113 Relocation out of Dixon - 230561	
Target	**Description of Change**
CO2 Moderate Adverse to Minimal	This project results in upgrading an existing roadway and would not increase auto trips
PM Moderate Adverse to Minimal	Similar to CO2
Collisions- Moderate Adverse to Minimal	Not a significant increase in VMT
Active Transportation – Moderate Adverse to Minimal	Not a significant increase in VMT
Open Space/Agricultural Development	Does not consume open space/ag development since improvements on an existing roadway
Non-Auto Travel Time/VMT – Moderate Adverse to Moderate	This project results in upgrading an existing roadway and would not increase auto trips

Targets Assessment of Large Projects (sorted by county and targets net score)

TABLE C-3 REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	TARGETS SUMMARY					ADOPTED TARGETS									
					Targets Supported	Targets Adversely Impacted	Targets Net Score	Targets Score 11-4-11	In PDA?	CO2	Housing	PM	Collisions	Active Transportation	Open Space / AG	Low Income HH Transportation Cost	Economic Vitality	Non-Auto Travel Time/VMT	Maintenance
1	240180	BART Bay Fair Connection	Alameda	Transit Efficiency	6.0	0.0	6.0	6.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	STRONG	MINIMAL
2	22062	Irvington BART Station	Alameda	Transit Efficiency	5.5	0.0	5.5	6.0	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	STRONG	MINIMAL
3	22455	AC Transit East Bay BRT	Alameda/ 3434	Transit Efficiency	5.5	0.0	5.5	6.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
4	22780	AC Transit Grand-MacArthur BRT	Alameda/ 3434	Transit Efficiency	5.5	0.0	5.5	6.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
5	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Alameda	Transit Expansion	5.0	0.0	5.0	5.0	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL	STRONG	STRONG	STRONG	MINIMAL
6	98207T, 98207R	Alameda-Oakland BRT & I-880 Broadway/Jackson Interchange Improvements	Alameda	Transit Efficiency	5.0	0.0	5.0	5.5	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	STRONG	MODERATE	MINIMAL
7	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Alameda/ 3434	Transit Efficiency	5.0	0.0	5.0	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
8	240113	BART Hayward Maintenance Complex	Alameda	Transit Efficiency	5.0	0.0	5.0	4.5	No	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL	STRONG	MODERATE	MODERATE	STRONG
9	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Alameda	Transit Expansion	5.0	0.0	5.0	5.5	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL	STRONG	STRONG	STRONG	MINIMAL
10	LBART	BART to Livermore (Phase 1: 1-Station Rail Extension with DMU)	Alameda	Transit Expansion	5.0	0.0	5.0	n/a	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL	STRONG	STRONG	STRONG	MINIMAL
11	580_BUS	I-580 Express Bus (Dublin to Livermore)	Alameda	Transit Efficiency	4.5	0.0	4.5	n/a	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
12	22089	Martinez Subdivision & Rail Improvements	Alameda	Transit Efficiency	3.0	0.0	3.0	2.0	Yes	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL	STRONG	STRONG	MINIMAL	MINIMAL
13	22765	I-580/I-680 Interchange HOV Direct Connectors	Alameda	Road Efficiency	2.0	0.0	2.0	2.0	No	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MODERATE	MINIMAL
14	240318	I-80 Ashby Interchange Improvements	Alameda	Road Efficiency	2.0	0.0	2.0	1.5	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
15	22769	I-880 23rd/29th Interchange Improvements	Alameda	Road Efficiency	1.5	0.0	1.5	2.0	Yes	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
16	22779	I-880/SR-262 Interchange Improvements (Phase 2: Warren Avenue Grade Separation)	Alameda	Road Efficiency	1.5	0.0	1.5	2.0	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
17	240052	I-880 Whipple Road Interchange Improvements	Alameda	Road Efficiency	1.5	0.0	1.5	2.0	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
18	240317	Port of Oakland Wharf Replacement & Berth Deepening (Berths 60-63)	Alameda	Other	1.5	0.0	1.5	1.5	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MODERATE
19	240657	I-580 Corridor Spot Intersection Improvements	Alameda	Road Efficiency	1.5	0.0	1.5	1.5	No	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
20	21100	I-580 Vasco Road Interchange Improvements & Auxiliary Lanes	Alameda	Road Efficiency	1.5	0.5	1.0	1.5	No	MINIMAL	MINIMAL	MODERATE AD	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
21	22082	Port of Oakland 7th Street Grade Separation & Roadway Improvements	Alameda	Road Efficiency	1.0	0.0	1.0	1.0	Yes	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
22	22760	Port of Oakland Outer Harbor Intermodal Terminals	Alameda	Other	1.0	0.0	1.0	1.0	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
23	230103	Decoto Neighborhood Grade Separation	Alameda	Road Efficiency	1.0	0.0	1.0	0.5	Yes	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
24	240024	Oakland Army Base Infrastructure Improvements	Alameda	Other	1.0	0.0	1.0	1.0	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
25	240279	Mandela Parkway & 3rd Street Corridor Street Reconstruction	Alameda	Road Efficiency	1.0	0.0	1.0	1.5	Yes	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
26	240562	SR-92 Clawiter/Whitesell Interchange Improvements	Alameda	Road Efficiency	1.0	0.0	1.0	1.5	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
27	94506	Fremont/Union City East-West Connector	Alameda	Arterial Expansion	2.0	1.5	0.5	-1.5	Yes	MODERATE AD	MODERATE	MODERATE AD	MODERATE AD	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
28	230099	I-580/I-680 Interchange Improvements (Phase 1)	Alameda	Road Efficiency	1.0	1.0	0.0	0.0	No	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE AD	MINIMAL	MODERATE	MODERATE AD	MINIMAL
29	240062, 22776	SR-84/I-680 Interchange Improvements + SR-84 Widening (Jack London to I-680)	Alameda	Highway Expansion	0.5	3.0	-2.5	-2.0	No	MODERATE AD	MINIMAL	MODERATE AD	MODERATE AD	MODERATE AD	MODERATE AD	MINIMAL	MODERATE	MODERATE AD	MINIMAL
30	240053	Whipple Road Widening (Mission Boulevard to I-880)	Alameda	Highway Expansion	1.0	6.0	-5.0	-4.5	No	STRONG AD	MINIMAL	STRONG AD	STRONG AD	STRONG AD	STRONG AD	MINIMAL	STRONG	STRONG AD	MINIMAL
31	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Contra Costa	Transit Efficiency	4.5	0.0	4.5	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
32	230321	Hercules Intermodal Station (Phases 2, 3, and 4)	Contra Costa	Transit Efficiency	4.5	0.0	4.5	5.0	Yes	MODERATE	STRONG	MODERATE	MODERATE	STRONG	MODERATE	MINIMAL	MINIMAL	MODERATE	MINIMAL
33	22360	I-80 San Pablo Dam Road Interchange Improvements	Contra Costa	Road Efficiency	2.5	0.0	2.5	2.0	No	MINIMAL	STRONG	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
34	22353, 21223	I-680 HOV Gap Closure in Walnut Creek (N. Main to Livorna)	Contra Costa	Road Efficiency	1.5	0.0	1.5	2.0	Yes	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MODERATE	MINIMAL
35	22604	Vasco Road Safety & Operational Improvements (Brentwood to San Joaquin County line)	Contra Costa	Highway Expansion	1.0	0.0	1.0	0.5	No	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
36	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello Avenue to SR-242)	Contra Costa	Highway Expansion	1.0	0.5	0.5	1.0	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE AD	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL

LEGEND — IMPACT TO TARGETS

STRONG | MODERATE | MINIMAL | MODERATE ADVERSE | STRONG

Targets Assessment of Large Projects (sorted by county and targets net score)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	TARGETS SUMMARY					ADOPTED TARGETS									
					Targets Supported	Targets Adversely Impacted	Targets Net Score	Targets Score 11-4-11	In PDA?	CO2	Housing	PM	Collisions	Active Transportation	Open Space / AG	Low Income HH Transportation Cost	Economic Vitality	Non-Auto Travel Time/VMT	Maintenance
37	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Contra Costa	Highway Expansion	2.0	4.5	-2.5	-3.5	No	STRONG AD	STRONG	STRONG AD	MODERATE AD	STRONG AD	MINIMAL	MINIMAL	STRONG	STRONG AD	MINIMAL
38	22981	SR-4 Widening (Marsh Creek Road to San Joaquin County line)	Contra Costa	Highway Expansion	1.0	3.5	-2.5	-3.5	No	STRONG AD	MINIMAL	STRONG AD	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	STRONG	STRONG AD	MINIMAL
39	98133	Pacheco Boulevard Widening (Blum Road to Arthur Road)	Contra Costa	Highway Expansion	1.0	4.0	-3.0	-4.5	No	STRONG AD	MINIMAL	STRONG AD	STRONG AD	MODERATE	MINIMAL	MINIMAL	MODERATE	STRONG AD	MINIMAL
40	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Contra Costa	Highway Expansion	1.0	4.5	-3.5	-3.5	No	STRONG AD	MINIMAL	STRONG AD	MODERATE	STRONG AD	MODERATE AD	MINIMAL	MODERATE	STRONG AD	MINIMAL
41	94050	SR-4 Upgrade to Full Freeway (Phase 2: Cummings Skyway to I-80)	Contra Costa	Highway Expansion	1.0	5.5	-4.5	-4.0	Yes	STRONG AD	MINIMAL	MODERATE AD	STRONG AD	STRONG AD	STRONG AD	MINIMAL	STRONG	STRONG AD	MINIMAL
42	230252	Marin Countywide Bus Service Frequency Improvements	Marin	Transit Efficiency	4.5	0.0	4.5	5.5	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
43	21325	US-101 Twin Cities Corridor Improvements	Marin	Road Efficiency	3.0	0.0	3.0	4.5	No	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL
44	240644	Marin Countywide Senior Mobility Program	Marin	Safety	1.5	0.0	1.5	1.5	Yes	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL
45	240182	BART Metro Program	Multi-County	Transit Efficiency	8.5	0.0	8.5	8.5	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	MINIMAL
46	00BART	BART Service Frequency Improvements	Multi-County	Transit Efficiency	8.5	0.0	8.5	8.5	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	MINIMAL
47	230603	California High-Speed Train - Bay Area to Central Valley	Multi-County	Transit Expansion	7.5	0.0	7.5	n/a	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	MODERATE	MODERATE	STRONG	STRONG	MINIMAL
48	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-County	Transit Efficiency	7.5	0.0	7.5	8.5	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	MODERATE	MODERATE	STRONG	STRONG	MINIMAL
49	240521, 21627, 240134	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-County/ 3434	Transit Efficiency	7.5	0.0	7.5	8.5	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	MODERATE	MODERATE	STRONG	STRONG	MINIMAL
50	240018	Dumbarton Corridor Express Bus	Multi-County	Transit Efficiency	6.5	0.0	6.5	6.0	Yes	STRONG	MODERATE	STRONG	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
51	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)	Multi-County/ 3434	Transit Efficiency	6.0	0.0	6.0	7.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	STRONG	STRONG	MINIMAL
52	240216	Dumbarton Rail	Multi-County/ 3434	Transit Expansion	6.0	0.0	6.0	4.0	Yes	STRONG	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MINIMAL	STRONG	MODERATE	MINIMAL
53	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Multi-County	Transit Efficiency	5.5	0.0	5.5	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	STRONG	MODERATE	MINIMAL
54	00ACT1	AC Transit Frequent Transit Network	Multi-County	Transit Efficiency	5.5	0.0	5.5	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	STRONG	MODERATE	MINIMAL
55	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Multi-County/ 3434	Transit Expansion	5.0	0.0	5.0	6.0	Yes	STRONG	MINIMAL	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
56	n/a	BART Station Capacity Improvements	Multi-County	Transit Efficiency	5.0	0.0	5.0	n/a	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
57	n/a	BART Station Access Improvements	Multi-County	Transit Efficiency	5.0	0.0	5.0	n/a	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
58	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Multi-County/ 3434	Transit Expansion	4.5	0.0	4.5	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MINIMAL	MODERATE	MODERATE	MINIMAL
59	230055	Golden Gate Ferry Service Frequency Improvements	Multi-County	Transit Efficiency	4.5	0.0	4.5	4.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
60	230604	Bay Bridge Contraflow Lane	Multi-County	Pricing	4.5	0.0	4.5	4.0	Yes	STRONG	MODERATE	STRONG	MINIMAL	MINIMAL	MINIMAL	MODERATE	STRONG	MODERATE	MINIMAL
61	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Multi-County	Transit Efficiency	4.5	0.0	4.5	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	STRONG	MODERATE	MODERATE	MINIMAL
62	230219, 230314	Golden Gate Bus Service Frequency Improvements	Multi-County	Transit Efficiency	4.5	0.0	4.5	5.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
63	98139	ACE Expansion	Multi-County/ 3434	Transit Efficiency	4.0	0.0	4.0	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MODERATE	MINIMAL
64	240036	Caltrain Communications-Based Overlay Signal System (CBOSS) and Positive Train Control System (PTC)	Multi-County	Transit Efficiency	2.5	0.0	2.5	2.5	Yes	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MODERATE
65	240060, 240523	US-101 HOV Lanes (Whipple to Cesar Chavez)	Multi-County	Road Efficiency	2.5	0.0	2.5	2.5	Yes	MODERATE	MODERATE	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL
66	22003	Capitol Corridor Reliability Improvements (Phase 2)	Multi-County	Road Efficiency	1.5	0.0	1.5	1.0	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
67	22657	I-580 Westbound Truck Climbing Lane (Altamont Pass)	Multi-County	Road Efficiency	1.5	0.0	1.5	1.0	No	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
68	240140	Caltrain At-Grade Crossing Improvements	Multi-County	Transit Efficiency	1.5	0.0	1.5	1.0	Yes	MINIMAL	MODERATE	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
69	240571	I-80/I-880 Congestion Pricing and Clean Vehicle Incentive Program	Multi-County	Pricing	2.0	1.0	1.0	0.5	Yes	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MODERATE	MODERATE AD	MINIMAL
70	98147, 240691	Marin-Sonoma Narrows (Phase 2)	Multi-County	Highway Expansion	2.5	2.0	0.5	0.5	Yes	MODERATE AD	MINIMAL	MODERATE AD	STRONG	MODERATE AD	MODERATE	MINIMAL	STRONG	MODERATE AD	MINIMAL
71	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network	Multi-County	Express Lanes Network	2.0	2.5	-0.5	-0.5	Yes	MODERATE AD	MODERATE	MODERATE AD	MODERATE AD	MODERATE AD	MODERATE	MINIMAL	STRONG	MODERATE AD	MINIMAL
72	240122	SR-29 Complete Streets Improvements	Napa	Road Efficiency	1.5	0.0	1.5	2.0	Yes	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL

