

# CWTP Evaluation Results and Process Overview

## draft report

*prepared for*

**Alameda County Transportation Commission**

*prepared by*

**Cambridge Systematics, Inc.**



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*draft report*

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*prepared for*

Alameda County Transportation Commission

*prepared by*

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*date*

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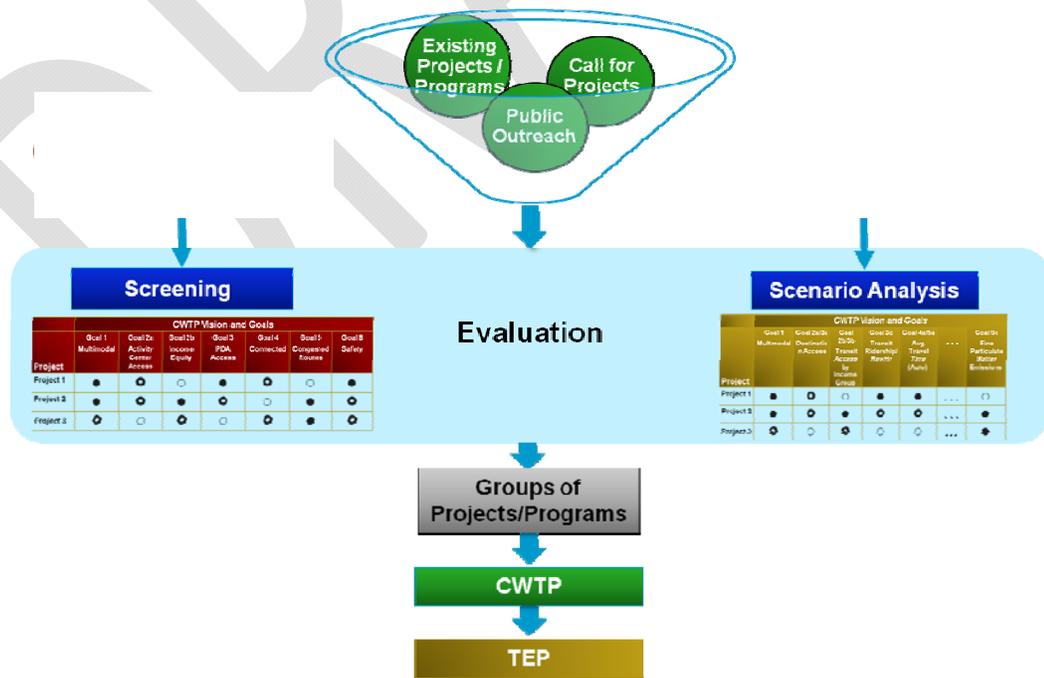
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# Executive Summary

This technical report presents the results of the first of three rounds of a performance evaluation process for projects and programs to be included in the updated Alameda Countywide Transportation Plan (CWTP). The evaluation was guided by the vision statement and nine goals adopted by Alameda CTC CWTP-TEP Steering Committee in January 2012 with input from the Community and Technical Advisory Working Groups. Based on the nine adopted goals, performance measures were developed and adopted by the Steering Committee in March 2011. The outcomes resulting from this evaluation are three groups of projects and programs that have similar goal-related performance and, in the case of projects, estimated costs. The three groups represent the technical outcomes of this evaluation in relation to the adopted goals and performance measures, and serve as a tool to assist decision-makers in selecting transportation investments for Alameda County’s future transportation system. Other factors will also be used in selecting transportation investments that will be incorporated in the CWTP. Figure ES.1, below, shows the evaluation process used that is based on the goals and performance measures and applied to projects and programs submitted for inclusion in the CWTP. Projects and programs for the Transportation Expenditure Plan (TEP) will be derived from the CWTP.

Figure ES.1 Evaluation Process Overview



The context in which the CWTP is being updated is an important factor in the planning process. Transportation funding is limited, so the project evaluation and prioritization process is very important. While the performance evaluation process presented in the following report is an important piece in creating a list of investments to be included in the draft CWTP, this is only one part of what influences the creation of the final Plan.

The Alameda County Transportation Commission (Alameda CTC) is charged with creating both a “Financially Constrained“ scenario and a “Vision” scenario. The Vision scenario will include a compilation of all project and program investments needed to fully sustain and develop the transportation system in Alameda County. Therefore, capital project and program investments submitted that do not fall within the Financially Constrained, or “preferred scenario” for this CWTP update, will be included in the larger Vision scenario to be eligible for future funding.

The Alameda CTC must meet the CWTP Vision and Goals, described in detail below. The evaluation process developed for the CWTP was used to evaluate investment options based on this requirement.

Readers should consider that a subset of projects and programs submitted in the CWTP Financially Constrained, or “preferred scenario” may be funded in part by the TEP currently being developed by the CWTP-TEP Steering Committee with input from the Community and Technical Advisory Working Groups.

This round of evaluation has culminated in identification of a grouped project list and program investment levels that support achievement of Alameda County transportation system goals and positioning of County projects for regional funding. In fall 2011 and winter 2012, two additional performance evaluations of refined scenarios will be done and will inform the development of “preferred scenario.” The tables below present the three groups, illustrating project and program evaluation results, organized by the nine CWTP goals. Further detail on the evaluation process and outcomes is supported throughout this technical report.

Table ES.1 Evaluation Results, Programs

#	Program Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance
<b>Group 1. High Relative Performance</b>											
1	Bicycle and Pedestrian Program	●	●	◐	●	◐	◐	○	●	●	●
2	Transit Enhancements, Expansion and Safety Program	●	●	●	●	●	●	●	◐	●	●
3	Transit and Paratransit Operations and Education Program	●	●	●	●	●	●	◐	◐	●	●
4	CBTP Implementation Program	●	●	●	●	◐	●	◐	◐	●	●
11	TDM and Parking Management Program	●	◐	●	●	◐	●	○	◐	◐	●
<b>Group 2. Medium Relative Performance</b>											
5	Local Road Improvements Program	◐	◐	◐	●	●	◐	●	●	○	◐
6	Local Streets and Roads O&M Program	◐	◐	◐	●	●	◐	●	◐	◐	◐
9	Transportation and Land Use (PDA) Program	●	●	●	◐	◐	●	○	◐	◐	◐
12	Goods Movement Program	◐	○	○	●	●	◐	●	●	◐	◐
14	Environmental Mitigation Program	◐	◐	◐	●	◐	◐	◐	●	●	◐
<b>Group 3. Low Relative Performance</b>											
7	Highway, Freeway, Safety and Non-Capacity Improvements Program	○	○	◐	●	◐	◐	●	◐	○	○

#	Program Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance
8	Bridge Improvements Program	●	○	○	●	●	●	●	●	○	○
10	Planning and Outreach Program	○	○	○	●	●	●	○	●	●	○
13	PDA Support – Non-Transportation Program	○	●	●	●	○	●	○	○	●	○
15	Transportation Technology and Revenue Enhancement Program	●	○	●	●	●	●	●	○	●	○

● = High, ● = Medium, and ○ = Low

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Table ES.2 Evaluation Results, Group 1 Projects

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RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>North</b>												
22002	I-880 NB HOV lane extension from HOV terminus at Bay Bridge approach to Maritime	●	●	●	●	●	NA	●	●	●	●	\$19.00
22780	AC Transit Grand-MacArthur BRT	●	●	●	●	○	NA	●	●	●	●	\$36.00
230243	Access Improvements to West End Transit Hub on Mariner Square Drive (MSD)	●	●	●	●	○	NA	●	●	●	●	\$4.40
240116	Powell Street Bridge Widening at Christie Avenue	●	●	●	●	○	NA	●	●	●	●	\$4.80
240278	Harrison St-Oakland Avenue Major Street Improvements	●	●	●	●	○	NA	●	●	●	●	\$12.40
240280	Woodland-81 <sup>st</sup> Avenue Industrial Zone street reconstruction	●	○	●	●	○	NA	●	●	●	●	\$11.50
240282	Tidewater District Street Reconstruction	●	●	●	●	●	NA	●	●	○	●	\$4.60
<b>Central</b>												
240092	Lewelling Blvd./Hesperian Blvd. Intersection Improvements Project (I-880 Hesperian/Lewelling Interchange)	●	●	●	●	○	NA	●	●	○	●	\$5.00
240180	BayFair Connection (Capacity Improvements)	●	●	●	●	○	NA	●	●	○	●	\$150.00

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RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>South</b>												
21123	Union City Intermodal Station infrastructure improvements (Phase 2)	●	●	●	○	○	NA	●	●	●	●	\$25.50
21126	SR 84 WB HOV on ramp from Newark Blvd	○	○	●	●	●	NA	●	●	●	●	\$12.80
21484	Kato Road widening from Warren Ave. to Milmont	●	●	●	●	○	NA	●	●	●	●	\$12.30
230110	Route 262 Mission Boulevard Cross Connector Improvements between I-680 and Warm Springs Boulevard SR 262 Mission Blvd Improvements	●	●	●	●	○	NA	●	●	●	●	\$19.50
230114	Auto Mall Parkway Cross Connector Widening between I-680 and I-880	●	●	●	●	○	NA	●	●	●	●	\$24.40
240051	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	●	○	●	●	●	NA	●	●	○	●	\$10.00
240263	Upgrade Relinquished Route 84 in Fremont (SR 84 Relinquished Route Upgrade)	●	●	●	●	●	NA	●	●	●	●	\$43.30
240264	Widen Fremont Boulevard from I-880 to Grimmer Boulevard	●	●	●	●	○	NA	●	●	●	●	\$4.60
240272	Thornton Avenue Widening	●	●	●	●	○	NA	●	●	●	●	\$9.20
240304	Platform Extension at Alameda and San Joaquin Co. ACE Stations	●	●	●	●	●	NA	●	●	●	●	\$5.00

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RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
East												
21477	I-580 Greenville interchange	●	○	○	○	○	NA	●	●	●	●	\$46.00
21489	I-580 /Foothill/San Ramon Interchange improvements	○	○	○	○	●	NA	●	●	○	○	\$3.60
22664	I-580 WB Express Lane from Greenville Road to Foothill Blvd	○	○	○	●	○	NA	○	●	●	●	\$16.50
240059	I-680 widening for NB HOV/ HOT Lane from Route 84 to Alcosta Blvd	○	●	○	●	○	NA	○	●	●	●	\$136.40
240061	I-680 widening for SB HOV/ HOT from Alcosta Blvd to Route 84	○	●	○	●	○	NA	○	●	●	●	\$136.40
240106	SR 84/Sunol Improvements	●	●	●	●	○	NA	●	●	●	●	\$8.30
240139	I-680 Stoneridge Drive overcrossing widening	●	●	○	●	●	NA	●	●	●	●	\$4.80
240254	Greenville Widening	●	○	○	○	○	NA	●	●	●	○	\$10.00
240261	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	●	●	○	●	●	NA	●	●	●	●	\$12.80

● = High, ○ = Medium, and ○ = Low

**Table ES.3 Evaluation Results, Group 2 Projects**

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RTPID	Project Name	Goal 1. Multimodal	Goal 2 Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>North</b>												
21144	I-80 Gilman Street Interchange Improvements	●	○	●	●	●	NA	●	●	●	○	\$25.20
22082	7th Street Grade Separation & Roadway Improvement Project	●	●	●	●	●	NA	●	●	●	●	\$220.50
22089	Martinez Subdivision	○	●	●	●	●	NA	●	●	●	●	\$100.00
22455	AC Transit East Bay Bus Rapid Transit (BRT)	●	●	●	●	●	NA	●	●	●	●	\$211.00
22760	Outer Harbor Intermodal Terminal (OHIT)	●	○	●	●	●	NA	●	●	●	●	\$216.70
98207	I880 Broadway/Jackson Interchange, ramp and circulation Improvements; and Alameda Point, Downtown Oakland, and Jack London Square Transit Access	●	●	●	●	●	NA	●	●	○	●	\$189.30
230170	I-880: 42nd/High Street Access Improvements	○	○	●	●	●	NA	●	●	●	○	\$17.10
240024	Oakland Army Base Transportation Infrastructure Improvements	●	●	●	●	●	NA	●	●	●	●	\$208.60
240318	I-80 Ashby Interchange	○	●	●	●	●	NA	●	●	●	●	\$51.90

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RTPID	Project Name	Goal 1. Multimodal	Goal 2 Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>Central</b>												
22021	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	●	●	●	○	●	NA	●	●	○	●	\$40.00
230088	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger Phases 1 and 2: I-880 extend NB HOV lanes	●	●	●	●	●	NA	●	●	○	●	\$276.00
240037	I-880 Winton Avenue interchange improvements	○	●	●	●	●	NA	●	●	●	○	\$25.00
240047	I-880 West A Street Interchange	○	●	●	●	●	NA	●	●	●	●	\$42.50
240249	San Leandro Street Circulation and Capacity Improvements	●	●	●	●	○	NA	●	●	○	○	\$11.00
240657	I-580 Spot Intersection Improvements	○	●	●	●	●	NA	●	●	●	●	\$60.00
<b>South</b>												
22009	Capitol Corridor intercity rail service expansion (Oakland to San Jose)	●	●	●	●	○	NA	●	●	●	●	\$510.50
22042	I-680 for NB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lanes)	●	●	●	●	●	NA	●	●	●	●	\$203.60
22062	Irvington BART Station	●	○	●	●	○	NA	●	●	○	●	\$123.00