LEGEND	IMPACT TO TARGETS			
STRONG	MODERATE	MINIMAL	MODERATE ADVERSE	STRONG

Targets Assessment of Large Projects (sorted by county and targets net score)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	TARGETS SUMMARY					ADOPTED TARGETS									
					Targets Supported	Targets Adversely Impacted	Targets Net Score	Targets Score 11-4-11	In PDA?	CO2	Housing	PM	Collisions	Active Transportation	Open Space / AG	Low Income HH Transportation Cost	Economic Vitality	Non-Auto Travel Time/VMT	Maintenance
73	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Napa	Road Efficiency	1.5	0.0	1.5	1.5	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL
74	94075	SR-12 Jameson Canyon Project (Phase 3: New SR-12/SR-29 Interchange)	Napa	Road Efficiency	1.5	1.0	0.5	0.5	No	MODERATE AD	MINIMAL	MODERATE AD	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL
75	22247	Regional Bikeway Network	Regional	Bike/Ped	7.0	0.0	7.0	7.0	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	MODERATE	MODERATE	MODERATE	STRONG	MINIMAL
76	240410	Transportation for Livable Communities	Regional	TLC	7.0	0.0	7.0	7.5	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	MODERATE	MODERATE	MODERATE	STRONG	MINIMAL
77	240690	Lifeline Program	Regional	Lifeline/New Freedom	5.5	0.0	5.5	6.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MINIMAL	STRONG	MODERATE	STRONG	MINIMAL
78	NewFree	New Freedom	Regional	Lifeline/New Freedom	5.5	0.0	5.5	6.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MINIMAL	STRONG	MODERATE	STRONG	MINIMAL
79	LS&R	Local Streets and Roads Capital Maintenance Needs	Regional	Maintenance	5.0	0.0	5.0	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	STRONG
80	Transitshort	Transit Capital Maintenance Needs	Regional	Maintenance	5.0	0.0	5.0	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	STRONG
81	230419	Freeway Performance Initiative	Regional	FPI	4.0	0.0	4.0	4.0	Yes	MODERATE	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MODERATE	STRONG	MODERATE	MINIMAL
82	230550	Climate Initiatives	Regional	Climate	3.5	0.0	3.5	3.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL
83	240589	EV Solar Installation [BAAQMD program]	Regional	Climate	1.5	0.5	1.0	0.5	Yes	STRONG	MODERATE	MINIMAL	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
84	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Regional	Climate	1.5	1.0	0.5	0.0	Yes	MINIMAL	MODERATE	STRONG	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	MODERATE AD	MINIMAL
85	240582	Truck & Motorcycle Retirement [BAAQMD program]	Regional	Climate	1.5	1.0	0.5	0.0	Yes	MINIMAL	MODERATE	STRONG	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	MODERATE AD	MINIMAL
86	240674	Transbay Transit Center - Phase 3 (Pedestrian Connector Tunnel to BART/Muni)	San Francisco	Transit Expansion	8.0	0.0	8.0	n/a	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	MODERATE	STRONG	STRONG	STRONG	MINIMAL
87	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	San Francisco/ 3434	Transit Expansion	7.5	0.0	7.5	8.0	Yes	STRONG	MODERATE	STRONG	STRONG	STRONG	MODERATE	MODERATE	STRONG	STRONG	MINIMAL
88	240171	SFMTA Transit Effectiveness Project	San Francisco	Transit Efficiency	7.5	0.0	7.5	7.5	Yes	STRONG	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	STRONG	STRONG
89	240526	SFCTA Transit Performance Initiative	San Francisco	Transit Efficiency	7.5	0.0	7.5	7.5	Yes	STRONG	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	STRONG	STRONG
90	230161	Van Ness Avenue BRT	San Francisco/ 3434	Transit Efficiency	6.5	0.0	6.5	6.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	STRONG	STRONG	MINIMAL
91	230164	Geary Boulevard BRT	San Francisco	Transit Efficiency	6.5	0.0	6.5	6.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	STRONG	STRONG	MINIMAL
92	240155	Better Market Street	San Francisco	Transit Efficiency	6.0	0.0	6.0	5.5	Yes	MINIMAL	MODERATE	MODERATE	STRONG	STRONG	MINIMAL	STRONG	MODERATE	STRONG	MODERATE
93	240522	Congestion Pricing Pilot	San Francisco	Pricing	6.0	0.0	6.0	6.5	Yes	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL	MINIMAL	STRONG	STRONG	MODERATE
94	00MUNI	Muni Service Frequency Improvements	San Francisco	Transit Efficiency	5.5	0.0	5.5	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	STRONG	MODERATE	MINIMAL
95	22415	Historic Streetcar Expansion Program	San Francisco	Transit Efficiency	5.0	0.0	5.0	4.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MINIMAL	STRONG	MODERATE	MODERATE	MINIMAL
96	240545	Parkmerced Light Rail Corridor	San Francisco	Transit Efficiency	5.0	0.0	5.0	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
97	240557	Oakdale Caltrain Station	San Francisco	Transit Efficiency	4.5	0.0	4.5	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
98	240158	Eastern Neighborhoods (EN TRIPS) Circulation & Streetscape Improvements	San Francisco	Road Efficiency	4.0	0.0	4.0	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL
99	240694	Treasure Island Congestion Pricing	San Francisco	Pricing	4.0	0.0	4.0	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL
100	240147	Southeast Waterfront Transportation Improvements	San Francisco	Transit Efficiency	3.5	0.0	3.5	3.0	Yes	MINIMAL	MODERATE	MODERATE	MINIMAL	MODERATE	MINIMAL	STRONG	MODERATE	MODERATE	MINIMAL
101	240163	Hunters Point & Candlestick Point Local Road Network	San Francisco	Road Efficiency	2.5	0.0	2.5	3.0	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL
102	240344	SFpark	San Francisco	Parking	2.5	0.0	2.5	2.0	Yes	MODERATE	MODERATE	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL
103	240358	Mission Bay Local Road Network	San Francisco	Arterial Expansion	2.5	0.0	2.5	3.0	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL
104	240035	Caltrain Terminal Station Improvements (4th & King)	San Francisco	Transit Efficiency	1.5	0.0	1.5	1.5	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL
105	230555	I-80 Yerba Buena Island Interchange Improvements	San Francisco	Road Efficiency	2.0	1.0	1.0	1.0	No	MODERATE AD	MODERATE	MODERATE AD	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
106	240026	SamTrans El Camino BRT	San Mateo	Transit Efficiency	5.5	0.0	5.5	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
107	22274	ITS Improvements in San Mateo County	San Mateo	Road Efficiency	4.0	0.0	4.0	4.0	Yes	MODERATE	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MODERATE	STRONG	MODERATE	MINIMAL
108	240590	El Camino Real Complete Streets Improvements	San Mateo	Road Efficiency	4.0	0.0	4.0	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL

LEGEND — IMPACT TO TARGETS: STRONG | MODERATE | MINIMAL | MODERATE ADVERSE | STRONG

Targets Assessment of Large Projects (sorted by county and targets net score)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	TARGETS SUMMARY					ADOPTED TARGETS									
					Targets Supported	Targets Adversely Impacted	Targets Net Score	Targets Score 11-4-11	In PDA?	CO2	Housing	PM	Collisions	Active Transportation	Open Space / AG	Low Income HH Transportation Cost	Economic Vitality	Non-Auto Travel Time/VMT	Maintenance
109	22268	San Mateo Countywide Shuttle Service Frequency Improvements	San Mateo	Transit Efficiency	2.5	0.0	2.5	1.5	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MODERATE	MINIMAL	MODERATE
110	21602	US-101 Broadway Interchange Improvements	San Mateo	Road Efficiency	2.0	0.0	2.0	2.5	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
111	21603	US-101 Woodside Road Interchange Improvements	San Mateo	Road Efficiency	2.0	0.0	2.0	2.5	Yes	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
112	21606	US-101 Willow Road Interchange Improvements	San Mateo	Road Efficiency	2.0	0.0	2.0	2.5	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
113	21613	SR-92 Improvements (Phase 1: San Mateo Bridge to I-280)	San Mateo	Road Efficiency	1.5	0.0	1.5	1.5	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
114	22279	US-101 Produce Road Interchange Improvements	San Mateo	Road Efficiency	1.5	0.0	1.5	1.5	No	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
115	22756	US-101 Candlestick Point Interchange Improvements	San Mateo	Road Efficiency	1.5	0.0	1.5	2.0	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
116	240064	Caltrain Grade Separations (Phase 1: San Mateo County)	San Mateo	Transit Efficiency	1.5	0.0	1.5	1.0	No	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE
117	21604	US-101 Auxiliary Lane Modifications (Oyster Point to San Francisco County line)	San Mateo	Road Efficiency	1.0	0.0	1.0	1.5	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
118	21615	I-280/SR-1 Interchange Improvements	San Mateo	Road Efficiency	1.0	0.0	1.0	1.5	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
119	22229	US-101 Sierra Point Parkway Interchange Improvements + Lagoon Way Extension	San Mateo	Road Efficiency	1.0	0.0	1.0	1.5	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
120	22230	I-280 Auxiliary Lanes (Hickey Boulevard to I-380)	San Mateo	Road Efficiency	1.0	0.0	1.0	1.5	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
121	94644	SR-92 Westbound Slow-Vehicle Climbing Lane (I-280 to SR-35)	San Mateo	Road Efficiency	1.0	0.0	1.0	1.0	No	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
122	21612	Dumbarton Bridge/US-101 Access Improvements (Phase 1)	San Mateo	Road Efficiency	0.5	0.0	0.5	1.0	Yes	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
123	240114	SR-1 Safety & Operational Improvements (Pacifica to Half Moon Bay)	San Mateo	Road Efficiency	1.0	0.5	0.5	1.0	No	MINIMAL	MODERATE AD	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE
124	22282	US-101 Operational Improvements (near US-101/SR-92 Interchange)	San Mateo	Road Efficiency	0.0	0.0	0.0	0.0	Yes	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
125	98204	SR-1 Widening (Fassler Avenue to Westport Drive)	San Mateo	Highway Expansion	0.0	0.5	-0.5	0.0	No	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
126	240119	VTA El Camino BRT	Santa Clara	Transit Efficiency	7.0	0.0	7.0	6.5	Yes	MODERATE	STRONG	MODERATE	MODERATE	STRONG	MODERATE	STRONG	STRONG	STRONG	MINIMAL
127	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Santa Clara/ 3434	Transit Expansion	7.0	0.0	7.0	8.0	Yes	STRONG	MINIMAL	STRONG	STRONG	MODERATE	MODERATE	STRONG	STRONG	STRONG	MINIMAL
128	22019	Downtown East Valley (Phase 2: LRT)	Santa Clara/ 3434	Transit Expansion	6.0	0.0	6.0	5.0	Yes	MODERATE	STRONG	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
129	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Santa Clara	Transit Expansion	6.0	0.0	6.0	5.5	Yes	MODERATE	STRONG	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
130	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Santa Clara	Transit Expansion	6.0	0.0	6.0	5.5	Yes	MODERATE	STRONG	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
131	98119	Vasona Light Rail Extension (Phase 2)	Santa Clara	Transit Expansion	5.5	0.0	5.5	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
132	230547	Monterey Highway BRT	Santa Clara	Transit Efficiency	5.5	0.0	5.5	5.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
133	230554	Sunnyvale-Cupertino BRT	Santa Clara	Transit Efficiency	5.0	0.0	5.0	5.5	Yes	MODERATE	MINIMAL	MODERATE	MODERATE	STRONG	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
134	21760	Caltrain Double-Track Improvements (San Jose to Gilroy)	Santa Clara	Transit Efficiency	4.5	0.0	4.5	4.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
135	230534	Caltrain Electrification (Tamien to Gilroy)	Santa Clara	Transit Efficiency	4.5	0.0	4.5	4.5	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL
136	240494	ITS Improvements in Santa Clara County	Santa Clara	Road Efficiency	4.0	0.0	4.0	4.0	Yes	MODERATE	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MODERATE	STRONG	MODERATE	MINIMAL
137	22965	New US-101 Mabury/Taylor Interchange	Santa Clara	Arterial Expansion	2.5	0.0	2.5	2.0	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
138	22979	New US-101 Zanker/Skyport/Fourth Street Interchange	Santa Clara	Arterial Expansion	2.5	0.0	2.5	2.0	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
139	240437	US-101 Braided Ramps (Capitol Expressway to Yerba Buena Road)	Santa Clara	Arterial Expansion	2.5	0.0	2.5	2.0	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
140	240441	US-101/Oregon Expressway/Embarcadero Road Interchange Improvements	Santa Clara	Arterial Expansion	2.5	0.0	2.5	2.0	No	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
141	21719	I-880/I-280/Stevens Creek Boulevard Interchange Improvements	Santa Clara	Arterial Expansion	2.0	0.0	2.0	1.5	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
142	230537	I-280 Winchester Boulevard Interchange Improvements	Santa Clara	Arterial Expansion	2.0	0.0	2.0	1.5	No	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
143	240048	Caltrain Diridon Station Track Capacity Expansion (Phases 2 & 3)	Santa Clara	Transit Efficiency	2.0	0.0	2.0	0.5	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL
144	240063	Caltrain Terminal Station Improvements (San Jose Diridon)	Santa Clara	Transit Efficiency	2.0	0.0	2.0	1.5	Yes	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL

LEGEND — IMPACT TO TARGETS: STRONG | MODERATE | MINIMAL | MODERATE ADVERSE | STRONG

Targets Assessment of Large Projects (sorted by county and targets net score)

REVISED 1/24/2012

Row #	Project ID	Project Name	County	Project Type	TARGETS SUMMARY					ADOPTED TARGETS									
					Targets Supported	Targets Adversely Impacted	Targets Net Score	Targets Score 11-4-11	In PDA?	CO2	Housing	PM	Collisions	Active Transportation	Open Space / AG	Low Income HH Transportation Cost	Economic Vitality	Non-Auto Travel Time/VMT	Maintenance
145	240429	I-880/US-101 Interchange Improvements	Santa Clara	Arterial Expansion	2.0	0.0	2.0	1.5	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
146	240444	US-101/SR-237 Interchange Improvements	Santa Clara	Arterial Expansion	2.0	0.0	2.0	1.5	Yes	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
147	240671	New I-280 Senter Road Interchange	Santa Clara	Arterial Expansion	2.0	0.0	2.0	1.5	No	MINIMAL	STRONG	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
148	230337	New Lawrence Expressway Interchange (Monroe Street)	Santa Clara	Arterial Expansion	1.5	0.0	1.5	1.5	No	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
149	240479	I-680 Auxiliary Lanes (McKee Road to Berryessa Road)	Santa Clara	Road Efficiency	1.5	0.0	1.5	1.0	No	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
150	240586	Oregon Expressway Alma Bridge Interchange Improvements	Santa Clara	Road Efficiency	1.5	0.0	1.5	0.5	Yes	MINIMAL	STRONG	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
151	21922	Mineta San Jose International Airport APM Connector	Santa Clara	Transit Efficiency	1.0	0.0	1.0	0.0	Yes	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
152	22814	Foothill Expressway Deceleration Lane Extension	Santa Clara	Road Efficiency	1.0	0.0	1.0	0.0	No	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
153	230340	New Lawrence Expressway Interchange (Kifer Road)	Santa Clara	Arterial Expansion	1.0	0.0	1.0	1.5	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
154	240580	I-280/Lawrence Expressway/Stevens Creek Interchange Improvements	Santa Clara	Arterial Expansion	1.0	0.0	1.0	1.5	Yes	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
155	230332	Rengstorff Avenue Grade Separation	Santa Clara	Road Efficiency	0.5	0.0	0.5	0.5	No	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
156	240404	Calaveras Boulevard Overpass Widening (Abel Street to Milpitas Boulevard)	Santa Clara	Road Efficiency	0.5	0.0	0.5	0.0	Yes	MINIMAL	MODERATE	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
157	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Santa Clara	Road Efficiency	0.5	0.0	0.5	1.0	Yes	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
158	240443	Mary Avenue Extension	Santa Clara	Road Efficiency	0.0	0.0	0.0	0.0	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
159	HOTd	Silicon Valley Express Lanes Network	Santa Clara	Express Lanes Network	2.0	2.5	-0.5	-0.5	Yes	MODERATE AD	MODERATE	MODERATE AD	MODERATE AD	MODERATE AD	MODERATE	MINIMAL	STRONG	MODERATE AD	MINIMAL
160	230294	New SR-152 Alignment	Santa Clara	Highway Expansion	2.0	4.0	-2.0	-2.5	No	STRONG AD	MODERATE	STRONG AD	MODERATE	STRONG AD	MINIMAL	MINIMAL	STRONG	STRONG AD	MINIMAL
161	21714	US-101 Widening (Monterey Street to SR-129)	Santa Clara	Road Efficiency	1.5	5.5	-4.0	-4.5	No	STRONG AD	MODERATE	MODERATE AD	STRONG AD	STRONG AD	STRONG AD	MINIMAL	STRONG	STRONG AD	MINIMAL
162	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Solano	Transit Efficiency	3.5	0.0	3.5	4.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL
163	22629	Vallejo Ferry Terminal Intermodal Station	Solano	Transit Expansion	3.5	0.0	3.5	4.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL
164	94151	Jepson Parkway Construction (SR-12 to I-80)	Solano	Highway Expansion	2.0	0.5	1.5	-1.5	Yes	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE	MODERATE AD	MINIMAL	MODERATE	MODERATE	MINIMAL
165	230325	I-80 Westbound Cordelia Truck Scales Relocation	Solano	Road Efficiency	1.0	0.0	1.0	1.0	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
166	230326	I-80/I-680/SR-12 Widening & Interchange Improvements (Phase 1)	Solano	Highway Expansion	1.5	0.5	1.0	-0.5	No	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
167	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Solano	Highway Expansion	1.0	0.0	1.0	1.5	Yes	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL
168	230561	SR-113 Relocation out of Dixon	Solano	Highway Expansion	0.5	0.0	0.5	-3.5	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE	MINIMAL	MINIMAL
169	230575	Rio Vista Bridge Reconstruction & Realignment	Solano	Road Efficiency	0.5	0.0	0.5	0.5	No	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE
170	22794	Curtola Transit Center Improvements	Solano	Transit Efficiency	0.5	0.5	0.0	-0.5	No	MINIMAL	MODERATE	MINIMAL	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
171	230313	Redwood Parkway & Fairground Drive Roadway Improvements	Solano	Road Efficiency	1.0	1.0	0.0	-2.5	No	MINIMAL	MODERATE	MINIMAL	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	MODERATE	MODERATE AD	MINIMAL
172	230477	SR-12 Widening (SR-29 to Sacramento County line)	Solano	Highway Expansion	1.5	4.5	-3.0	-5.0	Yes	STRONG AD	MINIMAL	STRONG AD	STRONG	STRONG AD	MODERATE AD	MINIMAL	MODERATE	STRONG AD	MINIMAL
173	240650	Sonoma Countywide Bus Service Frequency Improvements	Sonoma	Transit Efficiency	5.0	0.0	5.0	5.0	Yes	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	MODERATE	STRONG	MODERATE	MODERATE	MINIMAL
174	230366	Caulfield Lane Extension (Southern Crossing)	Sonoma	Road Efficiency	1.0	0.0	1.0	0.0	Yes	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL
175	21998	SR-116 Widening & Rehabilitation (Elphick Road to Redwood Drive)	Sonoma	Highway Expansion	0.5	2.0	-1.5	-1.0	Yes	MODERATE AD	MINIMAL	MODERATE AD	MODERATE AD	MODERATE AD	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MODERATE
176	21884	Petaluma Cross-Town Connector/Interchange	Sonoma	Road Efficiency	1.0	3.0	-2.0	-2.5	No	MODERATE AD	STRONG	MODERATE AD	MODERATE AD	MODERATE AD	MODERATE AD	MINIMAL	MINIMAL	MODERATE AD	MINIMAL
177	22207	Farmers Lane Extension (Bellevue Avenue to SR-12)	Sonoma	Highway Expansion	0.5	3.0	-2.5	-2.5	Yes	MODERATE AD	MODERATE	MODERATE AD	MODERATE AD	MODERATE AD	MODERATE AD	MINIMAL	MINIMAL	MODERATE AD	MINIMAL

LEGEND	IMPACT TO TARGETS			
STRONG	MODERATE	MINIMAL	MODERATE ADVERSE	STRONG

Targets Assessment of Small Projects by Project Type (sorted by Targets Net Score)

TABLE C-4

Summarized Categories of Small Projects	# of Projects	CO_2	Housing	PM	PM in CARE*	Collisions	Active Transport	Open Space/AG*	Low-Inc HH Trans. Cost	Economic Vitality*	Non Auto Mode Share/VMT	Maintenance	Targets Net Score
Transit Expansion & Efficiency	65	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	STRONG	MINIMAL	9.0
Emissions Reduction	10	STRONG	MINIMAL	STRONG	STRONG	MINIMAL	STRONG	MINIMAL	STRONG	STRONG	STRONG	MINIMAL	6.0
Bicycle and Pedestrian Improvements	109	STRONG	MODERATE	MODERATE	MODERATE	STRONG	STRONG	MINIMAL	MODERATE	MINIMAL	MODERATE	MINIMAL	4.5
State Highways, Arterials, and Local Streets (Maintenance & Safety)	71	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	STRONG	3.5
Transit Maintenance & Safety	16	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MODERATE	MINIMAL	MINIMAL	MINIMAL	MODERATE	STRONG	3.5
Public Outreach/Info/ Preparedness	9	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MODERATE	MODERATE	MINIMAL	MODERATE	MINIMAL	MINIMAL	3.0
ITS/TDM/Parking	22	MODERATE	MINIMAL	MODERATE	MINIMAL	MODERATE	MODERATE	MINIMAL	MINIMAL	MODERATE	MODERATE	MINIMAL	3.0
State Highways, Arterials, and Local Streets (Expansion & Efficiency)	259	MINIMAL	STRONG	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	STRONG	MINIMAL	MINIMAL	0.0
Other	6	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	MINIMAL	0.0
Freeways and Interchanges	102	STRONG AD	STRONG	STRONG AD	STRONG AD	MINIMAL	STRONG AD	MINIMAL	MINIMAL	STRONG	STRONG AD	MINIMAL	-2.0

* Assessment based on the project geography

LEGEND	IMPACT TO TARGETS			
STRONG	MODERATE	MINIMAL	MODERATE ADVERSE	STRONG ADVERSE

ATTACHMENT D REVISED 2/16/2012

Equity Considerations on the Project Level

Attached you will find a set of county maps identifying all of the projects analyzed individually in the project performance assessment. The maps identify projects that serve a community of concern, as well as how those projects support the three equity-related performance targets. Table D-1 accompanies these equity considerations maps, providing specific details on individual projects.

The three equity-related targets are a subset of the 10 targets adopted by MTC and ABAG; they are assessed in the targets assessment element of the broader project performance assessment, as described in the cover memo and Attachment C (note: all materials are available on the OneBayArea website: http://onebayarea.org/plan_bay_area/transportation.htm).

By relying on the targets assessment, this analysis highlights equity considerations contained in the overall assessment, while at the same time looking at projects from a geographical perspective. Projects were identified as serving a community of concern if they were located in a community of concern and if they provided an access point for residents (e.g. train station, freeway on-ramp, etc.).

Three of the ten Plan Bay Area performance targets were used to calculate a project's Equity Targets Score:

- Adequate Housing
- Particulate Matter in CARE Communities
- Low-Income Household Transportation Cost

A project's Equity Targets Score indicates that project's level of support for equity concerns; it can range from +3.0 (Strong Support) to -3.0 (Strong Adverse Impacts). The same ratings and scale from the Targets Assessment were used to examine equity considerations:

- strong support (1)
- moderate support (0.5)
- minimal impact (0)
- moderate adverse impact (-0.5)
- strong adverse impact (-1)

For example, a project with a target rating marked "STRONG" has strong support for that target and receives +1.0 point towards its equity targets score.

The criteria for each of the three equity-related performance targets are shown on the following pages.

1. Adequate Housing

Criteria

House 100% of the region's projected 25-year growth by income level without displacing current low-income residents

The assessment of a project's impact on housing was dependent upon two criteria: potential for housing growth and past track record on affordable housing of the jurisdictions in which the project is located. The strongest support were for projects in jurisdictions that had: (1) above average track record for permitting low and very low income housing relative to their Regional Housing Needs Assessment (RHNA) targets; and (2) potential for a high amount of housing growth in the future, as measured by units included the Focused Growth scenario.

Guidelines for Applying Criteria

Potential for Housing Growth

Based on the housing growth from the Focused Growth Scenario, a project would receive support based on the numbers below and as shown in Exhibit C-1, Table 1:

- Cities below 1,500 units of production were awarded **minimal (0)**
- 1,500 to 10,000 **support of target (0.5)**

Support for Affordable Housing

Based on feedback the Adequate Housing Target, the assessment was revised from the original approach to sufficiently consider how projects support production of low income units in Bay Area jurisdictions. With input from ABAG staff, the Adequate Housing target has been re-evaluated to consider jurisdictions' track records in meeting their Regional Housing Needs Allocation (RHNA) targets for the past production of Very Low and Low income housing units. These results are reflected in revised Targets Assessment scores.

With data compiled from ABAG's housing report in 2007 "A Place to Call Home – Housing in the San Francisco Bay Area," we calculated the number of permitted units as a share of each jurisdiction's RHNA target by income level for years 1999 through 2006. Overall, 23 cities were identified that performed better than the regional averages for both very low (above 44%) and low (above 75%) income housing and 53 that were below the regional averages.

Projects that were multi-county projects were given a score for both housing production and RHNA based on the individual cities and unincorporated areas. The overall county RHNA score was determined by the majority of projects in one category (Above average, neither above or below and below average). If 2/3 of the cities in a county had below average production, then the county would receive a -0.5. If there was not a clear majority of cities in one category, then the county would be scored minimal or 0 points.

RHNA Rating (See Exhibit C-1, Table 2)

- **Strong** rating if above the regional average for both very low and low income housing categories **(0.5)**
- **Minimal** rating if not above or below the regional average for both categories **(0)**
- **Adverse** rating if below the regional average for very low and low income housing categories **(-0.5)**

Some projects that were multi-county such as BART, Capital Corridor or ACE were scored based upon the cities served by the projects in the same manner as described above.

2. Healthy and Safe Communities (*PM in CARE Communities)*

Criteria

Achieve greater reductions of PM in CARE communities

If a project is located in a CARE community:
Projects support the target if they have potential to reduce particulate (PM) emissions from vehicles by reducing VMT or providing an alternative to driving alone. Projects likely to increase VMT are assumed to have an adverse impact on the target.

If a project is not located in a CARE community:
Projects are assumed to have minimal impact on PM emissions in CARE communities.

Guidelines for Applying Criteria

Because the criteria for 3a and 3b are nearly identical to those for the CO2 reduction target and because the particulate targets are focused largely on tailpipe emissions which correlate with CO2 emissions, projects generally received the same rating for these targets as they did for CO2 reduction.