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22779	Route 262/I-880 interchange improvements, Ph 2 – Construct grade separation at Warren Avenue/Union Pacific RR	○	○	●	●	●	NA	●	●	●	●	\$78.00
94506	East-West Connector Project in North Fremont and Union City	●	●	●	●	○	NA	●	●	●	●	\$190.00
98139	Right-of Way Preservation and track improvements in Alameda County	●	●	●	●	●	NA	●	●	○	●	\$600.00
230103	Grade Separation in the Decoto neighborhood	●	●	●	○	○	NA	●	●	●	●	\$130.00
240053	Whipple Road from I-880 to Mission Boulevard Widening and Enhancement	●	●	●	●	○	NA	●	●	●	●	\$100.00
<b>East</b>												
21100	I-580 Vasco interchange	○	●	●	●	●	NA	●	●	●	●	\$60.00
21475	I-580 First St. interchange	●	○	●	●	●	NA	●	●	●	●	\$40.00
22765	I-580/I-680 HOV Direct Connector – Project Development	●	●	●	●	●	NA	●	●	●	●	\$1,167.00
230099	I-580/I-680 Improvements Phase 1	●	●	●	●	●	NA	●	●	●	●	\$528.00
240038	Dougherty Road Widening from Sierra Lane to North City Limit	●	○	●	●	○	NA	●	●	●	○	\$18.40

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RTPID	Project Name	Goal 1. Multimodal	Goal 2 Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
240141	I-680 Sunol Boulevard Interchange (Non-Capacity Increasing Freeway/ Expressway Interchange Modifications)	○	○	●	●	●	NA	●	●	●	○	\$1.20
240144	I-580 Santa Rita Interchange improvements	○	○	●	●	●	NA	●	●	●	○	\$2.50
240250	Dublin Boulevard Widening from Sierra Court to Dublin Court	●	○	●	●	○	NA	●	●	●	○	\$4.20

● = High, ○ = Medium, and ○ = Low

**Table ES.4 Evaluation Results, Group 3 Projects**

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RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Afford-able & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>North</b>												
22769	I-880 at 23 <sup>rd</sup> /29 <sup>th</sup> Avenue interchange safety and access improvements	○	●	●	●	●	NA	●	●	●	○	\$102.00
230604	Contra Flow Lanes on Westbound Lanes of San Francisco-Oakland Bay Bridge	●	○	●	●	●	NA	●	●	○	●	\$610.50
240279	Mandela Parkway and 3 <sup>rd</sup> Street Corridor Commercial/Industrial Area Street Reconst.	○	●	●	●	●	NA	●	●	●	○	\$157.00
<b>Central</b>												
240113	BART Hayward Maintenance Complex	●	●	●	●	○	NA	●	●	●	●	\$585.00
240562	Rte 92/Clawiter Road Whitesell interchange improvement, Ph 2	○	○	●	●	●	NA	●	●	●	○	\$52.00
<b>South</b>												
21482	Extend Fremont Blvd to connect to I-880/Dixon Landing Rd	●	○	●	●	○	NA	●	●	●	○	\$47.80
230101	Union City Passenger Rail Station & Dumbarton Rail Seg.G Improvement Union City BART Phase 2/Passenger Rail Station	●	●	●	●	●	NA	●	●	○	●	\$180.00
240018	Dumbarton Rail Corridor Phase I	●	●	●	●	●	NA	○	●	○	●	\$164.00

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RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Afford-able & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
240052	I-880/Whipple Road Interchange	○	○	●	●	●	NA	●	●	●	○	\$60.00
240216	Dumbarton Rail Corridor Phase II	●	●	●	●	●	NA	○	●	●	●	\$716.00
East												
22667	BART to Livermore Extension Phase 2	●	○	●	●	●	NA	○	●	●	○	\$2,927.00
22776	SR 84 Expressway Widening (Pigeon Pass to Jack London)	○	●	●	●	●	NA	●	●	●	○	\$136.50
230086	I-580 Interchange Improvements at Hacienda Drive and Fallon Road – Phase II	○	○	●	●	●	NA	●	●	●	○	\$37.60
240062	SR 84/I-680 interchange and SR 84 Widening	○	○	●	●	●	NA	●	●	●	○	\$244.00
240132	El Charro Road Construction	●	○	●	●	●	NA	●	●	●	○	\$49.00
240196	BART to Livermore Extension Phase 1	●	○	●	●	○	NA	○	●	○	●	\$1,250.00

● = High, ○ = Medium, and ○ = Low



# 1.0 Introduction

This technical report presents the results of the first of three rounds of a technical process or evaluation phase for projects and programs to be included in the update of the Alameda Countywide Transportation Plan (CWTP). In fall 2011 and winter 2012, two additional performance evaluations of refined scenarios will be done and will inform the development of “preferred scenario.” This material summarizes activities related to project and program evaluations in support of the Alameda CWTP Update, which will be used to inform the development of the Transportation Expenditure Plan (TEP).

The context in which the CWTP is being updated is an important factor in the planning process. Transportation funding is limited, so the project evaluation and prioritization process is very important. While the performance evaluation process presented in the following report is an important piece in creating a list of investments to be included in the draft CWTP, this is only one part of what influences the creation of a final Plan.

First, the Alameda County Transportation Commission (Alameda CTC) is charged with creating both “Financially Constrained” scenario and a “Vision” scenario. The Vision scenario will include a compilation of all project and program investments needed to fully sustain and develop the transportation system in Alameda County. Therefore, capital project and program investments submitted that do not fall within the Financially Constrained, or “preferred scenario” for this CWTP update, will be included in the larger Vision scenario to be eligible for future funding.

Second, the Alameda CTC must meet the CWTP Vision and Goals, described in detail below. The evaluation process developed for the CWTP was used to evaluate investment options based on this requirement.

Third, readers should consider that a subset of projects and programs submitted in the CWTP Financially Constrained, or “preferred scenario” may be funded in part by the Transportation Expenditure Plan (TEP), currently being developed by the CWTP-TEP Steering Committee with input from the Community and Technical Advisory Working Groups.

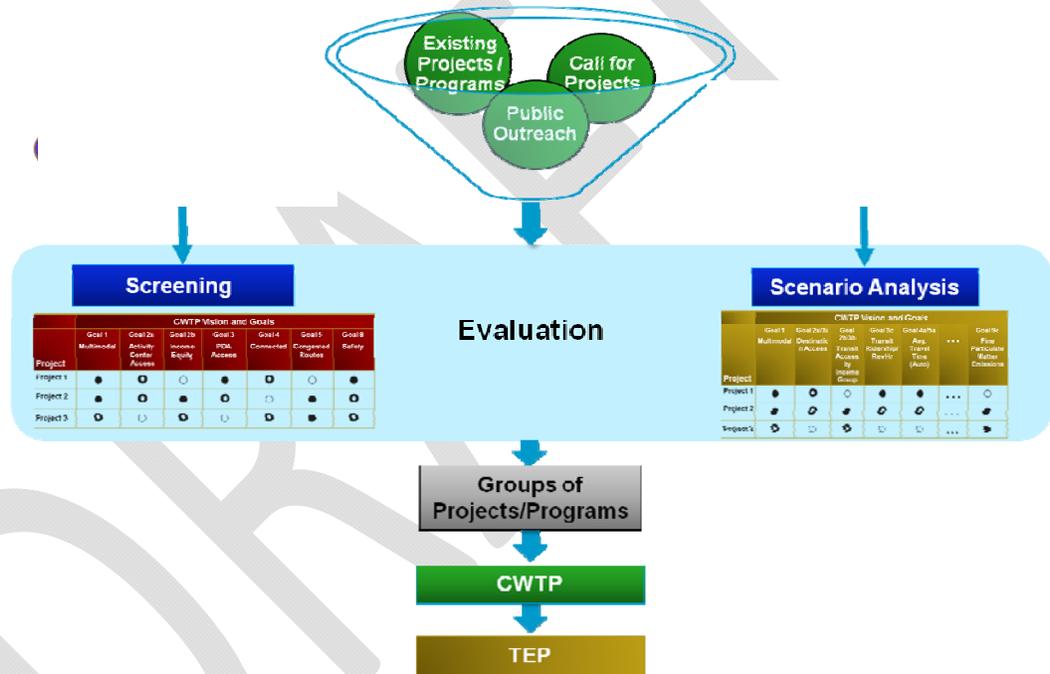
## 1.1 PERFORMANCE MEASURE EVALUATION PROCESS

The major components of the performance measure evaluation process shown in Figure 1.1 were:

1. Develop CWTP vision statement and supporting goals to direct the performance measure development and overall evaluation process (adopted January 2011);

2. Develop objective, understandable Performance Measures based on the CWTP Vision and Goals (adopted March 2011);
3. Receive projects, programs and programmatic projects submitted for inclusion in the CWTP (approved May 2011);
4. Perform evaluation through an initial screening of projects and programs and an evaluation tool based scenario analysis (three rounds of evaluation are planned; this document addresses the first round); and
5. Organize projects and programs into groups of similar performance to assist in establishing priorities and identifying strategies for ultimately creating the CWTP “Preferred Scenario” of transportation investments by December 2011.

Figure 1.1 Process Overview



## 1.2 VISION AND GOALS

Between December 2010 and January 2011, the Alameda County Community Advisory Working Group (CAWG), Technical Advisory Working Group (TAWG), and Steering Committee collectively developed a vision and nine goals for the CWTP. The final vision statement and goals are presented below.

The final adopted vision statement is as follows:

*Alameda County will be served by a premier transportation system that supports a vibrant and livable Alameda County through a connected and*

*integrated multimodal transportation system promoting sustainability, access, public health, and economic opportunities.*

*Our vision recognizes the need to maintain and operate our existing transportation infrastructure and services while developing new investments that are targeted, effective, financially sound and supported by appropriate land uses. Mobility in Alameda County will be guided by transparent decision-making and measureable performance indicators and will be supported by these goals:*

*Our transportation system will be:*

- *Multimodal;*
- *Accessible, Affordable, and Equitable for people of all ages, incomes, abilities, and geographies;*
- *Integrated with land use patterns and local decision-making;*
- *Connected across the county, within and across the network of streets, highways, transit, bicycle and pedestrian routes;*
- *Reliable and Efficient;*
- *Cost Effective;*
- *Well Maintained;*
- *Safe; and*
- *Supportive of a Healthy and Clean Environment.*

This vision statement and associated nine goals provided the backbone of the project and program performance evaluation. Based on the key areas of concern listed above, the process aims to assist stakeholders in understanding the benefits and tradeoffs of different combinations of investment strategies in different areas of Alameda County. These goals guided the development of the specific performance measures, discussed in Section 1.3 below.

## **1.3 PERFORMANCE MEASURES DEVELOPMENT**

The performance measures, adopted by the Alameda CTC CWTP-TEP Steering Committee in March 2011, are summarized in Table 1.1 with their corresponding goals. The performance measures were developed over several months with input from the Community and Technical Advisory Working Groups. These performance measures were developed to provide an objective, technical means to measure how well the various projects and programs meet Alameda County's goals.

**Table 1.1 Alameda County CWTP Performance Measures**

Alameda County Goal/	Measures for Alameda County CWTP Scenario Analysis
1. Multimodal	Percent of all trips made by alternative modes (bicycling, walking, or transit).
2. Accessible, Affordable and Equitable for people of all ages, incomes, abilities and geographies	<p><b>Accessible:</b> Share of households (by income group) within 30-minute bus/rail transit ride and 20-minute auto ride of at least one major employment center and within walking distance of schools (Source: Adapted from Caltrans Smart Mobility Framework.)* This measure also serves as a proxy for economic vitality.</p> <p>Share of households (by income group) near frequent bus/rail transit service.** (Source: Adapted from Alameda CTC CMP process and the Transit Capacity and Quality of Service Manual.)</p> <p><b>Affordable:</b> Covered by breaking out accessibility metrics by income group.</p> <p><b>Equitable:</b> Equity covered by breaking out metrics by geographic areas of the county. Measures marked with an asterisk will be reported for major jurisdictions as possible given the limitations of analytical tools.</p>
3. Integrated with land use patterns and local decision-making	<p>See “<i>Accessible</i>” measure.</p> <p>Transit riders/revenue hours of service. (Source: Consultant proposal.)***</p>
4. Connected	See “ <i>Reliable and efficient</i> ” measures.
5. Reliable and efficient	<p><b>Efficiency:</b> Average per-trip travel for automobile, truck, and bus/rail transit modes. (Source: Modified from RTP process.) This measure also serves as a proxy for economic vitality.</p> <p><b>Reliability:</b> Ratio of peak to off-peak travel time for automobile, truck, and transit modes. (Source: Consultant proposal.)</p>
6. Cost-effective	Transit riders/revenue hours of service. (Source: Consultant proposal.)***
7. Well-maintained	<p>Pavement Condition Index (PCI) on local roadways. (Source: Alameda County CMP, RTP process.)*</p> <p>Transit asset age. (Source: RTP process.)</p>
8. Safe	Injuries and fatalities from all collisions, including pedestrians and bicyclists. (Source: Alameda CMP, RTP.)*
9. Supportive of a clean and healthy environment	<p>Per-capita CO2 emissions from cars and light-duty trucks. (Source: RTP process.)*</p> <p>Average time traveling by foot and bicycle per day. (Source: RTP.)*</p> <p>Quantity of fine particulate emissions. (Source: Modified from RTP.)*</p>

\* As possible given constraints of analysis tools, results will be provided by for geographic subareas of the county to assess geographic equity issues.

\*\* Defined as being within one-half mile of rail and one-quarter mile of bus service (acceptable walking distances defined in the Transportation Research Board’s 2003 Transit Capacity and Quality of Service Manual Part 3 operating at LOS B or better (headways of <14 minutes) during peak hours.

\*\*\* Measure requires further review to ensure it can be calculated given constraints of Alameda CTC travel demand model.

As Table 1.1 shows, the goals are included in the left column, and the performance measures used to measure how well projects and programs met each goal are detailed in the right column. The performance measures were designed to be based on technical analysis results derived from standard evaluation tools, such as the Alameda County travel demand model and a Geographic Information System (GIS). Each measure described in Table 1.1 had specific calculable measures created to meet the technical and data availability of each evaluation stage.