The results for target 3c are reported separately in the Project Assessment Equity Considerations. Projects were mapped against the Bay Area Air Quality Management District (BAAQMD) six Community Air Risk Evaluation (CARE) Impacted Communities. These are areas that are highly impacted from outdoor Toxic Air Contaminants (TAC) due to their proximity to ports or freeways and a high density of sensitive populations (seniors, children and low income residents). Projects likely to increase transit, biking or walking and are located in a CARE community are considered to support the target. Conversely, projects that increase VMT and are located in a CARE community are considered to adversely affect this target. The degree of support or adverse impact is a function of the project scale and likely increase or decrease in VMT. Projects receive a minimal rating if they do not affect VMT substantially, even if they are located in a CARE community. Projects that are not located in a CARE community also receive a minimal rating.

3. Equitable Access (Low Income Household Transportation Cost)

Criteria

Decrease by 10% the share of low-income and lower middle income residents' household income consumed by transportation and housing

Projects were supportive of the target if they included transit enhancements that provided a lower cost transportation alternative to driving. The degree of support would vary by the operator's current low-income ridership.

Guidelines for Applying Criteria

Transit projects were determined to provide a lower cost alternative to auto ownership and were supportive of this target. Transit projects were assessed based on the percentage of the total region's low income riders and the total number of low income riders served by the operator. The percentages of low income riders were based on the Transit Demographics Survey and the 2011 Statistical Summary of Bay Area Transit Operators. The points breakdown is shown below and in Exhibit C-1, Table 3:

- **Strong** – Low income riders constitute over 40% of total ridership or operator serves over 10% of the region's total low income transit riders
- **Moderate** – Operator serves over 0.5% of the region's total low income transit riders
- **Minimal** – Operator serves less than 0.5% of the region's total low income transit riders

By awarding strong support to operators that have a high share (over 40%) of low income riders, this acknowledges that many small operators provide service to low income groups but carry a smaller share of the region's total low income ridership. It also rewards the larger operators that carry a high number of the region's low income population.

No adverse rating was given for highway projects that did not provide low-cost options since these projects did not take away choices for low and middle income residents.

Project Assessment Equity Considerations (listed by county)

TABLE D-1 REVISED 2/15/2012

Map ID	Project ID	Project Name	County	Project Type	EQUITY-RELATED TARGETS			Equity Targets Score	Serves Community of Concern?*	In Community of Concern?	In CARE Community?
					Housing	PM in CARE	Low Income HH Transportation Cost				
1	240180	BART Bay Fair Connection	Alameda	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
2	22062	Irvington BART Station	Alameda	Transit Efficiency	MINIMAL	MINIMAL	STRONG	1.0	Yes	Yes	No
3	22455	AC Transit East Bay BRT	Alameda/ 3434	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
4	22780	AC Transit Grand-MacArthur BRT	Alameda/ 3434	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
5	22667	BART to Livermore (Phases 1 & 2: Rail Extension)	Alameda	Transit Expansion	MINIMAL	MINIMAL	STRONG	1.0	No	No	No
6	98207T, 98207R	Alameda-Oakland BRT & I-880 Broadway/Jackson Interchange Improvements	Alameda	Transit Efficiency	MINIMAL	MODERATE	STRONG	1.5	Yes	Yes	Yes
7	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements	Alameda/ 3434	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
8	240113	BART Hayward Maintenance Complex	Alameda	Transit Efficiency	MINIMAL	MINIMAL	STRONG	1.0	No	Yes	No
9	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)	Alameda	Transit Expansion	MINIMAL	MINIMAL	STRONG	1.0	No	No	No
10	LBART	BART to Livermore (Phase 1: 1-Station Rail Extension with DMU)	Alameda	Transit Expansion	MINIMAL	MINIMAL	STRONG	1.0	No	No	No
11	580_BUS	I-580 Express Bus (Dublin to Livermore)	Alameda	Transit Efficiency	MINIMAL	MINIMAL	STRONG	1.0	No	No	No
12	22089	Martinez Subdivision & Rail Improvements	Alameda	Transit Efficiency	MODERATE	MINIMAL	STRONG	1.5	No	Yes	Yes
13	22765	I-580/I-680 Interchange HOV Direct Connectors	Alameda	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
14	240318	I-80 Ashby Interchange Improvements	Alameda	Road Efficiency	STRONG	MINIMAL	MINIMAL	1.0	No	No	Yes
15	22769	I-880 23rd/29th Interchange Improvements	Alameda	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	Yes
16	22779	I-880/SR-262 Interchange Improvements (Phase 2: Warren Avenue Grade Separation)	Alameda	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
17	240052	I-880 Whipple Road Interchange Improvements	Alameda	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
18	240317	Port of Oakland Wharf Replacement & Berth Deepening (Berths 60-63)	Alameda	Other	MINIMAL	MINIMAL	MINIMAL	0.0	No	Yes	Yes
19	240657	I-580 Corridor Spot Intersection Improvements	Alameda	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
20	21100	I-580 Vasco Road Interchange Improvements & Auxiliary Lanes	Alameda	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
21	22082	Port of Oakland 7th Street Grade Separation & Roadway Improvements	Alameda	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	Yes
22	22760	Port of Oakland Outer Harbor Intermodal Terminals	Alameda	Other	MINIMAL	MINIMAL	MINIMAL	0.0	No	Yes	Yes
23	230103	Decoto Neighborhood Grade Separation	Alameda	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No
24	240024	Oakland Army Base Infrastructure Improvements	Alameda	Other	MINIMAL	MINIMAL	MINIMAL	0.0	No	Yes	Yes
25	240279	Mandela Parkway & 3rd Street Corridor Street Reconstruction	Alameda	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	Yes
26	240562	SR-92 Clawiter/Whitesell Interchange Improvements	Alameda	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
27	94506	Fremont/Union City East-West Connector	Alameda	Arterial Expansion	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
28	230099	I-580/I-680 Interchange Improvements (Phase 1)	Alameda	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
29	240062, 22776	SR-84/I-680 Interchange Improvements + SR-84 Widening (Jack London to I-680)	Alameda	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
30	240053	Whipple Road Widening (Mission Boulevard to I-880)	Alameda	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	No

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Map ID	Project ID	Project Name	County	Project Type	EQUITY-RELATED TARGETS			Equity Targets Score	Serves Community of Concern?*	In Community of Concern?	In CARE Community?
					Housing	PM in CARE	Low Income HH Transportation Cost				
31	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)	Contra Costa	Transit Efficiency	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
32	230321	Hercules Intermodal Station (Phases 2, 3, and 4)	Contra Costa	Transit Efficiency	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
33	22360	I-80 San Pablo Dam Road Interchange Improvements	Contra Costa	Road Efficiency	STRONG	MINIMAL	MINIMAL	1.0	Yes	Yes	Yes
34	22353, 21223	I-680 HOV Gap Closure in Walnut Creek (N. Main to Livorna)	Contra Costa	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
35	22604	Vasco Road Safety & Operational Improvements (Brentwood to San Joaquin County line)	Contra Costa	Highway Expansion	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
36	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello Avenue to SR-242)	Contra Costa	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
37	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)	Contra Costa	Highway Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
38	22981	SR-4 Widening (Marsh Creek Road to San Joaquin County line)	Contra Costa	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
39	98133	Pacheco Boulevard Widening (Blum Road to Arthur Road)	Contra Costa	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
40	22400	SR-239 Expressway Construction (Brentwood to Tracy)	Contra Costa	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
41	94050	SR-4 Upgrade to Full Freeway (Phase 2: Cummings Skyway to I-80)	Contra Costa	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
42	230252	Marin Countywide Bus Service Frequency Improvements	Marin	Transit Efficiency	MINIMAL	MINIMAL	MODERATE	0.5	Yes	Yes	No
43	21325	US-101 Twin Cities Corridor Improvements	Marin	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
44	240644	Marin Countywide Senior Mobility Program	Marin	Safety	MINIMAL	MINIMAL	MODERATE	0.5	Yes	Yes	No
45	240182	BART Metro Program	Multi-County	Transit Efficiency	MODERATE	STRONG	STRONG	2.5	Yes	Yes	Yes
46	00BART	BART Service Frequency Improvements	Multi-County	Transit Efficiency	MODERATE	STRONG	STRONG	2.5	Yes	Yes	Yes
47	230603	California High-Speed Train - Bay Area to Central Valley	Multi-County	Transit Expansion	MODERATE	STRONG	MODERATE	2.0	Yes	Yes	Yes
48	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-County	Transit Efficiency	MODERATE	STRONG	MODERATE	2.0	Yes	Yes	Yes
49	240521, 21627, 240134	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (SF to Tamien)	Multi-County/ 3434	Transit Efficiency	MODERATE	STRONG	MODERATE	2.0	Yes	Yes	Yes
50	240018	Dumbarton Corridor Express Bus	Multi-County	Transit Efficiency	MODERATE	STRONG	STRONG	2.5	Yes	Yes	Yes
51	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)	Multi-County/ 3434	Transit Efficiency	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
52	240216	Dumbarton Rail	Multi-County/ 3434	Transit Expansion	MODERATE	STRONG	MINIMAL	1.5	Yes	Yes	Yes
53	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)	Multi-County	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
54	00ACT1	AC Transit Frequent Transit Network	Multi-County	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
55	240676, 240675, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)	Multi-County/ 3434	Transit Expansion	MINIMAL	MINIMAL	MODERATE	0.5	No	Yes	No
56	n/a	BART Station Capacity Improvements	Multi-County	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
57	n/a	BART Station Access Improvements	Multi-County	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
58	22511, 22512, 22122, 230613, 22120, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)	Multi-County/ 3434	Transit Expansion	MODERATE	MODERATE	MINIMAL	1.0	Yes	Yes	Yes
59	230055	Golden Gate Ferry Service Frequency Improvements	Multi-County	Transit Efficiency	MODERATE	MODERATE	MODERATE	1.5	No	No	Yes

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Map ID	Project ID	Project Name	County	Project Type	EQUITY-RELATED TARGETS			Equity Targets Score	Serves Community of Concern?*	In Community of Concern?	In CARE Community?
					Housing	PM in CARE	Low Income HH Transportation Cost				
60	230604	Bay Bridge Contraflow Lane	Multi-County	Pricing	MODERATE	STRONG	MODERATE	2.0	No	Yes	Yes
61	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)	Multi-County	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
62	230219, 230314	Golden Gate Bus Service Frequency Improvements	Multi-County	Transit Efficiency	MODERATE	MODERATE	MODERATE	1.5	No	No	Yes
63	98139	ACE Expansion	Multi-County/ 3434	Transit Efficiency	MODERATE	MODERATE	MINIMAL	1.0	No	Yes	Yes
64	240036	Caltrain Communications-Based Overlay Signal System (CBOSS) and Positive Train Control System (PTC)	Multi-County	Transit Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	Yes	Yes
65	240060, 240523	US-101 HOV Lanes (Whipple to Cesar Chavez)	Multi-County	Road Efficiency	MODERATE	MODERATE	MINIMAL	1.0	Yes	Yes	Yes
66	22003	Capitol Corridor Reliability Improvements (Phase 2)	Multi-County	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	Yes
67	22657	I-580 Westbound Truck Climbing Lane (Altamont Pass)	Multi-County	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
68	240140	Caltrain At-Grade Crossing Improvements	Multi-County	Transit Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	Yes
69	240571	I-80/I-880 Congestion Pricing and Clean Vehicle Incentive Program	Multi-County	Pricing	MODERATE	MODERATE	MINIMAL	1.0	Yes	Yes	Yes
70	98147, 240691	Marin-Sonoma Narrows (Phase 2)	Multi-County	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
71	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network	Multi-County	Express Lanes Network	MODERATE	MODERATE AD	MINIMAL	0.0	Yes	Yes	Yes
72	240122	SR-29 Complete Streets Improvements	Napa	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
73	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)	Napa	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No
74	94075	SR-12 Jameson Canyon Project (Phase 3: New SR-12/SR-29 Interchange)	Napa	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
75	22247	Regional Bikeway Network	Regional	Bike/Ped	MODERATE	STRONG	MODERATE	2.0	Yes	Yes	Yes
76	240410	Transportation for Livable Communities	Regional	TLC	MODERATE	STRONG	MODERATE	2.0	Yes	Yes	Yes
77	240690	Lifeline Program	Regional	Lifeline/New Freedom	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
78	NewFree	New Freedom	Regional	Lifeline/New Freedom	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
79	LS&R	Local Streets and Roads Capital Maintenance Needs	Regional	Maintenance	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
80	Transitshort	Transit Capital Maintenance Needs	Regional	Maintenance	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
81	230419	Freeway Performance Initiative	Regional	FPI	MODERATE	MINIMAL	MODERATE	1.0	Yes	Yes	Yes
82	230550	Climate Initiatives	Regional	Climate	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
83	240589	EV Solar Installation [BAAQMD program]	Regional	Climate	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	Yes
84	240577	Heavy-Duty Truck Replacement [BAAQMD program]	Regional	Climate	MODERATE	STRONG	MINIMAL	1.5	No	Yes	Yes
85	240582	Truck & Motorcycle Retirement [BAAQMD program]	Regional	Climate	MODERATE	STRONG	MINIMAL	1.5	Yes	Yes	Yes
86	240674	Transbay Transit Center - Phase 3 (Pedestrian Connector Tunnel to BART/Muni)	San Francisco	Transit Expansion	MODERATE	STRONG	STRONG	2.5	No	No	Yes
87	230290	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	San Francisco/ 3434	Transit Expansion	MODERATE	STRONG	MODERATE	2.0	Yes	Yes	Yes
88	240171	SFMTA Transit Effectiveness Project	San Francisco	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
89	240526	SFCTA Transit Performance Initiative	San Francisco	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes

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Map ID	Project ID	Project Name	County	Project Type	EQUITY-RELATED TARGETS			Equity Targets Score	Serves Community of Concern?*	In Community of Concern?	In CARE Community?
					Housing	PM in CARE	Low Income HH Transportation Cost				
90	230161	Van Ness Avenue BRT	San Francisco/ 3434	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
91	230164	Geary Boulevard BRT	San Francisco	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
92	240155	Better Market Street	San Francisco	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
93	240522	Congestion Pricing Pilot	San Francisco	Pricing	MODERATE	STRONG	MINIMAL	1.5	Yes	Yes	Yes
94	00MUNI	Muni Service Frequency Improvements	San Francisco	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
95	22415	Historic Streetcar Expansion Program	San Francisco	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
96	240545	Parkmerced Light Rail Corridor	San Francisco	Transit Efficiency	MODERATE	MINIMAL	STRONG	1.5	No	No	No
97	240557	Oakdale Caltrain Station	San Francisco	Transit Efficiency	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
98	240158	Eastern Neighborhoods (EN TRIPS) Circulation & Streetscape Improvements	San Francisco	Road Efficiency	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
99	240694	Treasure Island Congestion Pricing	San Francisco	Pricing	MODERATE	MINIMAL	MODERATE	1.0	Yes	Yes	No
100	240147	Southeast Waterfront Transportation Improvements	San Francisco	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
101	240163	Hunters Point & Candlestick Point Local Road Network	San Francisco	Road Efficiency	MODERATE	MINIMAL	MODERATE	1.0	Yes	Yes	Yes
102	240344	SFpark	San Francisco	Parking	MODERATE	MODERATE	MINIMAL	1.0	Yes	Yes	Yes
103	240358	Mission Bay Local Road Network	San Francisco	Arterial Expansion	MODERATE	MINIMAL	MODERATE	1.0	Yes	Yes	Yes
104	240035	Caltrain Terminal Station Improvements (4th & King)	San Francisco	Transit Efficiency	MODERATE	MINIMAL	MODERATE	1.0	Yes	Yes	Yes
105	230555	I-80 Yerba Buena Island Interchange Improvements	San Francisco	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No
106	240026	SamTrans El Camino BRT	San Mateo	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
107	22274	ITS Improvements in San Mateo County	San Mateo	Road Efficiency	MODERATE	MINIMAL	MODERATE	1.0	Yes	Yes	Yes
108	240590	El Camino Real Complete Streets Improvements	San Mateo	Road Efficiency	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
109	22268	San Mateo Countywide Shuttle Service Frequency Improvements	San Mateo	Transit Efficiency	MODERATE	MINIMAL	STRONG	1.5	Yes	Yes	Yes
110	21602	US-101 Broadway Interchange Improvements	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
111	21603	US-101 Woodside Road Interchange Improvements	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	Yes
112	21606	US-101 Willow Road Interchange Improvements	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	Yes
113	21613	SR-92 Improvements (Phase 1: San Mateo Bridge to I-280)	San Mateo	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
114	22279	US-101 Produce Road Interchange Improvements	San Mateo	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
115	22756	US-101 Candlestick Point Interchange Improvements	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	Yes
116	240064	Caltrain Grade Separations (Phase 1: San Mateo County)	San Mateo	Transit Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
117	21604	US-101 Auxiliary Lane Modifications (Oyster Point to San Francisco County line)	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
118	21615	I-280/SR-1 Interchange Improvements	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
119	22229	US-101 Sierra Point Parkway Interchange Improvements + Lagoon Way Extension	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No

* = serving a CoC is defined as being located within a CoC and providing an access point for residents

Map ID	Project ID	Project Name	County	Project Type	EQUITY-RELATED TARGETS			Equity Targets Score	Serves Community of Concern?*	In Community of Concern?	In CARE Community?
					Housing	PM in CARE	Low Income HH Transportation Cost				
120	22230	I-280 Auxiliary Lanes (Hickey Boulevard to I-380)	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
121	94644	SR-92 Westbound Slow-Vehicle Climbing Lane (I-280 to SR-35)	San Mateo	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
122	21612	Dumbarton Bridge/US-101 Access Improvements (Phase 1)	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	Yes
123	240114	SR-1 Safety & Operational Improvements (Pacifica to Half Moon Bay)	San Mateo	Road Efficiency	MODERATE AD	MINIMAL	MINIMAL	-0.5	No	No	No
124	22282	US-101 Operational Improvements (near US-101/SR-92 Interchange)	San Mateo	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
125	98204	SR-1 Widening (Fassler Avenue to Westport Drive)	San Mateo	Highway Expansion	MODERATE AD	MINIMAL	MINIMAL	-0.5	No	No	No
126	240119	VTA El Camino BRT	Santa Clara	Transit Efficiency	STRONG	MODERATE	STRONG	2.5	Yes	Yes	Yes
127	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	Santa Clara/ 3434	Transit Expansion	MINIMAL	STRONG	STRONG	2.0	Yes	Yes	Yes
128	22019	Downtown East Valley (Phase 2: LRT)	Santa Clara/ 3434	Transit Expansion	STRONG	MODERATE	STRONG	2.5	Yes	Yes	Yes
129	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)	Santa Clara	Transit Expansion	STRONG	MODERATE	STRONG	2.5	Yes	Yes	Yes
130	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)	Santa Clara	Transit Expansion	STRONG	MODERATE	STRONG	2.5	Yes	Yes	Yes
131	98119	Vasona Light Rail Extension (Phase 2)	Santa Clara	Transit Expansion	MODERATE	MINIMAL	STRONG	1.5	No	No	No
132	230547	Monterey Highway BRT	Santa Clara	Transit Efficiency	MODERATE	MODERATE	STRONG	2.0	Yes	Yes	Yes
133	230554	Sunnyvale-Cupertino BRT	Santa Clara	Transit Efficiency	MINIMAL	MINIMAL	STRONG	1.0	Yes	Yes	No
134	21760	Caltrain Double-Track Improvements (San Jose to Gilroy)	Santa Clara	Transit Efficiency	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
135	230534	Caltrain Electrification (Tamien to Gilroy)	Santa Clara	Transit Efficiency	MODERATE	MODERATE	MODERATE	1.5	Yes	Yes	Yes
136	240494	ITS Improvements in Santa Clara County	Santa Clara	Road Efficiency	MODERATE	MINIMAL	MODERATE	1.0	Yes	Yes	Yes
137	22965	New US-101 Mabury/Taylor Interchange	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	Yes	Yes	Yes
138	22979	New US-101 Zanker/Skyport/Fourth Street Interchange	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	No	Yes
139	240437	US-101 Braided Ramps (Capitol Expressway to Yerba Buena Road)	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
140	240441	US-101/Oregon Expressway/Embarcadero Road Interchange Improvements	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	No	Yes
141	21719	I-880/I-280/Stevens Creek Boulevard Interchange Improvements	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
142	230537	I-280 Winchester Boulevard Interchange Improvements	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
143	240048	Caltrain Diridon Station Track Capacity Expansion (Phases 2 & 3)	Santa Clara	Transit Efficiency	STRONG	MINIMAL	MODERATE	1.5	No	No	Yes
144	240063	Caltrain Terminal Station Improvements (San Jose Diridon)	Santa Clara	Transit Efficiency	STRONG	MINIMAL	MODERATE	1.5	No	No	Yes
145	240429	I-880/US-101 Interchange Improvements	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	Yes	Yes
146	240444	US-101/SR-237 Interchange Improvements	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	No	Yes	No
147	240671	New I-280 Senter Road Interchange	Santa Clara	Arterial Expansion	STRONG	MINIMAL	MINIMAL	1.0	Yes	Yes	Yes
148	230337	New Lawrence Expressway Interchange (Monroe Street)	Santa Clara	Arterial Expansion	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
149	240479	I-680 Auxiliary Lanes (McKee Road to Berryessa Road)	Santa Clara	Road Efficiency	STRONG	MINIMAL	MINIMAL	1.0	No	No	Yes

* = serving a CoC is defined as being located within a CoC and providing an access point for residents

Map ID	Project ID	Project Name	County	Project Type	EQUITY-RELATED TARGETS			Equity Targets Score	Serves Community of Concern?*	In Community of Concern?	In CARE Community?
					Housing	PM in CARE	Low Income HH Transportation Cost				
150	240586	Oregon Expressway Alma Bridge Interchange Improvements	Santa Clara	Road Efficiency	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
151	21922	Mineta San Jose International Airport APM Connector	Santa Clara	Transit Efficiency	STRONG	MINIMAL	MINIMAL	1.0	Yes	Yes	Yes
152	22814	Foothill Expressway Deceleration Lane Extension	Santa Clara	Road Efficiency	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
153	230340	New Lawrence Expressway Interchange (Kifer Road)	Santa Clara	Arterial Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
154	240580	I-280/Lawrence Expressway/Stevens Creek Interchange Improvements	Santa Clara	Arterial Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
155	230332	Rengstorff Avenue Grade Separation	Santa Clara	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	Yes	No
156	240404	Calaveras Boulevard Overpass Widening (Abel Street to Milpitas Boulevard)	Santa Clara	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No
157	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)	Santa Clara	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	No
158	240443	Mary Avenue Extension	Santa Clara	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	Yes	Yes	No
159	HOTd	Silicon Valley Express Lanes Network	Santa Clara	Express Lanes Network	MODERATE	MODERATE AD	MINIMAL	0.0	Yes	Yes	Yes
160	230294	New SR-152 Alignment	Santa Clara	Highway Expansion	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
161	21714	US-101 Widening (Monterey Street to SR-129)	Santa Clara	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
162	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)	Solano	Transit Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	No	No	No
163	22629	Vallejo Ferry Terminal Intermodal Station	Solano	Transit Expansion	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No
164	94151	Jepson Parkway Construction (SR-12 to I-80)	Solano	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
165	230325	I-80 Westbound Cordelia Truck Scales Relocation	Solano	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
166	230326	I-80/I-680/SR-12 Widening & Interchange Improvements (Phase 1)	Solano	Highway Expansion	MODERATE AD	MINIMAL	MINIMAL	-0.5	No	No	No
167	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)	Solano	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	Yes	No
168	230561	SR-113 Relocation out of Dixon	Solano	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
169	230575	Rio Vista Bridge Reconstruction & Realignment	Solano	Road Efficiency	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
170	22794	Curtola Transit Center Improvements	Solano	Transit Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No
171	230313	Redwood Parkway & Fairground Drive Roadway Improvements	Solano	Road Efficiency	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No
172	230477	SR-12 Widening (SR-29 to Sacramento County line)	Solano	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
173	240650	Sonoma Countywide Bus Service Frequency Improvements	Sonoma	Transit Efficiency	MODERATE	MINIMAL	STRONG	1.5	Yes	Yes	No
174	230366	Caulfield Lane Extension (Southern Crossing)	Sonoma	Road Efficiency	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
175	21998	SR-116 Widening & Rehabilitation (Elphick Road to Redwood Drive)	Sonoma	Highway Expansion	MINIMAL	MINIMAL	MINIMAL	0.0	No	No	No
176	21884	Petaluma Cross-Town Connector/Interchange	Sonoma	Road Efficiency	STRONG	MINIMAL	MINIMAL	1.0	No	No	No
177	22207	Farmers Lane Extension (Bellevue Avenue to SR-12)	Sonoma	Highway Expansion	MODERATE	MINIMAL	MINIMAL	0.5	Yes	Yes	No

LEGEND

IMPACT TO TARGETS

STRONG | MODERATE | MINIMAL | MODERATE ADVERSE | STRONG ADVERSE

* = serving a CoC is defined as being located within a CoC and providing an access point for residents

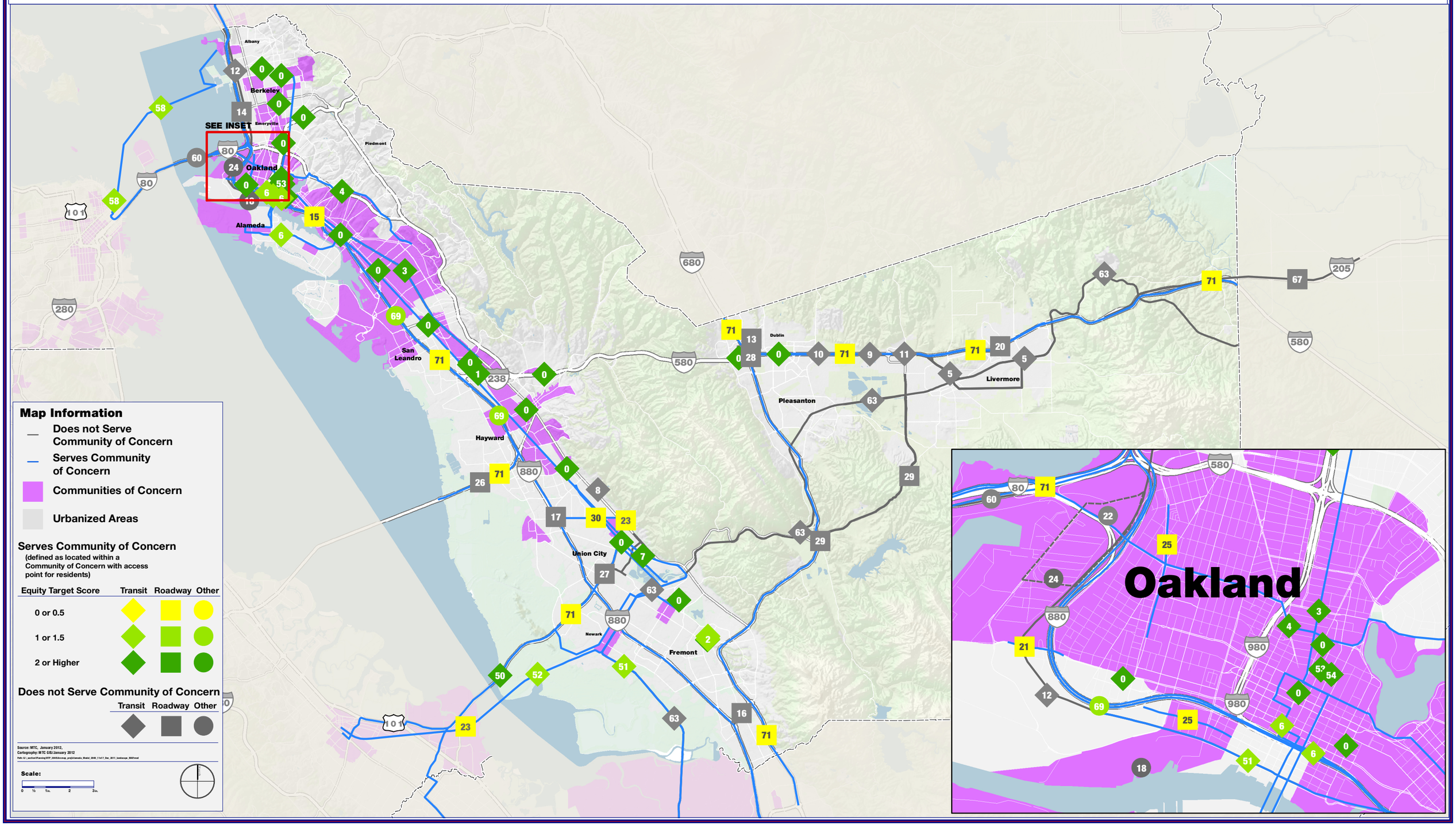
Plan Bay Area: Equity Considerations Map
Alameda County