## 1.4 CALL FOR PROJECTS AND COMMITTED PROJECTS

Coinciding with the Metropolitan Transportation Commission's (MTC) Regional Transportation Plan *Call for Projects*, the Alameda CTC issued a *Call for Projects and Programs* for the CWTP in the spring of 2011. The lists of projects, programs, and programmatic projects submitted in response to the *Call for Projects and Programs* are included in Appendices A and B. The approved *Call for Projects and Programs* list reflects the committed projects that were identified by MTC based on its adopted Committed Project and Funding Policy. Committed projects were not evaluated in this process.

## 1.5 EVALUATION TOOLS SELECTION

As presented above, the vision and goals were used as a foundation for the Alameda CWTP update. The following evaluation tools were used to support this technical process:

- Objective screening of projects and programs based on quantitative measures;
- Performance-based process to evaluate scenarios;
- State-of-the-practice tools applied to support the planning process;
- Tools to inform and support decision-making; and
- Objective grouping of projects and programs by performance.

## 1.6 EVALUATION PROCESS

The Evaluation Process consisted of several stages of evaluation:

- An initial screening of projects and programs;
- A project and program scenario evaluation using the Alameda Countywide travel model based; and
- Organizing projects and programs into groups of similar performance to assist in establishing priorities and identifying strategies.

This section highlights the process. More detail about how each stage was applied in the evaluation is provided in later sections. Table 1.2 presents the specific performance measures calculated for projects and programs in both the screening and scenario evaluation stages.

**Table 1.2 Alameda County CWTP Performance Measure Detail by Evaluation Stage**

CWTP Goal	Screening Measure	Scenario Measure
1. Multimodal	<ul style="list-style-type: none"> <li>Number of passenger and freight modes improved or affected by the investment</li> </ul>	<ul style="list-style-type: none"> <li>Percent of all trips made by alternative modes (bicycling, walking, or transit)</li> </ul>
2. Accessible, Affordable & Equitable	<ul style="list-style-type: none"> <li>Number of activity centers and transit hubs within ½ mile of the project</li> <li>Number of traffic analysis zones (TAZs) with above-average proportion of low-income households that are intersected by a project</li> </ul>	<ul style="list-style-type: none"> <li>Share of households, by income group, within a given travel time to activity centers</li> <li>Share of households, by income group, geographically close to frequent transit service</li> </ul>
3. Integrated w/Land Use	<ul style="list-style-type: none"> <li>Number of PDAs intersected by a project</li> </ul>	<ul style="list-style-type: none"> <li>Share of households, by income group, geographically close to frequent transit service</li> <li>Transit ridership per revenue hour</li> </ul>
4. Connected	<ul style="list-style-type: none"> <li>Ability to complete or improve a link in the regional transportation system</li> </ul>	<ul style="list-style-type: none"> <li>Average travel time (auto, carpool, truck, transit)</li> <li>Ratio of peak to off-peak travel time</li> </ul>
5. Reliable & Efficient	<ul style="list-style-type: none"> <li>Located on an identified Congestion Management Plan route</li> <li>Located on a route with above average heavy trucks</li> </ul>	<ul style="list-style-type: none"> <li>Average travel time (auto, carpool, truck, transit)</li> <li>Ratio of peak to off-peak travel time</li> </ul>
6. Cost-Effective	<ul style="list-style-type: none"> <li>Reflected in Grouping Process</li> <li>Investments grouped based on performance measure evaluation and cost</li> </ul>	<ul style="list-style-type: none"> <li>Reflected in Grouping Process</li> <li>Investments grouped based on performance measure evaluation and cost</li> </ul>
7. Well-Maintained	<ul style="list-style-type: none"> <li>This measure was not used in screening because current data were unavailable</li> </ul>	<ul style="list-style-type: none"> <li>Percent of roads, by facility type, in excellent, good, low or failing condition</li> <li>Estimating the remaining service life remaining for all transit assets</li> </ul>
8. Safe	<ul style="list-style-type: none"> <li>Number of freeways and arterial roadways with fatal crash</li> <li>rates above the statewide average (“safety areas”) that the project overlaps</li> </ul>	<ul style="list-style-type: none"> <li>Collision-related injuries and fatalities for all modes</li> </ul>
9. Supportive of a Clean & Healthy Environment	<ul style="list-style-type: none"> <li>This measure was not used in screening because current data were unavailable</li> </ul>	<ul style="list-style-type: none"> <li>Average daily travel time for bicycle and pedestrian trips</li> <li>Per-capita CO2 emissions from cars and light-duty trucks</li> <li>Per-capita fine particle emissions from cars and light-duty trucks</li> </ul>

## **Project and Program Screening**

After the list of projects, programs, and programmatic projects were adopted by the CWTP-TEP Steering Committee in May 2011, the screening phase began. The items on this adopted list were screened to provide a preliminary assessment of how well individual projects, programs, and programmatic projects addressed the adopted CWTP goals. Performance measures were developed to reflect each of these goals (see Table 1.2). The projects and programs were screened using the performance measures adopted by the Alameda CTC CWTP-TEP Steering Committee. In the project screening, several goals were not evaluated due to a lack of project data (“Well Maintained” and “Clean and Healthy Environment”). The Cost Effectiveness goal was not measured in this evaluation stage, but is reflected in the scenario and grouping evaluation stage described below.

Screening results are described in detail in Section 2.0 “Project and Program Screening”. The programs and projects in this evaluation stage were evaluated differently based on the availability of reliable information and data. Programs were evaluated using performance values (high, medium, low) for each goal. Program screening was based on best-practices research, similar procedures used regionally, and an understanding of types of projects considered under each program to be implemented countywide. All CWTP goals were assigned a performance value for each program. The outcomes of the screening process were used to group projects and programs into a set of five scenarios (defined below).

## **Project and Program Scenario Evaluation**

The screening phase was followed by the scenario evaluation phase, which began by packaging the projects and programs into five investment scenario packages with varying amounts of capital projects and programmatic investment. Scenario evaluation outcomes are based upon how each project and program performs in relation to the entire set of projects and programs included in the five scenario packages. Scenario results are described in detail in Section 3.0. The performance measures, shown in Table 1.2, for the scenario evaluations were based on the nine overarching goals developed as part of the CWTP to guide investment analysis and decision-making. These goals were used to develop individual measures to aid the decision-making process and provide objective measures of the modeling scenarios used to evaluate the five packages of projects and programs. The performance measures developed for this evaluation stage is therefore similar, but not the same as, the metrics used for the screening process. Again, all performance measures were developed to evaluate projects and programs based on the nine overarching goals chosen for the CWTP.

## **Project and Program Grouping**

Once the results of the screening and scenario evaluations were completed, projects and programs were organized into groups of similar performance. This

grouping was conducted to assist the Alameda CTC in establishing the preferred set of projects and programs for the CWTP. The specific details describing this process are shown in Section 4.0. As described below in Section 4.0, cost-effectiveness (CWTP, Goal #6) was a primary input used in the project and program groupings process after the completion of the screening and scenario evaluations.

Using a combination of both the screening and scenario evaluation results, projects and programs were placed into three groups, based on relatively similar levels of performance and estimated project costs and program funding levels identified earlier (e.g., Call for Projects). Groups were created to provide a straightforward methodology and clear results that reflect project evaluation. The performance evaluation results were compared for all projects and programs. Breakpoints in performance values were used to create high, medium, and low sectors for evaluation.

Projects and programs were categorized into investment strategy types to provide readily accessible summary data for each planning area, and to illustrate how strategy types performed.

## 2.0 Project and Program Screening

This section provides a summary of the CWTP program and project performance evaluation screening results. The screening process was based on information and data available from descriptions provided by sponsors when submitted for consideration in the current CWTP. Information about projects, specifically, was also collected from publicly available sources to provide background on the project purpose, location, and investment type. The screening evaluation results were used to both create the five transportation investment scenarios for the modeling stage of performance measure evaluation, and to create each project or program' composite performance for this evaluation process.

This section presents the results of the screening in Table 2.2 and Table 2.3, followed by a detailed description of the performance measures used and how they were calculated. Performance measures for the screening process are found in Section 1.0 (Table 1.2).

### 2.1 PROGRAM SCREENING

For program screening, ratings were assigned to the 15 transportation program categories being evaluated as part of the CWTP. Program screening includes the overall programs included in Table 2.1 below, as well as programmatic projects. Each program was evaluated against the nine goal categories adopted in January 2011. If the program addressed the goal generally, it received a “medium” rating. If the program addressed the goal to a significant degree, it received a “high” rating. Programs that did not address the goal received a “low” rating. Table 2.1 includes abbreviations for each of the 15 programs used in the results summaries. Note that programs that do not meet a high number of goals will still have an important role in the planning process in preparing and moving projects forward. The evaluation of the programs is meant as a means to establish which programs could have a higher priority.

Ratings by goal were assigned to each program (Table 2.2). The definitions (or reasoning) of how each goal was assessed by program is outlined below.

**Table 2.1 Draft CWTP Program Definitions and Abbreviations**

	Program Name	Abbreviation
1	Bicycle and Pedestrian Program	Bike/Ped
2	Transit Enhancements and Expansion	Transit EE
3	Transit and Paratransit Operations	Transit/Paratransit
4	Community-Based Transportation Plan Implementation	CBTP
5	Local Road Improvements	Local Roads
6	Local Streets and Roads O&M	Local Streets/O&M
7	Highway, Freeway, Safety, and Non-Capacity Improvements	Highway/Safety
8	Bridge Improvements	Bridge
9	Transportation and Land Use Program	TLU
10	Planning and Outreach	Planning
11	Transportation Demand and Parking Management	TDM/Parking
12	Goods Movement	Goods
13	PDA Non-Transportation	PDA Non-Trans
14	Environmental Mitigation	Environmental
15	Transportation Technology	Tech

Table 2.2 Programs and Programmatic Projects Screening Results

	CWTP Programs	Countywide Transportation Plan Goal								
		Goal 1 Multimodal	Goal 2 Accessible-Affordable – Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean and Healthy Environment
1	Bicycle and Pedestrian Program	●	●	●	○	○	○	○	●	●
2	Transit Enhancements and Expansion	●	●	●	○	●	●	●	○	●
3	Transit and Paratransit Operations	●	●	●	○	●	●	○	○	●
4	Community-Based Plan Implementation	●	●	●	○	○	●	●	○	●
5	Local Road Improvements	●	○	●	○	●	○	●	●	○
6	Local Streets & Roads O&M	●	○	○	○	●	○	●	○	○
7	Highway, Freeway, Safety & Non-Capacity Improvements	○	○	○	○	●	○	●	●	○
8	Bridge Improvements	○	○	○	○	○	○	●	●	○
9	Transportation & Land Use Program	●	●	●	○	○	●	○	○	○
10	Planning & Outreach	○	○	○	○	○	●	○	○	○
11	Transportation Demand & Parking Management	●	○	●	○	○	●	○	○	○
12	Goods Movement	○	○	○	○	●	○	●	●	○

	CWTP Programs	Countywide Transportation Plan Goal								
		Goal 1 Multimodal	Goal 2 Accessible-Affordable – Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean and Healthy Environment
13	PDA Non-Transportation	○	●	●	○	○	●	●	○	●
14	Environmental Mitigation	●	●	●	●	●	●	●	●	●
15	Transportation Technology	●	●	●	●	●	●	●	●	●

● = High, ● = Medium, and ○ = Low.

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### *Multimodal*

This goal addresses each program's effectiveness in encouraging the use of transportation modes other than the automobile, such as transit, bicycling, and walking. Programs that encourage the use of alternative modes and/or support multimodal goods movement rated highly with respect to this goal. For example, the TLU program rated highly because it emphasizes transportation improvement at transit hubs, including access improvements for bus, pedestrian, and bicycle modes. The TDM/PM program also rated highly because it encompasses programs that improve aspects of transit, walking, and bicycling, such as Safe Routes to School, Travel Choice, and many others. Two programs that received low ratings in this goal category are PDA Non-Trans and Planning, which generally relate to a broad range of topics that do not directly affect multimodal travel.

### *Accessible, Affordable, Equitable*

Transportation accessibility refers to how easily travelers can access destinations. The project team determined whether or not programs supported access to various destinations, such as transit hubs and intermodal facilities, major employment centers, and schools. Transportation affordability refers to how much of a burden transportation costs are on one's household income. The equitable portion of this goal refers to how each program increases mobility and accessibility for low-income households, as well as the disabled and elderly populations. Programs with high ratings were considered to improve accessibility, affordability, and/or equitability generally. For example, the Bridge program, while providing important elements of trips, does not support affordability or equitability, and only in certain cases do bridge improvements provide access to major activity centers. Projects in Transit/Paratransit, however, increase access and make travel affordable for a wide range of people.

### *Integrated with Land Use Patterns (PDAs)*

This goal addresses whether or not the program enhances a future or planned Priority Development Area (PDA). Development and increased density are encouraged in PDAs. Transit, walking, and bicycling can enhance these areas by improving safety, reducing traffic congestion, and reducing the need for parking. Programs related to alternative modes rated highly because transit, walking, and bicycling complement infill development. Ideally, infill development should bring destinations closer to origins, resulting in less travel time. Bringing origins and destinations closer together can also make alternative modes more viable and even more convenient than auto travel in some cases. The TLU program directly addresses PDAs because it covers improvements at transit hubs and other access improvements to alternative modes. TDM/Parking helps address incentives for using alternative modes and other ways of managing demand on the transportation network; and PDA Non-Transportation supports the land use

portion of PDAs, which is equally important to ensuring the success of these areas. Three programs rated “low” in relation to this goal: Bridge, Goods, and Planning.

### *Connected (Completes a Link in Network)*

For a program to rate highly in this category, it must complete a significant link in the bicycle, pedestrian, transit, freight, or HOV network. All but two projects received a “medium” rating in this category, which means that the program addresses this goal in some way, but not to a great degree. TLU and PDA Non-Trans received “low” ratings because they do not address the goal. They are land use-related programs and, therefore, are unable to complete a link in the transportation network.

### *Transportation System Efficiency/Reliability and Economic Vitality*

This goal relates to improvements in travel conditions on congested roadways. Reliability refers to the improvement of travel times on the transportation network. Can users count on getting to their destinations on time? Finally, the economic vitality portion of this goal relates to travel speeds and reliability on corridors that contain high volumes of trucks carrying goods. If goods cannot reach their destinations on time, the economy can be affected negatively. Therefore, Goods rated high in this category. Other programs that include high marks in this category include those that relate to roadway improvements: Local Roads, Local Streets/O&M, and Highway/Safety. Additionally, transit-related programs rated highly (Transit EE and Transit/Paratransit) because of their potential impact on system efficiency and reliability. Transportation Technology also rated highly because of its potential effect on system efficiency and reliability. The one non-transportation program (PDA Non-Trans) received a “low” rating in this category because it has no bearing on the transportation system.

### *Cost-Effective*

Cost-effective programs are those that contribute many benefits to the transportation system at a relatively low cost. Eight of the 15 programs rated highly in terms of cost-effectiveness. Some programs, such as Transit EE and Transit/Paratransit, have relatively higher capital or operations costs, but have the potential for many benefits to the system in terms of increased transit capacity and a large population served. Other programs help create incentives for using alternative modes through better access and other measures, which could create behavior changes among users that can help reduce congestion and address other transportation challenges. Transportation Technology (TT) can increase revenues in some cases, such as the use of tolling, and can have large-scale effects on travel behavior. Similarly, technologies such as communications systems have provided low-cost ways to present important information to travelers with positive effects on the entire system.

*Well-Maintained*

This goal refers to routine and preventive maintenance activities that leave roadways and transit facilities in a state of good repair. It was assumed that well-maintained infrastructure is important for travel efficiency, safety, and quality of service. Programs including projects that improve or maintain the state of good repair of the County's roadway and transit infrastructure were considered to have a high rating. Programs with less impact on transportation infrastructure maintenance were given medium or low ratings in this category.

*Safe*

This goal addresses the reduction of safety conflicts on roadways, transit infrastructure, bicycle and pedestrian routes, freight routes, and all other transportation modes. Programs that included specific safety projects, such as Local Roads, rated highly in this goal category.

*Supportive of a Clean and Healthy Environment*

This goal addresses how well programs reduce greenhouse gas (GHG) emissions, and whether the program encourages healthy physical activity. Programs that included specific environmental projects, such as Environmental Mitigation, rated highly in this category.

## 2.2 CAPITAL PROJECT SCREENING

Table 2.3 shows screening results for the capital project submittals that were received by the Alameda CTC and that were not classified as "committed". This list does not include programmatic projects as those were included in the "Draft Program Screening" step presented in Section 2.1. Each capital project's screening results were first calculated for each goal, and then totaled across all goals; no weights are applied to the individual projects and/or goal results. For display purposes, projects are grouped by County Planning Area, and then sequenced by the project identification number assigned for the Regional Transportation Plan (RTP ID). County Planning Areas were established in previous CWTPs as a means to represent North, Central, South, and East constituencies and activities.

For screening, each project was first geocoded in geographic information system (GIS) based on its location and attributes (e.g., stop/station location for transit projects). A spatial analysis was then conducted for each project using seven GIS layers that reflect activity center location, transit stops, crash rates, etc. Additional screening was conducted for metrics that do not entail GIS-based spatial analysis (e.g., mode, facility type, cost); and to check GIS results for accuracy. The outcomes of the screening process are summarized below.

### *Goal 1. Multimodal*

The result reflects the number of passenger and freight modes improved or affected by the project, with a possible value between 1 and 9. Passenger modes include automobile, bus, rapid bus, heavy rail, and ferry. Freight modes include truck, rail, maritime, and air transportation.

### *Goal 2a. Accessible, Affordable & Equitable: Activity Center Access*

The result reflects the number of activity centers and transit hubs within one-half mile of the project, with a possible value between 0 and 10. (All screening values are capped at 10 to avoid some calculation issues in creating breaks for high-medium-low analysis and presentation). Transit analysis is based on stop and station location rather than the alignment routing. Values for activity center access are manually adjusted in cases where there is limited ingress/egress on freeway ramps.

### *Goal 2b. Accessible, Affordable & Equitable: Low-Income Neighborhood Access*

This goal was measured as the number of traffic analysis zones (TAZ) with above-average proportion of low-income households that are intersected by a project, with a possible value between 0 and 10. The value is manually adjusted in cases where there is limited ingress/egress on freeway ramps.

### *Goal 3. Integrated with Land Use*

This goal was measured as the number of PDAs intersecting a project, with a possible value between 0 and 10. The value is manually adjusted in cases where there is limited ingress/egress on freeway ramps.

### *Goal 4. Connected*

The Regional Connectivity goal was measured by a project's ability to complete or improve a link in the regional transportation system. Projects that created significant new links to the bicycle, pedestrian, transit, freight, or HOV systems of the region's transportation network received a high value of 10. Projects that substantially improved existing connections were given a value of 5. No value was assigned if a project did not affect regional connectivity.

### *Goal 5. Reliable and Efficient*

This goal was assessed as whether a proposed project is located on an identified CMP route, or route with above average heavy trucks, with a value of 0 (project not located on either route), 5 (project located on one or the other), or 10 (project located on both).

### *Goal 6. Cost-Effective*

This goal was not considered as part of the screening process. However, project cost is an equal consideration with results from project screening and scenario evaluation when grouping projects into three groups that incorporate project cost.

### *Goal 7. Well-Maintained*

Goal 7 was not part of the capital project screening analysis process, primarily because this goal was addressed specifically in the programmatic project (or program) screening. For example, this goal refers to routine and preventive maintenance activities that leave roadways and transit facilities in a state of good repair. It was assumed that well-maintained infrastructure is important for travel efficiency, safety, and quality of service. Programmatic projects that improve or maintain the state of good repair of the County's roadway and transit infrastructure were considered to have a high rating. Programmatic projects providing less impact on transportation infrastructure maintenance were given medium or low ratings in this category (see Section 2.1 and Table 2.2).

### *Goal 8. Safe*

The safety analysis value reflects the number of freeways and arterial roadways with fatal crash rates above the statewide average ("safety areas") that the project overlaps. The value ranges from 0, which was assigned if the project does not overlap such a facility, 5 if the project overlaps one such facility, and 10 if the project overlaps two or more such facilities.

### *Goal 9. Supportive of a Clean and Healthy Environment*

Current and available data representing Goal 9 (e.g., project level emissions) were not available for project screening. However, analytical tools and models (Section 3.3) were used to predict Greenhouse Gas Emissions (GHG) and other emissions as part of the scenario evaluations used to identify performance for this goal.

Table 2.3 Screening Results for Capital Projects

RTP ID	Project Name	Goal 1. Multimodal	Goal 2a. Activity Center Access	Goal 2b. Income Equity	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 8. Safe
North County Planning Area								
21144	I-80 Gilman Street Interchange Improvements	●	○	●	○	●	●	○
22002	I-880 NB HOV lane extension from HOV terminus at Bay Bridge approach to Maritime	○	●	○	●	●	●	●
22082	7 <sup>th</sup> Street Grade Separation & Roadway Improvement Project	●	○	●	●	●	●	○
22089	Martinez Subdivision	○	●	●	●	●	●	○
22455	AC Transit East Bay Bus Rapid Transit (BRT)	●	●	●	●	●	●	○
22760	Outer Harbor Intermodal Terminal (OHIT)	●	●	●	●	●	●	●
22769	I-880 at 23 <sup>rd</sup> /29 <sup>th</sup> Avenue interchange safety and access improvements	○	●	●	●	●	●	○
22780	AC Transit Grand-MacArthur BRT	●	●	●	●	●	●	○
98207	I880 Broadway/Jackson Interchange, ramp and circulation Improvements; and Alameda Point, Downtown Oakland, and Jack London Square Transit Access	●	●	●	●	●	●	○
230170	I-880: 42 <sup>nd</sup> /High Street Access Improvements	○	○	●	●	●	●	○
230243	Access Improvements to West End Transit Hub on Mariner Square Drive (MSD)	●	●	●	●	●	○	○
230604	Contra Flow Lanes on Westbound Lanes of San Francisco-Oakland Bay Bridge	●	○	○	○	●	●	○
240024	Oakland Army Base Transportation Infrastructure Improvements	●	●	○	○	●	●	●

RTP ID	Project Name	Goal 1. Multimodal	Goal 2a. Activity Center Access	Goal 2b. Income Equity	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 8. Safe
240116	Powell Street Bridge Widening at Christie Avenue	○	●	●	●	●	●	○
240278	Harrison St-Oakland Avenue Major Street Improvements	●	●	○	●	●	●	○
240279	Mandela Parkway and 3 <sup>rd</sup> Street Corridor Commercial/Industrial Area Street Reconstruction	○	●	●	○	●	●	○
240280	Woodland – 81 <sup>st</sup> Avenue Industrial Zone street reconstruction	○	○	○	○	●	●	●
240282	Tidewater District Street Reconstruction	●	●	●	●	●	●	○
240318	I-80 Ashby Interchange	○	●	●	●	●	●	○
<b>Central County Planning Area</b>								
21123	Union City Intermodal Station infrastructure improvements (Phase 2)	●	●	○	●	○	○	○
22021	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	●	●	●	○	○	●	○
94506	East-West Connector Project in North Fremont and Union City	○	○	●	●	●	●	●
230088	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger Phases 1 and 2: I-880 extend NB HOV lanes	○	●	●	●	●	●	●
240037	I-880 Winton Avenue interchange improvements	○	●	●	○	●	●	○
240047	I-880 West A Street Interchange	○	●	●	●	●	●	○
240065	SR 92 Industrial interchange	○	○	○	○	●	●	●
240092	Lewelling Boulevard/Hesperian Boulevard Intersection Improvements Project (I-880 Hesperian/Lewelling Interchange)	○	●	●	●	●	○	○
240113	BART Hayward Maintenance Complex	○	●	○	○	●	○	○

RTP ID	Project Name	Goal 1. Multimodal	Goal 2a. Activity Center Access	Goal 2b. Income Equity	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 8. Safe
240180	BayFair Connection (Capacity Improvements)	●	●	●	●	●	○	○
240249	San Leandro Street Circulation and Capacity Improvements	○	●	●	○	●	○	○
240562	Rte 92/Clawiter Road Whitesell interchange improvement, Phase 2	○	●	●	●	●	●	○
240657	I-580 Spot Intersection Improvements	○	●	●	●	●	●	○
<b>South County Planning Area</b>								
21126	SR 84 WB HOV on ramp from Newark Blvd	○	○	○	○	●	●	●
21482	Extend Fremont Boulevard to connect to I-880/Dixon Landing Road	●	○	○	○	●	○	○
21484	Kato Road widening from Warren Avenue to Milmont	●	○	○	○	●	●	○
22009	Capitol Corridor intercity rail service expansion (Oakland to San Jose)	●	●	●	●	●	○	○
22042	I-680 for NB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lanes)	○	●	○	○	●	●	○
22062	Irvington BART Station	○	●	○	●	●	○	○
22779	Route 262/I-880 interchange improvements, Phase 2 – Construct grade separation at Warren Avenue/Union Pacific Railroad	○	●	●	●	●	●	○
98139	Right-of Way Preservation and track improvements in Alameda County	●	●	●	●	●	●	○
230101	Union City Passenger Rail Station & Dumbarton Rail Segment G Improvement Union City BART Phase 2/Passenger Rail Station	○	●	●	●	●	●	○
230103	Grade Separation in the Decoto neighborhood	●	●	●	●	○	●	○

RTP ID	Project Name	Goal 1. Multimodal	Goal 2a. Activity Center Access	Goal 2b. Income Equity	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 8. Safe
230110	Route 262 Mission Boulevard Cross Connector Improvements between I-680 and Warm Springs Boulevard SR 262 Mission Blvd Improvements	○	●	○	○	●	●	○
230114	Auto Mall Parkway Cross Connector Widening between I-680 and I-880	○	●	○	○	●	●	○
240018	Dumbarton Rail Corridor Phase I	●	●	○	○	●	●	○
240051	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	○	●	○	●	●	●	●
240052	I-880/Whipple Road Interchange Improvement	○	○	○	○	●	●	○
240053	Whipple Road from I-880 to Mission Boulevard Widening and Enhancement	○	●	●	●	●	●	○
240216	Dumbarton Rail Corridor Phase II	●	●	○	○	●	●	○
240263	Upgrade Relinquished Route 84 in Fremont (SR 84 Relinquished Route Upgrade)	●	●	○	●	●	●	●
240264	Widen Fremont Boulevard from I-880 to Grimmer Boulevard	●	●	●	●	●	●	●
240272	Thornton Avenue Widening	○	○	○	○	●	●	○
240304	Platform Extension at Alameda and San Joaquin County ACE Stations	○	●	●	●	●	●	○
<b>East County Planning Area</b>								
21100	I-580 Vasco interchange	○	●	○	○	●	●	○
21475	I-580 First Street interchange	●	○	○	○	●	●	○
21477	I-580 Greenville interchange	●	○	○	○	●	●	○

RTP ID	Project Name	Goal 1. Multimodal	Goal 2a. Activity Center Access	Goal 2b. Income Equity	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 8. Safe
21489	I-580/Foothill/San Ramon Interchange improvements	●	●	○	○	●	●	●
22664	I-580 WB Express Lane from Greenville Road to Foothill Blvd	○	●	○	○	●	●	●
22667	BART to Livermore Extension Phase 2	○	○	○	○	●	●	○
22765	I-580/I-680 HOV Direct Connector – Project Development	○	●	○	●	●	●	○
22776	SR 84 Expressway Widening (Pigeon Pass to Jack London)	○	●	○	●	●	○	○
230086	I-580 Interchange Improvements at Hacienda Drive and Fallon Road – Phase II	○	○	○	○	●	●	○
230099	I-580/I-680 Improvements Phase 1	●	●	○	●	●	●	○
240038	Dougherty Road Widening from Sierra Lane to North city Limit	●	○	○	○	●	○	○
240059	I-680 widening for NB HOV/HOT Lane from Route 84 to Alcosta Blvd	○	●	●	●	●	●	●
240061	I-680 widening for SB HOV/HOT from Alcosta Blvd to Route 84	○	●	●	●	●	●	●
240062	SR 84 Widening and SR84/I680 Interchange	○	○	○	○	●	●	○
240106	SR 84/Sunol Improvements	●	●	○	●	●	●	○
240132	El Charro Road Construction	●	○	○	○	●	○	○
240139	I-680 Stoneridge Drive overcrossing widening	○	●	○	○	●	●	○
240141	I-680 Sunol Boulevard Interchange (Non-Capacity Increasing Freeway/Expressway Interchange Modifications)	○	○	○	○	●	●	○
240144	I-580 Santa Rita Interchange improvements	○	○	○	○	●	●	○

RTP ID	Project Name	Goal 1. Multimodal	Goal 2a. Activity Center Access	Goal 2b. Income Equity	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 8. Safe
240196	BART to Livermore Extension Phase 1	●	●	○	●	●	●	○
240250	Dublin Boulevard Widening from Sierra Court to Dublin Court	○	○	○	○	●	●	○
240254	Greenville Widening	○	○	○	○	●	●	○
240261	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	●	●	○	○	●	●	○

● = High, ● = Medium, and ○ = Low.