FIGURE D-2

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit



Plan Bay Area: Equity Considerations Map

Alameda County

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit | Geographic Information Systems Unit

Map ID	Project ID	Project Name
1	240180	BART Bay Fair Connection
2	22062	Irvington BART Station
3	22455	AC Transit East Bay BRT
4	22780	AC Transit Grand-MacArthur BRT
5	22667	BART to Livermore (Phases 1 & 2: Rail Extension)
6	98207T, 98207R	Alameda-Oakland BRT + Transit Access Improvements I-880 Broadway/Jackson Interchange
7	230101	Union City Commuter Rail Station + Dumbarton Rail Segment G Improvements
8	240113	BART Hayward Maintenance Complex
9	240196	BART to Livermore (Phase 1: 1-Station Rail Extension with Bus Enhancements)
10	LBART	BART to Livermore (Phase 1: 1-Station Rail Extension with DMU)
11	580_BUS	I-580 Express Bus (Dublin to Livermore)
12	22089	Martinez Subdivision & Rail Improvements
13	22765	I-580/I-680 Interchange HOV Direct Connectors
14	240318	I-80 Ashby Interchange Improvements
15	22769	I-880 23rd/29th Interchange Improvements
16	22779	I-880/SR-262 Interchange Improvements (Phase 2: Warren Avenue Grade Separation)
17	240052	I-880 Whipple Road Interchange Improvements
18	240317	Port of Oakland Wharf Replacement & Berth Deepening (Berths 60-63)
19	240657	I-580 Corridor Spot Intersection Improvements
20	21100	I-580 Vasco Road Interchange Improvements & Auxiliary Lanes
21	22082	Port of Oakland 7th Street Grade Separation & Roadway Improvements
22	22760	Port of Oakland Outer Harbor Intermodal Terminals
23	230103	Decoto Neighborhood Grade Separation
24	240024	Oakland Army Base Infrastructure Improvements
25	240279	Mandela Parkway & 3rd Street Corridor Street Reconstruction
26	240562	SR-92 Clawiter/Whitesell Interchange Improvements

Map ID	Project ID	Project Name
27	94506	Fremont/Union City East-West Connector
28	230099	I-580/I-680 Interchange Improvements (Phase 1)
29	240062, 22776	SR-84/I-680 Interchange Improvements + SR-84 Widening (Pigeon Pass to I-680)
30	240053	Whipple Road Widening (Mission Boulevard to I-880)
0	240182, 00BART	45 - BART Metro Program 46 - BART Service Frequency Improvements 56 - BART Station Capacity Improvements 57 - BART Station Access Improvements
50	240018	Dumbarton Corridor Express Bus
51	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)
52	240216	Dumbarton Rail
53	240699	AC Transit Service Frequency Improvements (Restoration of 2009 Funding Levels)
54	00ACT1	AC Transit Frequent Transit Network
58	22120, 22122, 22511, 22512, 230613, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)
60	230604	Bay Bridge Contraflow Lane
63	98139	ACE Expansion
67	22657	I-580 Westbound Truck Climbing Lane (Altamont Pass)
69	240571	I-80/I-880 Congestion Pricing and Clean Vehicle Incentive Program
71	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network
75	22247	Bicycle/Pedestrian Expansion
76	240410	Transportation for Livable Communities (TLC)
77	240690	Lifeline Transportation Program
78	NewFree	New Freedom
79	LS&R	Local Streets and Roads Capital Maintenance Needs
80	Transitshort	Transit Capital Maintenance Needs
81	230419	Freeway Performance Initiative
82	230550	Climate Initiatives Program
83	240589	Solar Installations to Offset Electric Vehicle Use
84	240577	Heavy Duty Truck Replacement Program
85	240582	Heavy-Duty Diesel Truck and Motorcycle Early Retirement Program

NOTE: Project names appearing in grey are not shown on the map.

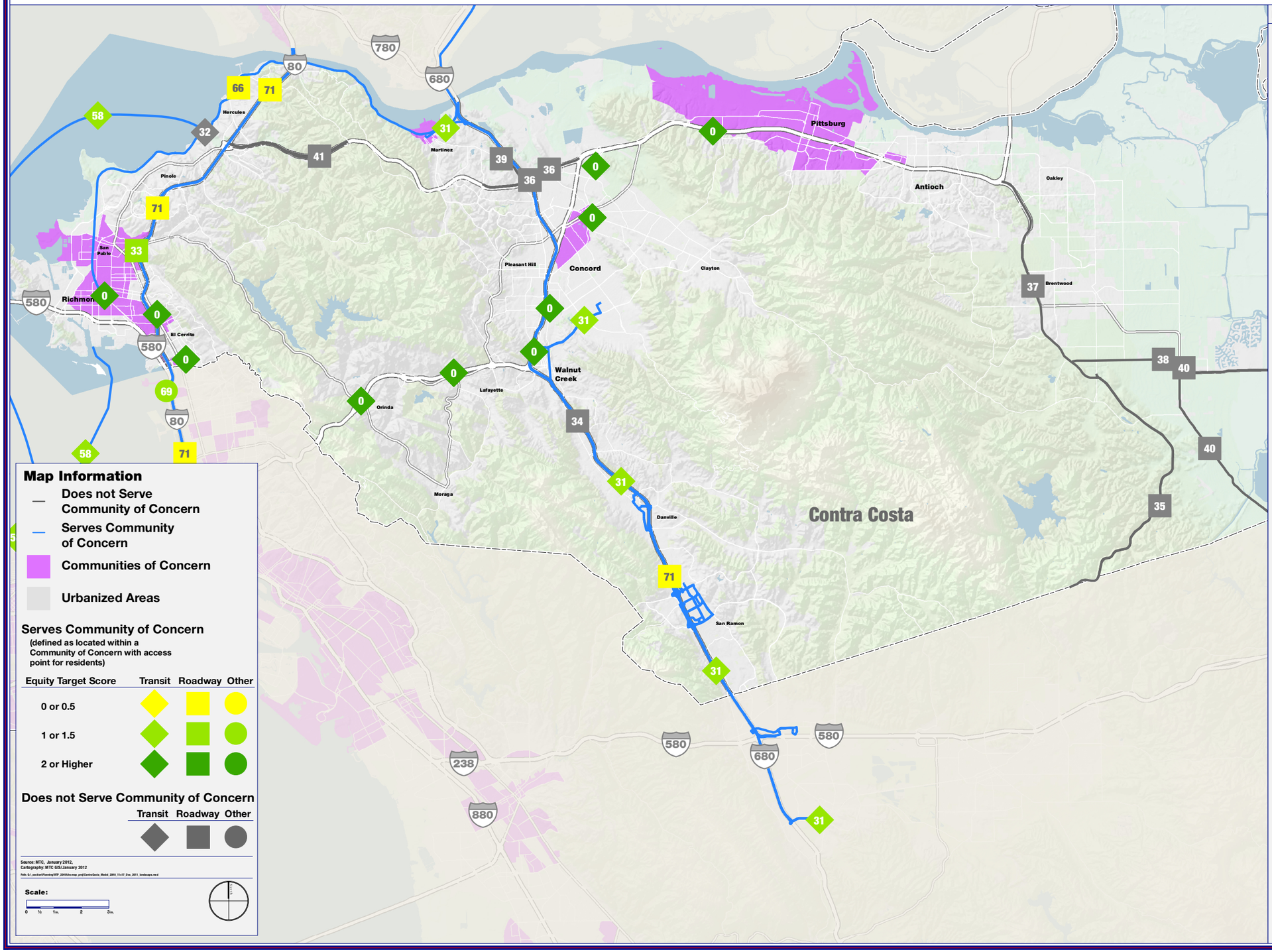
Plan Bay Area: Equity Considerations Map
Contra Costa County

FIGURE D-3

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit



Map Information

- Does not Serve Community of Concern
- Serves Community of Concern
- Communities of Concern
- Urbanized Areas

Serves Community of Concern
(defined as located within a Community of Concern with access point for residents)

Equity Target Score	Transit	Roadway	Other
0 or 0.5	◆	■	●
1 or 1.5	◆	■	●
2 or Higher	◆	■	●

Does not Serve Community of Concern

Transit	Roadway	Other
◆	■	●

Source: MTC, January 2012,
Cartography: MTC GIS/January 2012
Path: G:\...\Equity Considerations Map.jpg

Scale: 0 ½ 1 in. 2 3 in.

Map ID	Project ID	Project Name
31	22343	I-680 Express Bus Service Frequency Improvements (Phase 2)
32	230321	Hercules Intermodal Station (Phases 2, 3, and 4)
33	22360	I-80 San Pablo Dam Road Interchange Improvements
34	21223, 22353	I-680 HOV Gap Closure (North Main Street to Livorna Road)
35	22604	Vasco Road Safety & Operational Improvements (Brentwood to San Joaquin County line)
36	21205, 22350	I-680/SR-4 Interchange Improvements + SR-4 Widening (Morello Avenue to SR-242)
37	22605	SR-4 Bypass Completion (SR-160 to Walnut Avenue)
38	22981	SR-4 Widening (Marsh Creek Road to San Joaquin County line)
39	98133	Pacheco Boulevard Widening (Blum Road to Arthur Road)
40	22400	SR-239 Expressway Construction (Brentwood to Tracy)
41	94050	SR-4 Upgrade to Full Freeway (Phase 2: Cummings Skyway to I-80)
0	240182 00BART	45 - BART Metro Program 46 - BART Service Frequency Improvements 56 - BART Station Capacity Improvements 57 - BART Station Access Improvements
58	22120, 22122, 22511, 22512, 230613, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)
66	22003	Capitol Corridor Reliability Improvements (Phase 2)
69	240571	I-80/I-880 Congestion Pricing and Clean Vehicle Incentive Program
71	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes Network
75	22247	Bicycle/Pedestrian Expansion
76	240410	Transportation for Livable Communities (TLC)
77	240690	Lifeline Transportation Program
78	NewFree	New Freedom
79	LS&R	Local Streets and Roads Capital Maintenance Needs
80	Transitshort	Transit Capital Maintenance Needs
81	230419	Freeway Performance Initiative
82	230550	Climate Initiatives Program
83	240589	Solar Installations to Offset Electric Vehicle Use
84	240577	Heavy Duty Truck Replacement Program
85	240582	Heavy-Duty Diesel Truck and Motorcycle Early Retirement Program

NOTE: Project names appearing in grey are not shown on the map.

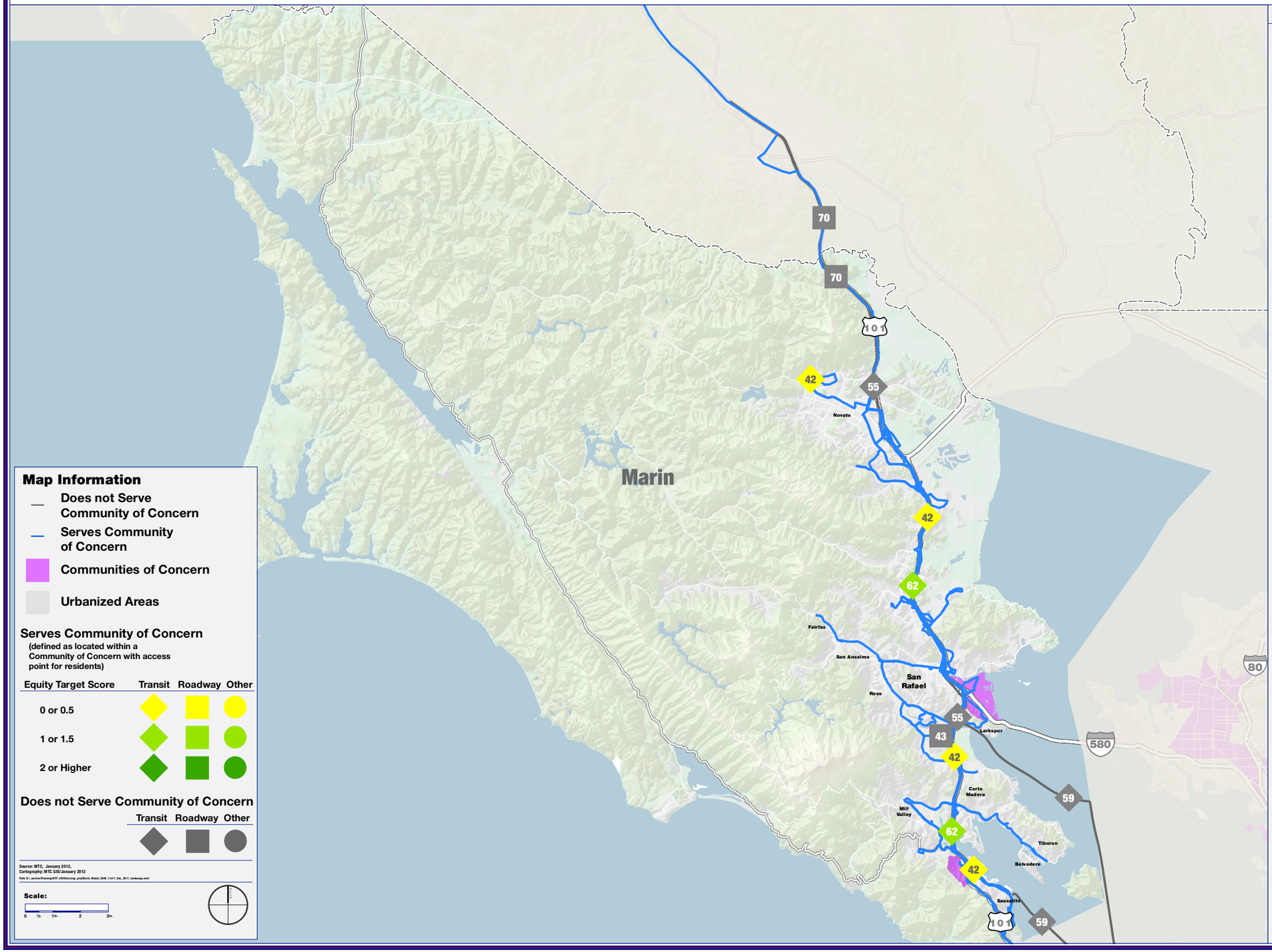
Plan Bay Area: Equity Considerations Map
Marin County

FIGURE D-4

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit



Map Information

- Does not Serve Community of Concern
- Serves Community of Concern
- Communities of Concern
- Urbanized Areas

Serves Community of Concern
(defined as located within a Community of Concern with access point for residents)

Equity Target Score	Transit	Roadway	Other
0 or 0.5	◆	■	●
1 or 1.5	◆	■	●
2 or Higher	◆	■	●

Does not Serve Community of Concern

Transit	Roadway	Other
◆	■	●

Source: MTC, January 2012,
Cartography: MTC GIS/January 2012
Path: G:\...\Marin_Model_2040_11x17_Dec_2011_landscape.mxd

Scale: 0 ½ 1 mi. 2 3 mi.

Map ID	Project ID	Project Name
42	230252	Marin Countywide Bus Service Frequency
43	21325	US-101 Twin Cities Corridor Improvements
44	240644	Marin Countywide Senior Mobility Program
55	240675, 240676, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)
59	230055	Golden Gate Ferry Service Frequency Improvements
62	230219, 230314	Golden Gate Bus Service Frequency Improvements
70	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)
75	22247	Bicycle/Pedestrian Expansion
76	240410	Transportation for Livable Communities (TLC)
77	240690	Lifeline Transportation Program
78	NewFree	New Freedom
79	LS&R	Local Streets and Roads Capital
80	Transitshort	Transit Capital Maintenance Needs
81	230419	Freeway Performance Initiative
82	230550	Climate Initiatives Program
83	240589	Solar Installations to Offset Electric Vehicle Use
84	240577	Heavy Duty Truck Replacement Program
85	240582	Heavy-Duty Diesel Truck and Motorcycle Early Retirement Program

NOTE: Project names appearing in grey are not shown on the map.

Plan Bay Area: Equity Considerations Map
North Bay Counties

FIGURE D-5

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit

Plan Bay Area: Equity Considerations Map

North Bay Counties

Metropolitan Transportation Commission

Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit

Map ID	Project ID	Project Name
55	240675, 240676, 240677	SMART (Phase 2: Extensions to Cloverdale & Larkspur + IOS Cost Deferrals)
62	230219, 230314	Golden Gate Bus Service Frequency Improvements
66	22003	Capitol Corridor Reliability Improvements (Phase 2)
70	98147, 240691	Marin-Sonoma Narrows (Phase 2: HOV Lanes)
71	HOTe	CTC Application + Alameda County Authorized Lanes Express Lanes
72	240122	SR-29 Complete Streets Improvements
73	240617	SR-29 HOV Lanes & BRT (Napa Junction to Vallejo)
74	94075	SR-12 Jameson Canyon Project (Phase 3: New SR-12/SR-29 Interchange)
75	22247	Bicycle/Pedestrian Expansion
76	240410	Transportation for Livable Communities (TLC)
77	240690	Lifeline Transportation Program
78	NewFree	New Freedom
79	LS&R	Local Streets and Roads Capital
80	Transitshort	Transit Capital Maintenance Needs
81	230419	Freeway Performance Initiative
82	230550	Climate Initiatives Program
83	240589	Solar Installations to Offset Electric Vehicle Use
84	240577	Heavy Duty Truck Replacement Program
85	240582	Heavy-Duty Diesel Truck and Motorcycle Early Retirement Program
162	21341	Fairfield/Vacaville Capitol Corridor Station (Phases 1, 2, and 3)
163	22629	Vallejo Ferry Terminal Intermodal Station
164	94151	Jepson Parkway Construction (SR-12 to I-80)
165	230325	I-80 Westbound Cordelia Truck Scales Relocation
166	230326	I-80/I-680/SR-12 Widening & Interchange Improvements (Phase 1)
167	230468	I-80 Auxiliary Lanes (Airbase Parkway to I-680)
168	230561	SR-113 Relocation out of Dixon
169	230575	Rio Vista Bridge Reconstruction & Realignment
170	22794	Curtola Transit Center Improvements
171	230313	Redwood Parkway & Fairground Drive Roadway Improvements
172	230477	SR-12 Widening (SR-29 to Sacramento County line)
173	240650	Sonoma Countywide Bus Service Frequency
174	230366	Caulfield Lane Extension (Southern Crossing)
175	21998	SR-116 Widening & Rehabilitation (Elphick Road to Redwood Drive)
176	21884	Petaluma Cross-Town Connector/Interchange
177	22207	Farmers Lane Extension (Bellevue Avenue to SR-12)

NOTE: Project names appearing in grey are not shown on the map.

Plan Bay Area: Equity Considerations Map
San Francisco

FIGURE D-6

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit

Map Information

- Does not Serve Community of Concern
- Serves Community of Concern
- Communities of Concern
- Urbanized Areas

Serves Community of Concern

(defined as located within a Community of Concern with access point for residents)

Equity Target Score	Transit	Roadway	Other
0 or 0.5	◆	■	●
1 or 1.5	◆	■	●
2 or Higher	◆	■	●

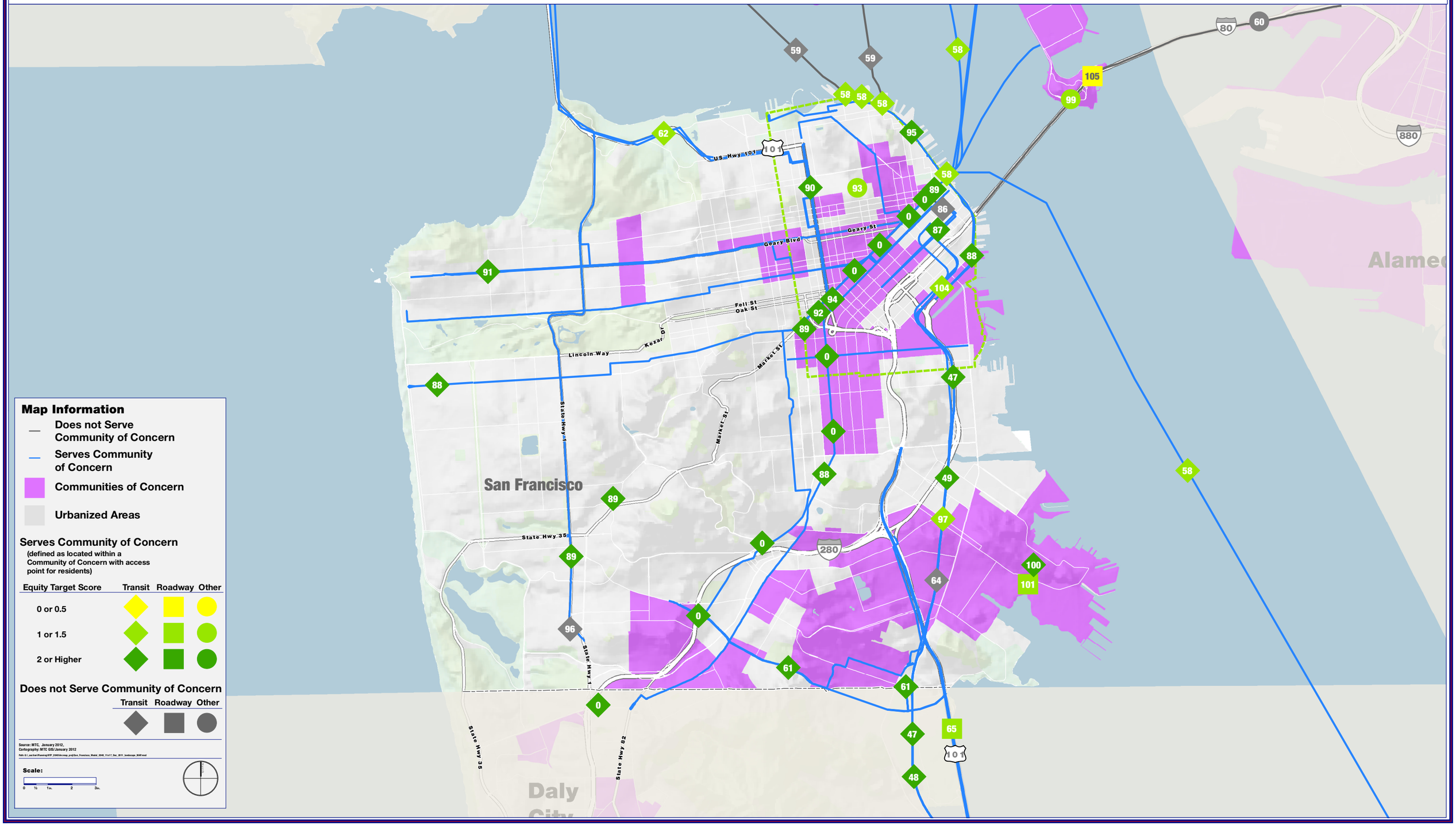
Does not Serve Community of Concern

Transit	Roadway	Other
◆	■	●

Source: MTC, January 2012,
Cartography: MTC GIS/January 2012

Path: G:\...\section\Planning\EIR_2040\Arcmap_proj\Geo_Francisco_Shield_2040_11x17_Dec_2011_landscape_BAR.mxd

Scale: 0 ½ 1 in. 2 3 in.



Plan Bay Area: Equity Considerations Map

San Francisco

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit

Map ID	Project ID	Project Name
0	240182 00BART	45 - BART Metro Program 46 - BART Service Frequency Improvements 56 - BART Station Capacity Improvements 57 - BART Station Access Improvements
47	230603	California High-Speed Train - Bay Area to Central Valley
48	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)
49	21627, 240134, 240521	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)
58	22120, 22122, 22511, 22512, 230613, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)
59	230055	Golden Gate Ferry Service Frequency Improvements
60	230604	Bay Bridge Contraflow Lane
61	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)
62	230219, 230314	Golden Gate Bus Service Frequency Improvements
64	240036	Caltrain Communications-Based Overlay Signal System (CBOSS) and Positive Train Control System (PTC)
65	240060, 240523	US-101 Express Lanes (Whipple Avenue to Cesar Chavez Street)
75	22247	Bicycle/Pedestrian Expansion
76	240410	Transportation for Livable Communities (TLC)
77	NewFree	New Freedom
78	230161	Van Ness Avenue BRT
79	LS&R	Local Streets and Roads Capital Maintenance Needs
80	Transitshort	Transit Capital Maintenance Needs
81	230419	Freeway Performance Initiative
82	230550	Climate Initiatives Program
83	240589	Solar Installations to Offset Electric Vehicle Use
84	240577	Heavy Duty Truck Replacement Program
85	240582	Heavy-Duty Diesel Truck and Motorcycle Early Retirement Program
86	240674	Transbay Transit Center - Phase 3 (Pedestrian Connector Tunnel to BART/Muni)
87	240674	Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)
88	240171	SFMTA Transit Effectiveness Project
89	240526	SFCTA Transit Performance Initiative
90	230161	Van Ness Avenue BRT
91	230164	Geary Boulevard BRT
92	240155	Better Market Street
93	240522	Congestion Pricing Pilot
94	00MUNI	Muni Service Frequency Improvements
95	22415	Historic Streetcar Expansion Program
96	240545	Parkmerced Light Rail Corridor
97	240557	Oakdale Caltrain Station
98	240158	Eastern Neighborhoods (EN TRIPS) Circulation & Streetscape Improvements
99	240694	Treasure Island Congestion Pricing
100	240147	Southeast Waterfront Transportation Improvements
101	240163	Hunters Point & Candlestick Point Local Road Network
102	240344	SFpark
103	240358	Mission Bay Local Road Network
104	240035	Caltrain Terminal Station Improvements (4th & King)
105	230555	I-80 Yerba Buena Island Interchange Improvements

NOTE: Project names appearing in grey are not shown on the map.