DRAFT



## **3.0 CWTP Scenario Evaluation Results**

The second evaluation stage of CWTP investments utilized the Alameda County Travel Model and other data-driven quantitative tools to estimate project performance under the adopted CTWP goals and performance measures (see Section 1.3 and Table 1.1 above). The travel model uses extensive data systems to represent and simulate travel in Alameda County and a nine-county regional area given various changes in population and employment data and the transportation network. Single projects or program investments are too small relative to the entire transportation network to produce measureable results for individual projects using this travel model. To measure performance by projects and programs, they were grouped by investment strategy types and assigned available funding assumptions to create five transportation investment “scenarios” for modeling that were used to extrapolate results to individual projects. This process and the results are described in the following sections.

### **3.1 LAND USE ASSUMPTIONS**

Demographic and socioeconomic data are important components of the travel modeling programs. Local data are assigned at the level of travel analysis zones, which are approximately the size of census tracts used by the U.S. Census Bureau.

For this first round of evaluation, a “SCS Alternative Future” land use scenario was developed based on population and employment projections developed by ABAG in early 2011. The demographic and socioeconomic data for jurisdictions within Alameda County were adjusted as part of the CWTP effort based on input from regional and local planning agencies and informed by the region’s on-going Sustainable Communities Strategy (SCS) planning process.

The housing growth by jurisdiction was derived from Projections 2009, but with a portion of future growth refocused into traffic zones that contained Priority Development Areas (PDA) or Growth Opportunity Areas (GOAs). The employment data was derived by utilizing the jobs per household ratio for Alameda County in the Initial Vision Scenario (IVS) as developed by ABAG for the regional SCS process, and applying the ratio to the Projections 2009 housing growth from 2010 to 2035. The derived employment growth was redistributed to the jurisdictions based on the proportional distribution in the IVS, but with greater weight given to PDAs/GOAs for specific Standard Industrial Classification (SIC) employment categories. Tables 3.1 and 3.2 show the demographic and socioeconomic assumptions used in this evaluation by Alameda County jurisdiction and all counties in the Bay Area. For subsequent

evaluations, a locally preferred SCS scenario is being developed with input from the regional and local agencies.

**Table 3.1 Alameda County Socioeconomic Data Used in Travel Modeling**

County or Jurisdiction	Households	Population	Employment	Employed Residents
Alameda	35,631	84,946	33,096	41,718
Albany	8,079	18,904	4,917	9,850
Berkeley	52,044	120,058	76,466	62,275
Dublin	28,698	80,295	31,612	36,178
Emeryville	9,749	18,032	23,005	9,249
Fremont	93,543	269,355	111,579	138,009
Hayward	58,215	181,833	79,451	81,542
Livermore	45,671	122,974	55,783	64,374
Newark	16,281	51,405	21,579	23,484
Oakland	193,519	503,004	232,697	218,685
Piedmont	3,820	10,667	2,104	4,874
Pleasanton	32,357	85,887	64,264	46,807
San Leandro	36,990	93,880	46,372	44,854
Union City	24,135	84,470	26,229	36,639
Alameda County	1,368	3,842	191	2,249
Ashland	8,276	23,409	5,885	9,950
Castro Valley	30,501	78,109	13,730	41,687
Cherryland	5,215	14,833	1,960	6,265
San Lorenzo	9,448	27,521	4,263	12,439
<b>Total</b>	<b>415,013</b>	<b>968,995</b>	<b>672,858</b>	<b>566,227</b>

Table 3.2 Bay Area County Socioeconomic Data Used in Travel Modeling

County or Jurisdiction	Households	Population	Employment	Employed Residents
Alameda County	415,013	968,995	672,858	566,227
Contra Costa Co.	322,728	892,995	405,896	364,082
Marin County	827,191	2,431,397	1,177,622	900,811
Napa County	693,540	1,873,421	835,183	891,128
San Francisco Co.	480,679	1,323,286	422,315	631,896
San Mateo County	171,296	506,499	155,695	244,130
Santa Clara County	54,624	148,797	83,050	59,267
Solano County	211,287	561,492	231,490	258,899
Sonoma County	112,229	274,301	141,358	142,422

## 3.2 CREATING THE SCENARIOS

The next step in the scenario evaluation process was to create the five transportation investment scenarios based on varying amounts of project and program investment. These scenarios were adopted by the CWTP-TEP Steering Committee with input from the Community and Technical Advisory Committees in April 2011. The five scenarios, described below, are based on themes and include:

1. Baseline,
2. Unconstrained,
3. Programs,
4. Capital Projects, and
5. Land Use.

The purpose of comparing the themed investment scenarios is to provide information from which the Alameda CTC Steering Committee and its stakeholders can form a preferred scenario for inclusion in the CWTP, which will undergo additional evaluation in fall 2011. These five scenarios were evaluated using the Alameda County travel model. The scenarios were “built” by coding each of the projects and program investment levels into the travel demand model as assumptions and into the transportation network. Detailed descriptions of each scenario and the programmatic and project assumptions are shown below and are shown in Appendix C:

- **Baseline.** Reflects the current (existing and committed) transportation system. The transportation network in the travel model was updated to

include existing and financially-committed transportation projects in Alameda County. See Appendix B.

- **Unconstrained.** The Unconstrained scenario includes the set of all transportation capital projects identified through the combined MTC/Alameda CTC Call for projects processes. This scenario also includes changes in nonmotorized travel times and transit frequencies to reflect programmatic spending as shown in Table 3.4. Major projects in this scenario include BART to Livermore Phase II, Dumbarton Rail Phase II, and the I-580/680 Direct Connector.

The Baseline and Unconstrained scenarios were compared to three scenarios that include mixes of projects and program investment levels that reflect financially-constrained transportation investment strategies. Each of the three financially constrained scenarios was assumed to have total funding for projects and programs of \$12 billion over the life of the CWTP.<sup>1</sup> The three financially constrained scenarios, as described below, were:

- **Programs.** Emphasis is on transportation operations, maintenance, ITS, improvements, enhancements. It includes all modes. This package provides the greatest coverage of highway improvements, such as interchanges, ramps, bridges, and the construction and adjustment of HOT/HOV lanes. Both passenger and freight modes were assigned, although the project submissions for freight operations were relatively few. Projects that improved congestion and safety conditions were prioritized with moderate priority given to projects that improve access to PDAs. Projects were grouped by corridor to emphasize cohesive network improvements. High effort was given to geographic equity to emphasize countywide improvement benefits. The scenario assumes a funding split of 60 percent programmatic/40 percent capital projects. This scenario includes financially constrained capital projects, changes in nonmotorized travel and transit frequencies to reflect programmatic spending, and the Dumbarton Phase 1 and the I-580/680 Direct Connector major projects.
- **Capital Projects.** Emphasis is on large-scale projects, approximately one-quarter representing near-term projects, capacity and enhancements for all passenger and freight modes. This package provides the greatest emphasis on highway, transit, rail, and port capacity projects. While some highway widenings and other improvements are included, priority was given to new

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<sup>1</sup> The project scenarios had initially included funding caps that would apply to projects and packages to affect the mix of capital and programmatic spending. However, the number of projects submitted, as part of the CWTP Call for Projects and Programs and estimated costs, did not make this possible. Instead, the project packages were differentiated primarily on investment strategy types. This is also reflected in programmatic spending, which is shown in Table 3.4.

capacity projects, or construction of new facilities that improve congestion and safety conditions. Projects were grouped by corridor to emphasize cohesive network improvements, although priority was given to segments or phases with the greatest capacity improvements. The scenario assumes a funding split of 40 percent programmatic/60 percent capital projects. This scenario includes financially constrained capital projects and major projects, including Dumbarton Rail Phase II, BART to Livermore Phase I, and the Bay Bridge Contra-Flow Lanes. This scenario does not include nonmotorized travel time changes, and does include less frequent transit service to reflect reductions in programmatic spending in these areas.

- Land Use.** Emphasis on projects in PDAs, projects connecting PDAs, transit, nonmotorized modes, and access to transit. This package provides the greatest attention to projects providing direct improvement to transportation systems in regional PDAs, including transit-oriented development projects. Priority was given to projects that would have the greatest potential to address requirements of AB 32 and SB 375 regarding GHG emissions from transportation. Priority was given to transit station and local neighborhood investments that would connect land use and transportation. This category received the lowest effort to balance geographic equity in the planning area due to the emphasis on GHG reduction strategies, namely public transportation and multimodal projects that are typically located in areas with relatively high population density. The scenario assumes a funding split of 50 percent for each programmatic and capital project. The Land Use scenario includes financially constrained capital projects, major projects including BART to Livermore Phase I, Dumbarton Rail Phase II, and the Bay Bridge Contra-Flow Lanes. This scenario also includes changes in nonmotorized travel times and transit frequencies with connections to PDAs that reflect programmatic spending.

Table 3.3 shows the allocation of funding for each scenario by planning area. Funds not spent on projects were used to model programmatic spending effects on the transportation network.

**Table 3.3 Scenario Project Package Totals by Alameda County Planning Area**

Planning Area	Unconstrained Scenario	Capital Projects Scenario	Programmatic Scenario	Land Use Scenario
North	\$2,031.5	\$1,303.3	\$728.2	\$1,092.0
Central	\$1,158.0	\$573.0	\$585.0	\$1,067.0
East	\$5,589.1	\$1,760.8	\$2,151.3	\$1,561.9
South	\$2,301.5	\$1,749.6	\$715.9	\$1,911.9
<b>Scenario Total</b>	<b>\$11,080.1</b>	<b>\$5,386.7</b>	<b>\$4,180.4</b>	<b>\$5,632.8</b>

Scenarios included mixes of projects and programs that lead to modeling results, which indicate the effects of different investment strategies. In the Programmatic and Capital Projects scenarios, all projects are exclusive; that is, no one project can be included in both the Programs and Capital Projects scenarios. All projects were included in the Unconstrained scenario<sup>2</sup>. Projects in the Land Use scenario did overlap with the Programs and Capital Projects scenarios due to the geographic focus of that project package. Therefore, each project was included in at least two scenarios for travel demand modeling and other quantitative analysis. Programs

Table 3.4 reflects the allocation of funding for each program by scenario. Total available program funding is a function of the program share of each scenario and surplus funds from project spending.

**Table 3.4 Alameda CWTP Resources Allocated by Programmatic Category by Scenario**  
*In Millions \$U.S.*

Program Category		Baseline	Unconstrained	Programs	Capital Projects	Land Use
1	Bicycle and Pedestrian Program	\$660	\$1,845	\$798	\$515	\$720
2	Transit Enhancements, Expansion and Safety Program	\$1,500	\$4,613	\$1,436	\$1,803	\$1,800
3	Transit and Paratransit Operations and Education Program	\$1,320	\$4,613	\$2,632	\$1,030	\$1,800
4	CBTP Implementation Program	\$60	\$277	\$160	\$0	\$180
5	Local Road Improvements Program	\$660	\$1,845	\$638	\$966	\$300
6	Local Streets and Roads O&M Program	\$300	\$923	\$1,196	\$322	\$300
7	Highway, Freeway, Safety and Non-Capacity Improvements Program	\$660	\$2,214	\$160	\$966	\$0
8	Bridge Improvements Program	\$120	\$185	\$239	\$0	\$0
9	Transportation and Land Use (PDA) Program	\$180	\$738	\$319	\$0	\$510
10	Planning and Outreach Program	\$60	\$92	\$0	\$0	\$30
11	TDM and Parking Management Program	\$60	\$369	\$160	\$0	\$300
12	Goods Movement Program	\$420	\$369	\$239	\$644	\$0
13	PDA Support – Non-Transportation Program	\$0	\$55	\$0	\$0	\$30
14	Environmental Mitigation Program	\$0	\$55	\$0	\$64	\$30
15	Transportation Technology and Revenue Enhancement Program	\$0	\$258	\$0	\$129	\$0
<i>Total (All programs)</i>		\$6,000	\$18,450	\$7,976	\$6,440	\$6,000
Program Share		50%	~60%	~65%	~55%	50%

<sup>2</sup> For projects with two phases of development that were submitted separately in the CWTP, such as BART to Livermore, which includes an express bus phase, only the second (fully developed) phase was included in the Unconstrained scenario.

Table 3.5 illustrates the changes to the transportation model to reflect investments in Alameda County’s transportation spending programs. The changes are presented below by scenario. The travel model includes changes to intrazone and interzone walking and bicycling travel times, walking to transit by mode, and single-occupancy vehicle (SOV) travel and wait times.