Plan Bay Area: Equity Considerations Map

San Mateo

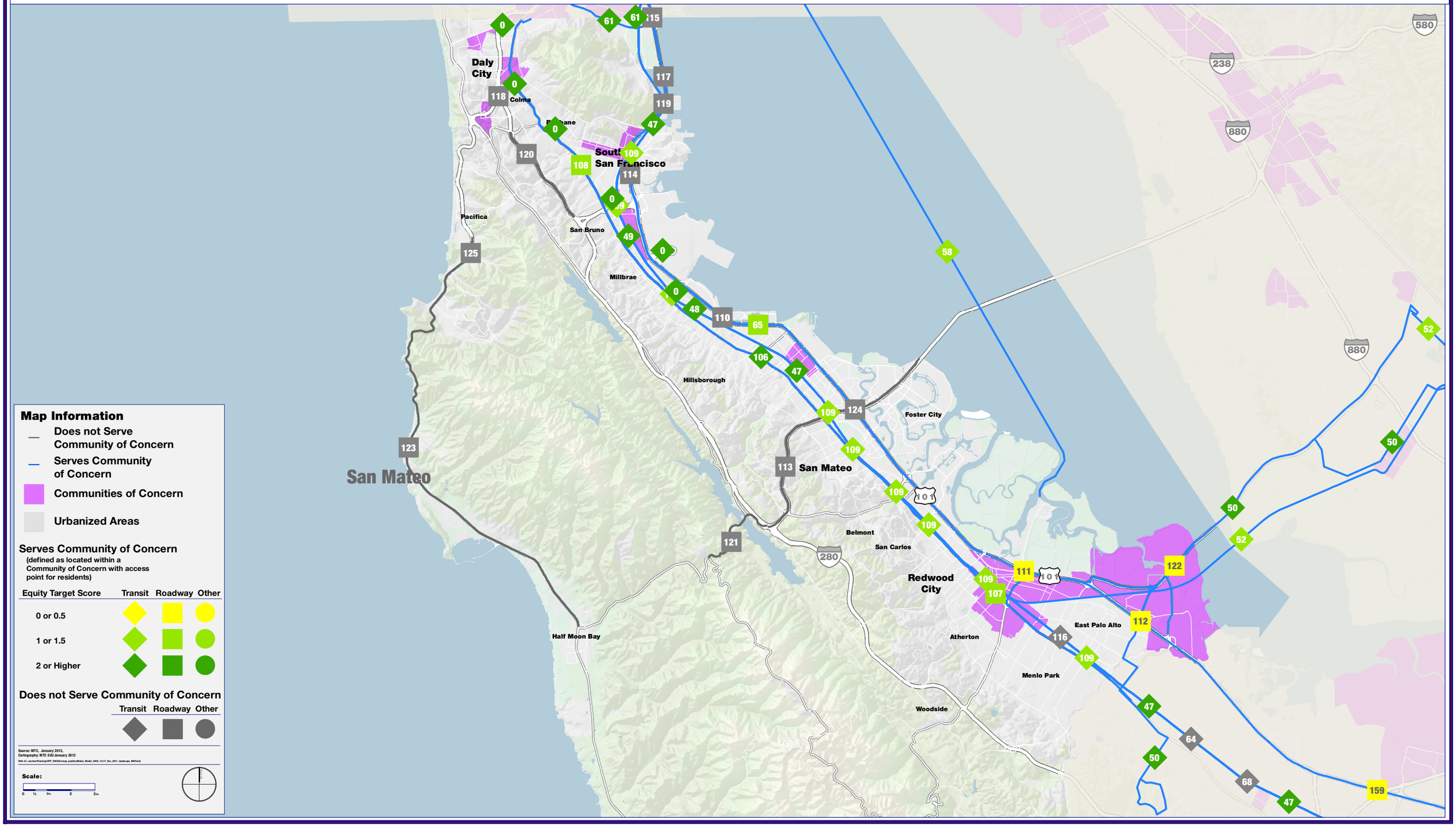
FIGURE D-7

Metropolitan Transportation Commission

Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit



Plan Bay Area: Equity Considerations Map

San Mateo

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit

Map ID	Project ID	Project Name
0	240182 00BART	45 - BART Metro Program 46 - BART Service Freq. Improvements 56 - BART Station Capacity Improvements 57 - BART Station Access Improvements
47	230603	California High-Speed Train - Bay Area to Central Valley
48	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)
49	21627, 240134, 240521	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)
50	240018	Dumbarton Corridor Express Bus
52	240216	Dumbarton Rail
58	22120, 22122, 22511, 22512, 230613, 230581	WETA Service Expansion (Treasure Island, Berkeley/Albany, Richmond, Hercules, and Redwood City)
61	22227, 240328, 240334	Geneva Avenue Corridor Improvements (Roadway Extension, BRT, and Southern Intermodal Terminal)
64	240036	Caltrain Communications-Based Overlay Signal System (CBOSS) and Positive Train Control System (PTC)
65	240060, 240523	US-101 HOV Lanes (Whipple Avenue to Cesar Chavez Street)
68	240140	Caltrain At-Grade Crossing Improvements
75	22247	Bicycle/Pedestrian Expansion
76	240410	Transportation for Livable Communities (TLC)
77	240690	Lifeline Transportation Program
78	NewFree	New Freedom
79	LS&R	Local Streets and Roads Capital
80	Transitshort	Transit Capital Maintenance Needs
81	230419	Freeway Performance Initiative
82	230550	Climate Initiatives Program
83	240589	Solar Installations to Offset Electric Vehicle Use
84	240577	Heavy Duty Truck Replacement Program
85	240582	Heavy-Duty Diesel Truck and Motorcycle Early Retirement Program
106	240026	SamTrans El Camino BRT
107	22274	ITS Improvements in San Mateo County
108	240590	El Camino Real Complete Streets Improvements
109	22268	San Mateo Countywide Shuttle Service Frequency Improvements
110	21602	US-101 Broadway Interchange Improvements
111	21603	US-101 Woodside Road Interchange Improvements
112	21606	US-101 Willow Road Interchange Improvements
113	21613	SR-92 Improvements (Phase 1: San Mateo Bridge to I-280)
114	22279	US-101 Produce Road Interchange Improvements
115	22756	US-101 Candlestick Point Interchange Improvements
116	240064	Caltrain Grade Separations (Phase 1: San Mateo County)
117	21604	US-101 Auxiliary Lane Modifications (Oyster Point to San Francisco County line)
118	21615	I-280/SR-1 Interchange Improvements
119	22229	US-101 Sierra Point Parkway Interchange Improvements + Lagoon Way Extension
120	22230	I-280 Auxiliary Lanes (Hickey Boulevard to I-380)
121	94644	SR-92 Westbound Slow-Vehicle Climbing Lane (I-280 to SR-35)
122	21612	Dumbarton Bridge/US-101 Access Improvements (Phase 1)
123	240114	SR-1 Safety & Operational Improvements (Pacifica to Half Moon Bay)
124	22282	US-101 Operational Improvements (near US-101/SR-92 Interchange)
125	98204	SR-1 Widening (Fassler Avenue to Westport Drive)
159	HOTd	Silicon Valley Express Lanes Network

NOTE: Project names appearing in grey are not shown on the map.

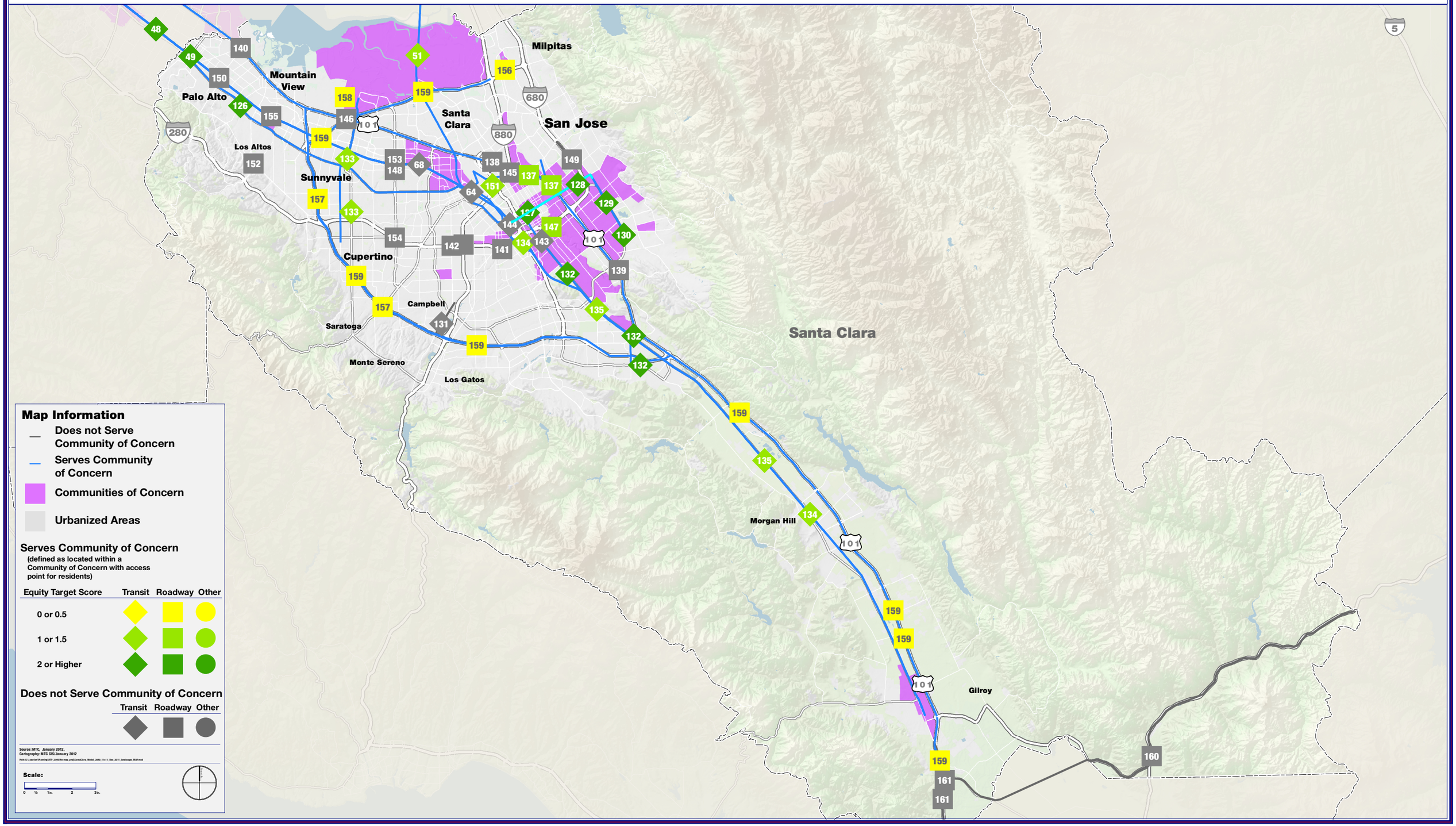
Plan Bay Area: Equity Considerations Map
Santa Clara County

FIGURE D-8

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit



Plan Bay Area: Equity Considerations Map

Santa Clara County

Metropolitan Transportation Commission
Planning, Financing and Coordinating Transportation for the nine-county San Francisco Bay Area

Research and Demographic Unit

Geographic Information Systems Unit

Map ID	Project ID	Project Name
48	240134, 21627	Caltrain Service Frequency Improvements (6-Train Service during Peak Hours) + Electrification (SF to Tamien)
49	240134, 240521, 21627	Caltrain Vision (10-Train Service during Peak Hours) + Electrification (San Francisco to Tamien)
51	22009	Capitol Corridor Service Frequency Improvements (Oakland to San Jose)
64	240036	Caltrain Communications-Based Overlay Signal System (CBOSS) and Positive Train Control System (PTC)
68	240140	Caltrain At-Grade Crossing Improvements
75	22247	Bicycle/Pedestrian Expansion
76	240410	Transportation for Livable Communities (TLC)
77	240690	Lifeline Transportation Program
78	NewFree	New Freedom
79	LS&R	Local Streets and Roads Capital Maintenance Needs
80	Transitshort	Transit Capital Maintenance Needs
81	230419	Freeway Performance Initiative
82	230550	Climate Initiatives Program
83	240589	Solar Installations to Offset Electric Vehicle
84	240577	Heavy Duty Truck Replacement Program
85	240582	Heavy-Duty Diesel Truck and Motorcycle Early Retirement Program
126	240119	VTA El Camino BRT
127	240375	BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)
128	22019	Downtown East Valley (Phase 2: LRT)
129	22956	Capitol Expressway Light Rail Extension (Phase 2: to Eastridge Transit Center)
130	22978	Capitol Expressway Light Rail Extension (Phases 2 & 3: to Nieman)
131	98119	Vasona Light Rail Extension (Phase 2)
132	230547	Monterey Highway BRT
133	230554	Sunnyvale-Cupertino BRT
134	21760	Caltrain Double-Track Improvements (San Jose to Gilroy)
135	230534	Caltrain Electrification (Tamien to Gilroy)
136	240494	ITS Improvements in Santa Clara County
137	22965	New US-101 Mabury/Taylor Interchange
138	22979	New US-101 Zanker/Skyport/Fourth Street
139	240437	US-101 Braided Ramps (Capitol Expressway to Yerba Buena Road)
140	240441	US-101/Oregon Expressway/Embarcadero Road Interchange Improvements
141	21719	I-880/I-280/Stevens Creek Boulevard Interchange Improvements
142	230537	I-280 Winchester Boulevard Interchange Improvements
143	240048	Caltrain Diridon Station Track Capacity Expansion (Phases 2 & 3)
144	240063	Caltrain Terminal Station Improvements
145	240429	I-880/US-101 Interchange Improvements
146	240444	US-101/SR-237 Interchange Improvements
147	240671	New I-280 Senter Road Interchange
148	230337	New Lawrence Expressway Interchange (Monroe Street)
149	240479	I-680 Auxiliary Lanes (McKee Road to Berryessa Road)
150	240586	Oregon Expressway Alma Bridge Interchange Improvements
151	21922	Mineta San Jose International Airport APM Connector
152	22814	Foothill Expressway Deceleration Lane Extension
153	230340	New Lawrence Expressway Interchange (Kifer Road)
154	240580	I-280/Lawrence Expressway/Stevens Creek Interchange Improvements
155	230332	Rengstorff Avenue Grade Separation
156	240404	Calaveras Boulevard Overpass Widening (Abel Street to Milpitas Boulevard)
157	240431	SR-85 Auxiliary Lanes (El Camino Real to Winchester Boulevard)
158	240443	Mary Avenue Extension
159	HOTd	Silicon Valley Express Lanes Network
160	230294	New SR-152 Alignment
161	21714	US-101 Widening (Monterey Street to SR-129)

NOTE: Project names appearing in grey are not shown on the map.