**Table 3.5 Program Allocation Modeling**

Change	Baseline (\$6 Billion)	Unconstrained (\$19 Billion)	Programs (\$7.5 Billion)	Capital Projects (\$6.5 Billion)	Land Use (\$6 Billion)
Interzone walk travel time	No change	-15% for all TAZs	-10% for all TAZs	No change	-20% to/from PDA TAZs
Intrazone walk travel time	No change	-15% for all TAZs	-15% in for all TAZs	No change	-25% in PDA
Interzone bike travel time	No change	-15% for all TAZs	-10% for all TAZs	No change	-20% to/from PDA TAZs
Intrazone bike travel time	No change	-15% for all TAZs	-15% in for all TAZs	No change	-25% in PDA only
Walk to local bus travel time	No change	-15% in all TAZs	-15% in all TAZs	No change	-25% in PDA only
Walk to express bus travel time	No change	-10% in PDA only	No change	No change	-25% in PDA only
Walk to rail travel time	No change	-10% in PDA only	No change	No change	-25% in PDA only
SOV terminal times	No change	+15% in PDA only	No change	No change	+25% in PDA only
Carpool terminal times	No change	+15% in PDA only	No change	No change	+25% in PDA only

Note: Terminal time refers to the travel time between a parked vehicle and the final destination.

These changes above are in addition to project coding that represented capital investments reflected in the projects submitted for regional planning processes. For example, pedestrian bridges or bicycle paths that formed a new access points were coded. Other model changes made to reflect programs were increases in transit service, represented as increased service frequency (decreased headways).

### 3.3 SCENARIO EVALUATION RESULTS

This section provides a summary of the quantitative systemwide performance evaluation results of the future 2035 baseline, financially unconstrained, and financially constrained scenarios.

Modeling results are presented, where possible, by Alameda County Planning Areas, North, Central, South, and East (defined above in Section 2.0). Detailed results for each scenario by performance measure are presented below. The performance measures for the scenario evaluations are based on the nine overarching goals developed as part of the CWTP to guide investment analysis

and decision-making and are described in Section 1.0. These goals were used to develop individual quantitative measures that will aid the decision-making process; and provide objective measures of the groups of projects and programs used in the Baseline, Unconstrained, and each of the financially constrained scenarios. The performance measure metrics are based on quantitative results derived from the Alameda County travel model for each scenario. In most cases, the analysis compares one of the four scenarios to the baseline scenario. These metrics are being used to evaluate packages of projects and are, therefore, similar to, but not the same as, metrics developed for the project screening process performed prior to this scenario evaluation. The results from the project-level screening process are presented in Section 2.0.

### Mode Shares by Scenario

Table 3.6 described the countywide results that show relatively little change in mode shares across all scenarios. The change appears to be primarily between walk and drive-alone trips. This is due to changes in walk times that make short trips by car less attractive. The nonmotorized mode shares are greatest in North County planning area, consistent with greatest residential and employment density of the planning areas.

**Table 3.6 Mode Shares by Scenario**

Planning Area	Drive Alone	Shared Ride 2	Shared Ride 3	Transit	Bike	Walk
<b>Countywide Results (Share of Trips)</b>						
Baseline	52%	19%	12%	6%	2%	9%
Unconstrained	51%	19%	12%	6%	2%	11%
Programs	51%	19%	12%	6%	2%	10%
Capital Projects	52%	19%	12%	6%	2%	9%
Land Use	51%	19%	12%	6%	2%	10%
<b>Baseline (Share of Trips)</b>						
North	47%	18%	12%	9%	2%	11%
Central	54%	20%	13%	5%	1%	7%
South	55%	20%	13%	3%	1%	8%
East	56%	20%	12%	4%	1%	8%
<b>Unconstrained (Share of Trips)</b>						
North	46%	18%	11%	9%	2%	13%
Central	54%	19%	12%	5%	1%	9%
South	54%	19%	13%	4%	1%	9%
East	55%	19%	12%	3%	1%	9%

Planning Area	Drive Alone	Shared Ride 2	Shared Ride 3	Transit	Bike	Walk
<b>Programs (Share of Trips)</b>						
North	47%	18%	12%	10%	2%	12%
Central	54%	19%	13%	5%	1%	8%
South	54%	19%	13%	3%	1%	8%
East	56%	20%	12%	3%	1%	8%
<b>Capital Projects (Share of Trips)</b>						
North	47%	18%	12%	10%	2%	11%
Central	54%	20%	13%	5%	1%	7%
South	55%	19%	13%	3%	1%	8%
East	56%	20%	12%	3%	1%	8%
<b>Land Use (Share of Trips)</b>						
North	46%	18%	11%	9%	2%	13%
Central	54%	19%	13%	5%	1%	8%
South	54%	19%	13%	3%	1%	9%
East	56%	20%	12%	3%	1%	8%

Note: Totals may not equal sums due to rounding.

### Activity Center Accessibility

As shown in Table 3.7, the countywide results indicate that activity center accessibility for each income group increases over the Baseline scenario in all but the Capital Projects scenario. This lack of improvement reflects reduced pedestrian and bicycle programs in the Capital Project scenario, as well as reduced spending in transit operations programs.

Table 3.7 Activity Center Accessibility by Scenario

Planning Area	Share of Household Income Groups			
	< \$25k	\$25k-\$45k	\$45k-\$75k	> \$75k
<b>Countywide Results</b>				
Baseline	70%	61%	50%	37%
Unconstrained	79%	71%	61%	48%
Programs	75%	67%	56%	43%
Capital Projects	68%	59%	49%	37%
Land Use	77%	68%	56%	41%
<b>Baseline</b>				
North	81%	77%	71%	59%
Central	72%	71%	67%	53%
South	30%	32%	29%	24%
East	30%	24%	21%	15%
<b>Unconstrained</b>				
North	89%	85%	80%	67%
Central	79%	78%	75%	62%
South	49%	49%	46%	42%
East	39%	32%	29%	22%
<b>Programs</b>				
North	85%	82%	77%	63%
Central	74%	73%	68%	54%
South	44%	44%	41%	36%
East	36%	30%	27%	19%
<b>Capital Projects</b>				
North	76%	73%	67%	56%
Central	71%	70%	66%	53%
South	31%	33%	30%	24%
East	30%	24%	21%	15%
<b>Land Use</b>				
North	89%	86%	80%	63%
Central	77%	75%	71%	55%
South	39%	39%	36%	29%
East	32%	25%	23%	17%

## Public Transit Accessibility

As shown in Table 3.8, transit accessibility relies primarily on the addition of more frequent transit service along all transit routes and modes. The Programs and the Unconstrained scenarios both show an increase in public transit accessibility in the Central, South, and East planning areas. This was due to increases in transit service in those scenarios, substantially above the baseline service levels. In the North County planning area, there is no change in transit accessibility because the area is already well served by transit. The Land Use scenario was unchanged from the Baseline, because PDAs are already well served by frequent public transportation. That is, routes in the Land Use scenario that gained more service were in close proximity to other routes that were already running at frequent headways in the Baseline scenario.

**Table 3.8 Public Transit Accessibility by Scenario**

Planning Area	Share of Household Income Groups			
	< \$25k	\$25k-\$45k	\$45k-\$75k	> \$75k
<b>Countywide Results</b>				
Baseline	81%	70%	58%	46%
Unconstrained	86%	78%	69%	60%
Programs	83%	72%	61%	49%
Capital Projects	79%	69%	57%	46%
Land Use	81%	70%	58%	46%
<b>Baseline</b>				
North	96%	94%	91%	84%
Central	90%	87%	83%	76%
South	28%	26%	25%	17%
East	6%	10%	10%	11%
<b>Unconstrained</b>				
North	96%	94%	92%	87%
Central	91%	89%	85%	79%
South	59%	59%	58%	53%
East	25%	26%	26%	23%
<b>Programs</b>				
North	96%	94%	91%	84%
Central	91%	89%	85%	79%
South	35%	32%	31%	22%
East	10%	15%	15%	16%

Planning Area	Share of Household Income Groups			
	< \$25k	\$25k-\$45k	\$45k-\$75k	> \$75k
<b>Capital Projects</b>				
North	92%	91%	89%	82%
Central	88%	86%	82%	75%
South	28%	26%	25%	17%
East	6%	10%	10%	11%
<b>Land Use</b>				
North	96%	94%	91%	84%
Central	90%	87%	83%	76%
South	28%	26%	25%	17%
East	6%	10%	10%	11%

Note: Totals may not equal sums due to rounding.

### Transit Efficiency Findings

Although there is greater transit service (both capital project and programmatic) in the Unconstrained scenario, the transit ridership increased less than the revenue hours of service in the scenario modeling, as shown in Table 3.9. Therefore, this scenario shows reduced efficiency even with greater public transit service levels. The apparent decline in efficiency in the unconstrained scenario reflects a large increase in service hours (based on increased frequencies of bus trips) and relatively minor increases in countywide transit ridership.

**Table 3.9 Transit Efficiency by Scenario**

	Baseline	Unconstrained	Programs	Capital Projects	Land Use
Passengers/Rev. Hour	45	44	48	48	48

### Average Travel Time Findings

For each financially constrained scenario, average travel times improve generally over the Baseline scenario in each of the detailed travel “corridors,” as shown in the Tables 3.10 to 3.14. This indicates a reduction of congestion for most origin-destination pairs. One exception is peak-period travel from Downtown San Francisco to North Alameda, where travel times increase on roadways (indicating congestion) from the Baseline to all other scenarios. This is due to the contra-flow lane project on the Bay Bridge, in which an eastbound lane is given over to westbound traffic in the AM peak period, and the opposite in the PM peak period. This affects all modes, including transit.

Transit projects, notably investments in operations, reduce congestion in the travel model by attracting new riders that no longer drive their cars for as many trips. The same is true for pedestrian and bicycle travel improvements, which can help reduce the number of cars using the roadways. Operations spending on alternative modes is most evident in the travel time results for the Programs and Land Use Scenarios.

**Table 3.10 Minutes of Average Travel Time the Baseline Scenario**

Planning Area Origin*	Planning Area Destination	AM Peak (1-Hour)			PM Peak (1-Hour)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	18	21	16	16	17	15	35
Central	Central	15	15	12	14	13	13	38
Dntn SF	North	65	75	38	59	60	55	42
North	Dntn SF	71	69	68	53	61	40	42
Cen. San Jose	East	49	49	49	128	124	124	120
East	Cen. San Jose	168	145	164	60	57	60	124
Cen. San Jose	South	32	31	31	41	36	36	83
South	Cen. San Jose	43	40	37	34	32	33	77
North	South	62	56	63	49	45	52	98
South	North	56	63	55	80	61	81	88

**Table 3.11 Minutes of Average Travel Time for the Unconstrained Scenario**

Planning Area Origin	Planning Area Destination	AM Peak (1-Hour)			PM Peak (1-Hour)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	17	19	15	15	16	14	32
Central	Central	14	14	11	13	12	12	35
Dntn SF	North	72	82	45	54	55	50	49
North	Dntn SF	62	57	59	53	61	39	43
Cen. San Jose	East	45	44	46	96	61	94	109
East	Cen. San Jose	141	114	138	56	53	56	116
Cen. San Jose	South	31	31	30	40	34	36	79
South	Cen. San Jose	43	39	37	34	32	33	76
North	South	54	47	54	47	43	50	90
South	North	52	58	52	62	44	66	91

Table 3.12 Minutes of Average Travel Time for the Programs Scenario

Planning Area Origin	Planning Area Destination	AM Peak (1-Hour)			PM Peak (1-Hour)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	17	20	15	15	16	14	31
Central	Central	14	14	12	13	13	12	35
Dntn SF	North	72	82	45	56	58	52	49
North	Dntn SF	63	58	60	53	60	39	43
Cen. San Jose	East	48	49	48	123	111	119	117
East	Cen. San Jose	154	131	151	59	55	58	118
Cen. San Jose	South	32	31	31	41	36	36	81
South	Cen. San Jose	43	40	37	34	32	33	76
North	South	56	49	57	47	42	50	95
South	North	53	59	52	71	50	73	92

Table 3.13 Minutes of Average Travel Time for the Capital Projects Scenario

Planning Area Origin	Planning Area Destination	AM Peak (1-Hour)			PM Peak (1-Hour)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	18	21	16	16	17	15	38
Central	Central	14	14	12	14	13	12	37
Dntn SF	North	73	84	47	58	59	54	42
North	Dntn SF	64	59	61	54	61	40	42
Cen. San Jose	East	47	46	47	117	115	115	114
East	Cen. San Jose	152	131	149	57	54	57	120
Cen. San Jose	South	32	31	31	41	36	36	81
South	Cen. San Jose	43	40	37	34	32	33	77
North	South	54	50	56	48	44	51	89
South	North	54	61	54	71	52	71	86

**Table 3.14 Minutes of Average Travel Time for the Land Use Scenario**

Planning Area/Super-District Origin	Planning Area/Super-District Destination	AM Peak (1-Hour)			PM Peak (1-Hour)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	18	20	16	16	17	15	32
Central	Central	15	14	12	14	13	12	35
Dntn SF	North	64	75	37	57	59	54	48
North	Dntn SF	69	67	66	53	61	40	44
Cen. San Jose	East	49	49	49	120	109	116	114
East	Cen. San Jose	155	125	151	60	55	59	122
Cen. San Jose	South	32	31	31	40	36	36	81
South	Cen. San Jose	43	40	37	34	32	33	76
North	South	58	52	59	48	43	51	98
South	North	54	61	54	75	54	75	95

### Ratio of Peak to Off-Peak Period Travel Times

Tables 3.15 to 3.19 presented the ratio of peak-period to off-peak period average travel times, which generally decreased for the district pairs used in this analysis, indicating improvements in peak-congested conditions over baseline conditions. Again, trips to and from Downtown San Francisco were affected somewhat by modeling adjustments to the Bay Bridge contra-flow lane.

**Table 3.15 Peak to Off-Peak Travel Time Ratio for the Baseline Scenario**

Planning Area Origin	Planning Area Destination	AM Peak (1-hr)			PM Peak (1-hr)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	1.31	1.44	1.24	1.16	1.20	1.20	1.03
Central	Central	1.27	1.25	1.15	1.22	1.16	1.21	0.99
Dntn SF	North	2.73	2.96	1.64	2.47	2.35	2.41	0.98
North	Dntn SF	2.84	2.57	2.82	2.14	2.26	1.64	0.96
Cen. San Jose	East	1.14	1.16	1.18	3.01	2.94	2.99	1.12
East	Cen. San Jose	3.91	3.40	3.91	1.40	1.33	1.42	1.24
Cen. San Jose	South	1.14	1.12	1.15	1.46	1.30	1.35	1.13
South	Cen. San Jose	1.54	1.43	1.38	1.21	1.14	1.23	1.18
North	South	1.82	1.84	1.81	1.46	1.46	1.50	1.36
South	North	1.67	2.07	1.60	2.39	2.02	2.34	1.33

Table 3.16 Peak to Off-Peak Travel Time Ratio for the Unconstrained Scenario

Planning Area Origin	Planning Area Destination	AM Peak (1-hr)			PM Peak (1-hr)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	1.27	1.39	1.21	1.15	1.18	1.19	0.98
Central	Central	1.22	1.21	1.11	1.12	1.08	1.12	0.99
Dntn SF	North	3.06	3.24	2.01	2.32	2.20	2.24	1.11
North	Dntn SF	2.52	2.13	2.47	2.16	2.26	1.65	0.97
Cen. San Jose	East	1.07	1.03	1.10	2.24	1.45	2.27	1.04
East	Cen. San Jose	3.27	2.67	3.29	1.31	1.24	1.34	1.18
Cen. San Jose	South	1.13	1.11	1.14	1.44	1.25	1.34	1.11
South	Cen. San Jose	1.54	1.41	1.38	1.20	1.14	1.21	1.18
North	South	1.61	1.55	1.58	1.42	1.43	1.46	1.30
South	North	1.57	1.95	1.52	1.88	1.47	1.92	1.45

Table 3.17 Peak to Off-Peak Travel Time Ratio for the Programs Scenario

Planning Area Origin	Planning Area Destination	AM Peak (1-hr)			PM Peak (1-hr)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	1.28	1.41	1.23	1.16	1.19	1.19	0.99
Central	Central	1.25	1.23	1.13	1.20	1.14	1.18	0.98
Dntn SF	North	2.70	2.92	1.61	2.41	2.29	2.34	1.08
North	Dntn SF	2.76	2.49	2.74	2.14	2.25	1.64	0.98
Cen. San Jose	East	1.14	1.16	1.18	2.81	2.57	2.81	1.07
East	Cen. San Jose	3.60	2.93	3.61	1.39	1.29	1.41	1.21
Cen. San Jose	South	1.14	1.12	1.14	1.44	1.30	1.34	1.12
South	Cen. San Jose	1.54	1.43	1.38	1.21	1.14	1.22	1.15
North	South	1.70	1.69	1.69	1.43	1.42	1.48	1.34
South	North	1.62	2.01	1.57	2.22	1.78	2.18	1.45

Table 3.18 Peak to Off-Peak Travel Time Ratio for the Capital Projects Scenario

Planning Area Origin	Planning Area Destination	AM Peak (1-hr)			PM Peak (1-hr)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	1.31	1.45	1.24	1.16	1.19	1.19	1.09
Central	Central	1.24	1.23	1.12	1.18	1.13	1.17	0.98
Dntn SF	North	3.09	3.29	2.07	2.44	2.33	2.38	0.98
North	Dntn SF	2.57	2.19	2.52	2.15	2.26	1.65	0.93
Gen. San Jose	East	1.10	1.10	1.14	2.75	2.71	2.76	1.09
East	Gen. San Jose	3.52	3.07	3.56	1.32	1.26	1.35	1.20
Gen. San Jose	South	1.14	1.12	1.15	1.48	1.31	1.36	1.13
South	Gen. San Jose	1.53	1.42	1.37	1.21	1.14	1.22	1.20
North	South	1.61	1.64	1.61	1.42	1.42	1.47	1.25
South	North	1.62	2.00	1.55	2.11	1.72	2.06	1.35

Table 3.19 Peak to Off-Peak Travel Time Ratio for the Land Use Scenario

Planning Area Origin	Planning Area Destination	AM Peak (1-hr)			PM Peak (1-hr)			Peak Transit
		Drive Alone	Shared Ride	Trucks	Drive Alone	Shared Ride	Trucks	
North	North	1.29	1.42	1.23	1.15	1.18	1.19	0.98
Central	Central	1.25	1.23	1.13	1.17	1.12	1.17	0.99
Dntn SF	North	3.06	3.23	2.02	2.40	2.28	2.33	1.11
North	Dntn SF	2.56	2.17	2.51	2.15	2.26	1.64	0.97
Gen. San Jose	East	1.13	1.15	1.17	2.88	2.62	2.87	1.11
East	Gen. San Jose	3.57	3.07	3.60	1.37	1.29	1.39	1.19
Gen. San Jose	South	1.14	1.12	1.14	1.46	1.30	1.35	1.12
South	Gen. San Jose	1.55	1.44	1.38	1.21	1.14	1.22	1.20
North	South	1.68	1.63	1.67	1.42	1.39	1.47	1.37
South	North	1.59	1.95	1.53	2.14	1.67	2.13	1.48

### Pavement Conditions

Lane mileage outputs from the travel model were requested as a way to evaluate the length of roadways assumed to exist in each model scenario. As shown in Table 3.20, additional roadway miles are included in each scenario. This metric provides context to the pavement condition measure.

The results indicate that, in the Unconstrained, Programs, and Capital Projects scenarios, the roadway conditions are expected to improve with approximately 91 percent of all non-highway roadway types achieving an “excellent” condition rating. The increase reflects high levels of roadway operations spending in the program allocations.

**Table 3.20 Pavement Conditions by Scenario**

Condition Class	Arterial	Collector	Local	Total
<b>Baseline (\$38 million/year)</b>				
Excellent	27.0%	21.1%	38.6%	86.7%
High/Good	0.0%	0.0%	9.2%	9.2%
Low	0.1%	0.0%	0.8%	0.9%
Failing	0.0%	3.2%	0.0%	3.2%
<i>Countywide</i>	<i>27.1%</i>	<i>24.3%</i>	<i>48.6%</i>	<i>100.0%</i>
<b>Unconstrained (\$111 million/year)</b>				
Excellent	27.0%	24.4%	39.4%	90.8%
High/Good	0.0%	0.0%	9.2%	9.2%
Low	0.0%	0.0%	0.0%	0.0%
Failing	0.0%	0.0%	0.0%	0.0%
<i>Countywide</i>	<i>27.0%</i>	<i>24.4%</i>	<i>48.6%</i>	<i>100.0%</i>
<b>Programs (\$73 million/year)</b>				
Excellent	27.0%	24.4%	39.4%	90.7%
High/Good	0.0%	0.0%	9.2%	9.2%
Low	0.0%	0.0%	0.0%	0.0%
Failing	0.0%	0.0%	0.0%	0.0%
<i>Countywide</i>	<i>27.0%</i>	<i>24.4%</i>	<i>48.6%</i>	<i>100.0%</i>
<b>Capital Projects (\$52 million/year)</b>				
Excellent	27.0%	23.8%	39.2%	90.0%
High/Good	0.0%	0.0%	9.2%	9.2%
Low	0.0%	0.0%	0.0%	0.0%
Failing	0.0%	0.6%	0.0%	0.6%
<i>Countywide</i>	<i>27.0%</i>	<i>24.4%</i>	<i>48.6%</i>	<i>100.0%</i>
<b>Land Use (\$24 million/year)</b>				
Excellent	25.8%	19.8%	18.3%	63.9%
High/Good	0.0%	0.3%	20.2%	20.5%
Low	0.0%	0.0%	1.8%	1.8%
Failing	1.2%	4.3%	8.3%	13.8%
<i>Countywide</i>	<i>27.0%</i>	<i>24.4%</i>	<i>48.6%</i>	<i>100.0%</i>

**Table 3.21 New Roadway Lane Mileage by Scenario Expected to be Added to Existing Maintenance Needs**

Facility Type	Total Lane Miles				
	Baseline	Unconstrained	Programs	Capital Projects	Land Use
Freeway	5,521	5,573	5,551	5,532	5,551
Expressway	1,511	1,531	1,511	1,531	1,511
Major Arterial	9,730	9,763	9,753	9,743	9,753
Collector	5,642	5,644	5,644	5,642	5,644
Fwy-to-Fwy Ramp	149	150	149	149	149
Fwy Ramp	542	546	545	546	545
Metered Ramp	27	28	28	28	28
<b>Total</b>	<b>23,123</b>	<b>23,234</b>	<b>23,180</b>	<b>23,171</b>	<b>23,180</b>

Note: Totals may not match due to rounding.

### Transit Vehicle Condition

The results indicate an increase in remaining service life as spending on transit maintenance programs increases, as shown in Table 3.22.

**Table 3.22 Transit Vehicle Conditions by Scenario**

	Percentage of Remaining Service Life				
	Baseline	Unconstrained	Programs	Capital Projects	Land Use
Cars	28%	28%	28%	28%	28%
Vans and 25 ft. Buses	63%	63%	63%	63%	63%
Buses 25-30 ft.	23%	23%	23%	23%	23%
Buses > 30 ft.	39%	52%	39%	47%	48%
<i>Average % RSL</i>	<i>38%</i>	<i>42%</i>	<i>38%</i>	<i>40%</i>	<i>41%</i>

### Safety Findings

The reduction in vehicle miles traveled (VMT) leads to a reduction in crashes over the Baseline scenario compared to the Unconstrained, Programs, and Land Use scenarios, as presented in Table 3.23. The slight increase in motor vehicle crashes in the Capital Projects scenario reflects the inclusion of projects that increase highway capacity, which attracts additional driving trips. This increases VMT, which then increases crash rates.

Projects that reduce driving – shifting trips to alternative modes – will result in fewer crashes using this methodology, as shown in Table 3.24.

**Table 3.23 Safety – Anticipated Accidents by Type (Injury, Fatality, and Property Damage) and Scenario**

Mode	Baseline		Unconstrained		Programs		Capital Projects		Land Use	
	Region	Alameda County	Region	Alameda County	Region	Alameda County	Region	Alameda County	Region	Alameda County
Motor Vehicle Fatal	693	155	691	154	693	155	693	156	693	155
Motor Vehicle Injury	55,024	12,329	54,804	12,241	54,961	12,294	55,032	12,344	54,991	12,317
Motor Vehicle Property Damage Only (PDO)	98,493	22,069	98,098	21,910	98,381	22,006	98,507	22,096	98,434	22,048
Walk Fatal	173	39	172	38	173	39	173	39	173	39
Walk Injury	4,552	1,020	4,534	1,013	4,547	1,017	4,553	1,021	4,550	1,019
Bicycle Fatal	30	7	30	7	30	7	30	7	30	7
Bicycle Injury	4,135	927	4,118	920	4,130	924	4,136	928	4,133	926
<i>Total Annualized (Less PDO)</i>	<i>60,056</i>	<i>13,456</i>	<i>59,815</i>	<i>13,360</i>	<i>59,987</i>	<i>13,418</i>	<i>60,065</i>	<i>13,473</i>	<i>60,020</i>	<i>13,444</i>
<i>Average Weekday</i>	<i>165</i>	<i>37</i>	<i>164</i>	<i>37</i>	<i>164</i>	<i>37</i>	<i>165</i>	<i>37</i>	<i>164</i>	<i>37</i>

**Table 3.24 Crash Rates Per Million VMT**

Rate	Auto	Walk	Bike
Fatal Rate/VMT	2.99	0.74	0.13
Injury Rate/VMT	237.01	19.61	17.81
PDO Rate/VMT	424.24		

### Average Non-Motorized Travel Time

Table 3.25 shows the changes in the unconstrained scenario that led to shorter walking trip times and shorter bicycle trip times. This indicates shorter distances between origins and destinations leading to easier trips that people are likely to make (see Mode Shares results in Table 3.5). The shorter distances were affected by the nonmotorized travel time changes based on programmatic spending levels assigned to each scenario. Some pedestrian and bicycle facilities were coded in the model but these are unlikely to make a significant impact on the results.

**Table 3.25 Average Daily Nonmotorized Travel Time by Scenario**

Trip Origin Planning Area	Baseline		Unconstrained		Programs		Capital Projects		Land Use	
	Walk	Bicycle	Walk	Bicycle	Walk	Bicycle	Walk	Bicycle	Walk	Bicycle
<i>Countywide</i>	17.91	22.76	17.18	20.50	17.73	22.08	17.88	22.74	17.32	20.75
North	16.35	22.61	15.65	20.32	16.20	21.94	16.36	22.60	15.69	20.17
Central	20.84	23.70	20.01	21.36	20.69	22.99	20.83	23.70	20.21	21.85
South	21.43	22.28	20.73	20.02	21.25	21.54	21.38	22.20	20.97	20.63
East	16.58	22.81	15.65	20.78	16.24	22.19	16.42	22.85	16.13	22.01

### Emissions Findings

As presented in Table 3.26, the changes in CO<sub>2</sub> (GHG) and PM<sub>2.5</sub> emissions show a reduction over the baseline scenario for all other scenarios. The greatest improvements, in the unconstrained scenario, likely results from increases in transit use, as well as improvements in highway travel speeds (more efficient automobile running speeds).

**Table 3.26 GHG and Fine Particulate Matter Emissions by Scenario**

Scenario	Tons of Daily Emissions	
	CO <sub>2</sub> (GHG)	PM <sub>2.5</sub>
Baseline	21,630	1.81
Unconstrained	20,597	1.79
Programs	21,275	1.68
Capital Projects	21,259	1.88
Land Use	21,151	1.81

### 3.4 SCENARIO ANALYSIS – PROGRAM RESULTS

This section presents performance results for capital projects based on the quantitative scenario analysis shown in Section 3.3. These project analysis results were developed through a five-step process that was conducted after completion of the travel model runs and off-model analysis conducted for each of the five scenarios (Baseline<sup>3</sup>, Unconstrained, Programs, Capital Projects, and Land Use). The five-step process produced results that reflected how well each capital project performs when combined in different ways with other capital projects, programmatic projects, and alternate levels of program funding. The details of this five-step process are shown below.

#### *Step 1. Assemble Scenario Results for Each Performance Measure*

Scenario results for each performance measure were assembled as shown in Section 3.3, Scenario Evaluation Results for each scenario and, where available, for each of the four planning areas. An example of these scenario results is shown in Table 3.27 for Performance Measure 9A (average non-motorized travel time). In the case of this example, the values shown in Table 3.27 for walk and bicycle trips were averaged by scenario and planning area to determine an overall travel time for non-motorized trips, as shown in Table 3.28. Similar averaging was completed for other performance measures where needed.

<sup>3</sup> Results from the Baseline scenario were not used for the project-level analysis since new project submittals were not included in this scenario. Baseline consisted only of the existing transportation system plus committed projects. Baseline is used for comparison purposes only.

## Step 2. Develop Scenario Rank for Each Performance Measure and Planning Area

For each performance measure and planning area, the four scenarios were ranked from the “best” to the “worst” in relative performance. The “best” performing scenario in each planning area and measure was assigned a value of ‘4’, while the “worst” performing scenario was assigned a value of 1. The results of this step for the non-motorized travel time performance measure are shown in Table 3.29. As can be seen, the Capital Projects scenario had the “worst” relative performance in all four planning areas for this measure, while the Unconstrained scenario had the “best” relative performance in the Central, South, and East planning areas.

**Table 3.27 Average Daily Walk and Bicycle Travel Time by Scenario – Performance Measure 9A**  
*In Minutes*

Trip Origin Planning Area	Baseline		Unconstrained		Programs		Capital Projects		Land Use	
	Walk	Bicycle	Walk	Bicycle	Walk	Bicycle	Walk	Bicycle	Walk	Bicycle
<i>Countywide</i>	17.91	22.76	17.18	20.50	17.73	22.08	17.88	22.74	17.32	20.75
North	16.35	22.61	15.65	20.32	16.20	21.94	16.36	22.60	15.69	20.17
Central	20.84	23.70	20.01	21.36	20.69	22.99	20.83	23.70	20.21	21.85
South	21.43	22.28	20.73	20.02	21.25	21.54	21.38	22.20	20.97	20.63
East	16.58	22.81	15.65	20.78	16.24	22.19	16.42	22.85	16.13	22.01

**Table 3.28 Average Daily Non-Motorized Travel Time by Scenario**  
*In Minutes*

Trip Origin Planning Area	Unconstrained	Programs	Capital projects	Land Use
<i>Countywide</i>	18.84	19.91	20.31	19.04
North	17.99	19.07	19.48	17.93
Central	20.69	21.84	22.27	21.03
South	20.38	21.40	21.79	20.80
East	18.22	19.22	19.64	19.07

Note: Values are average of the walk and bicycle times shown in Table 1 for each scenario and planning area.

**Table 3.29 Scenario Ranking for Non-Motorized Travel Time  
In Minutes**

Trip Origin Planning Area	Unconstrained	Programs	Capital Projects	Land Use
Countywide	4	2	1	3
North	3	2	1	4
Central	4	2	1	3
South	4	2	1	3
East	4	2	1	3

Note: Lowest time is assigned highest value.

### *Step 3. Identify Relevant Scenarios for Each Program*

Programmatic projects were modeled at a countywide level by applying changes to walking and bicycling times, increasing transit hours and frequency, and/or using pavement condition modeling, as described in Section 3.1. Determining the performance of individual programs began with establishing which scenario was most affected by which program. Associating relevant scenarios to specific programs was carried out by considering both financial allocations and programmatic modeling adjustments. This information can be found in Table 3.3 Alameda CWTP Resources Allocated by Programmatic Category by Scenario and Table 3.4 Program Allocation Modeling. As an example, the Bicycle and Pedestrian Program was associated with the Programs and Land Use scenarios based on higher levels of funding and allocation modeling in these scenarios. Using this methodology, four programs were not associated with any scenario including Bridge Improvements, Planning and Outreach, Goods Movement, and Environmental Mitigation. Therefore, these programs could not be scored in scenario analysis.

### *Step 4. Determine Performance Values for Each Program*

The scenario rankings, which are shown in Table 3.29 for one example measure, were combined to determine a single performance value for a program. This single value was determined by identifying the ranks (see Step #2) for each relevant scenario, and then averaging the identified rank values. This step was repeated for each performance measure and program.

Table 3.30 shows the application of this step for Bicycle and Pedestrian Program. The four middle columns in Table 3.30 repeat the scenario rankings that were reported in Table 3.29. The highlighted cells in Table 3.30 indicate that the Bicycle and Pedestrian Program is associated with the Programs and Land Use scenarios. For the non-motorized travel time measure, the Programs and Land Use scenarios had relative rankings of 2 and 3 at the countywide level, which averages to a value of 2.5. Therefore, the Bicycle and Pedestrian Program has a performance measure value of 2.5 for the non-motorized travel time measure.

**Table 3.30 Non-Motorized Travel Time Value for Bicycle and Pedestrian Program**

Trip Origin Planning Area	Unconstrained	Programs	Capital Projects	Land Use	Performance Measure Value*
<i>Countywide</i>	4	2	1	3	2.5

\*Final value is average of the highlighted cells.

*Step 5. Determine Relative Performance of Each Project*

Once values were determined for each project and performance measure, the final relative performance was established for each project by performance measure. For each performance measure, the values established in Step 4 for all programs were arrayed. The top one-third of projects (i.e., the projects with the highest values for a given performance measure) was assigned a final value of “high”. Similarly, the middle one-third of project was assigned a final value of “medium,” and the bottom one-third of projects was assigned a value of low. This process was repeated for all performance measures.

The results of Step #5 are displayed in Table 3.31.



Table 3.31 Program-Level Performance from Scenario Analysis by Performance Measure

ID	Project Name	Multimodal (Related to Goal 1)	Activity Center Access (Goals 2 & 3)	Transit Access by Income Group (Goals 2 & 3)	Transit Ridership per Revenue Hour (Goal 3)	Avg Travel Time – Auto (Goals 4 & 5)	Avg Travel Time – Carpool (Goals 4 & 5)	Avg Travel Time – Truck (Goals 4 & 5)	Avg Travel Time – Transit (Goals 4 & 5)	Ratio of Peak to Off-Peak Travel Time (Goals 4 & 5)	Pavement Condition (Goal 7)	Transit Vehicle Condition (Goal 7)	Crashes All Modes (Goal 8)	Avg Non-Motorized Travel Time (Goal 9)	GHG Emissions (Goal 9)	Fine Particle Emissions (Goal 9)
1	Bicycle and Pedestrian Program	●	●	●	●	●	●	●	○	●	○	○	●	●	●	●
2	Transit Enhancements, Expansion and Safety Program	●	○	●	●	●	●	●	●	●	○	●	●	●	●	●
3	Transit and Paratransit Operations and Education Program	●	●	●	●	●	●	●	●	●	○	●	●	●	●	●
4	CBTP Implementation Program	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
5	Local Road Improvements Program	○	○	●	●	●	●	●	●	●	●	○	●	●	○	○
6	Local Streets and Roads O&M Program	○	○	●	●	●	●	●	○	●	●	○	●	●	●	●
7	Highway, Freeway, Safety and Non-Capacity Improvements Program	○	○	○	●	●	●	●	○	●	●	○	●	○	○	○
8	Bridge Improvements Program	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
9	Transportation and Land Use (PDA) Program	●	●	●	●	○	○	○	●	●	○	○	●	●	●	●
10	Planning and Outreach Program	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
11	TDM and Parking Management Program	●	○	●	●	●	●	●	●	○	○	○	●	●	●	●
12	Goods Movement Program	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13	PDA Support – Non-Transportation Program	●	○	●	●	○	○	○	○	○	○	○	●	●	●	●
14	Environmental Mitigation Program	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
15	Transportation Technology and Revenue Enhancement Program	○	○	○	●	●	●	●	○	●	●	●	●	○	●	●

● = High, ● = Medium, and ○ = Low

Footnote: Programs 8,10, 12,14 were not included in modeling of scenarios and therefore are not rated in the scenario analysis



### 3.5 SCENARIO ANALYSIS – PROJECT RESULTS

This section presents performance results for capital projects based on the quantitative scenario analysis shown in Section 3.2. These project analysis results were developed through a five-step process that was conducted after completion of the travel model runs and off-model analysis conducted for each of the five scenarios (Baseline<sup>4</sup>, Unconstrained, Programs, Capital Projects, and Land Use). The five-step process produced results that reflected how well each capital project performs when combined in different ways with other capital projects, programmatic projects, and alternate levels of program funding. The details of steps 1 and 2 can be found in Section 3.4, as they are the same for program and project scenario analysis. Steps 3 through 5 of the five-step project analysis process are shown below.

#### *Step 3. Identify Scenarios and Planning Area for Each Capital Project*

As noted in Section 3.2, each project was included in at least two scenarios for travel demand modeling and other quantitative analysis. In Step 3, each project's location (in terms of county planning area) and scenarios in which it was analyzed were noted. As an example, Project #240065, the SR 92/Industrial Interchange is located in the Central County planning area and was included in the Unconstrained and Capital scenarios.

#### *Step 4. Determine Performance Values for Each Project*

The scenario rankings, which are shown in Table 3.30 for one example measure, were combined to determine a single performance value for a project. This single value was determined by identifying the ranks (see Step #2) for each scenario in which a project was included, and then averaging the identified rank values. This step was repeated for each performance measure and project.

Table 3.32 shows the application of this step for Project #240065 (SR 92/Industrial Interchange). The four middle columns in Table 3.32 repeat the scenario rankings that were reported in Table 3.29. The highlighted cells in Table 3.32 indicate that Project #240065 is located in Central County planning area, and was included in the Unconstrained and Capital scenarios. For the non-motorized travel time measure, the Unconstrained and Capital scenarios had relative rankings of 4 and 1 in the Central County planning area, which averages

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<sup>4</sup> Results from the Baseline scenario were not used for the project-level analysis since new project submittals were not included in this scenario. Baseline consisted only of the existing transportation system plus committed projects. Baseline is used for comparison purposes only.

to a value of 2.5. Therefore, Project #240065 has a performance measure value of 2.5 for the non-motorized travel time measure.

**Table 3.32 Non-Motorized Travel Time Value for Example Project**

Trip Origin Planning Area	Unconstrained	Program	Capital Projects	Land Use	Performance Measure Value*
North	3	2	1	4	
Central	4	2	1	3	2.5
South	4	2	1	3	
East	4	2	1	3	

\*Final value is average of the bold cells.

*Step 5. Determine Relative Performance of Each Project*

Once values were determined for each project and performance measure, the final relative performance was established for each project by performance measure. For each performance measure, the values established in Step 4 for all capital projects were arrayed. The top one-third of projects (i.e., the projects with the highest values for a given performance measure) was assigned a final value of “high”. Similarly, the middle one-third of project was assigned a final value of “medium,” and the bottom one-third of projects was assigned a value of low. This process was repeated for all performance measures.

The results of Step #5 are displayed in Table 3.33. Results in Table 3.33 are organized by planning area, and then sequenced by “RTP ID” number.

Table 3.33 Project-Level Performance from Scenario Analysis by Performance Measure

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RTP ID	Project Name	Multimodal (Related to Goal 1)	Activity Center Access (Goal 2 & 3)	Transit Access by Income Group (Goals 2 & 3)	Transit Ridership per Revenue Hour (Goal 3)	Avg Travel Time – Auto (Goals 4 & 5)	Avg Travel Time – Carpool (Goals 4 & 5)	Avg Travel Time – Truck (Goals 4 & 5)	Avg Travel Time – Transit (Goals 4 & 5)	Ratio of Peak to Off-Peak Travel Time (Goals 4 & 5)	Pavement Condition (Goal 7)	Transit Vehicle Condition (Goal 7)	Crashes All Modes (Goal 8)	Avg Non-Motorized Travel Time (Goal 9)	GHG Emissions (Goal 9)	Fine Particle Emissions (Goal 9)
<b>North County Planning Area</b>																
21144	I-80 Gilman Street Interchange Improvements	○	○	○	○	●	●	●	●	●	●	○	○	○	○	●
22002	I-880 NB HOV lane extension from HOV terminus at Bay Bridge approach to Maritime	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○
22082	7 <sup>th</sup> Street Grade Separation & Roadway Improvement Project	●	○	●	○	○	○	○	○	○	●	●	●	●	●	○
22089	Martinez Subdivision	○	○	○	○	●	●	●	●	●	●	○	○	○	○	●
22455	AC Transit East Bay BRT	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○
22760	Outer Harbor Intermodal Terminal (OHIT)	○	○	○	○	●	●	●	●	●	●	○	○	○	○	●
22769	I-880 at 23 <sup>rd</sup> /29 <sup>th</sup> Avenue interchange safety and access improvements	○	○	○	○	●	●	●	●	●	●	○	○	○	○	●
22780	AC Transit Grand-MacArthur BRT	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○
98207	I-880 Broadway/Jackson Interchange, ramp and circulation Improvements; and Alameda Point, Downtown Oakland, and Jack London Square Transit Access	●	●	○	●	●	●	●	●	●	○	●	○	●	○	●
230170	I-880: 42 <sup>nd</sup> /High Street Access Improvements	○	○	○	○	●	●	●	●	●	●	○	○	○	○	●
230243	Access Improvements to West End Transit Hub on MSD	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○
230604	Contra-Flow Lanes on Westbound Lanes of San Francisco-Oakland Bay Bridge	●	●	○	●	●	●	●	●	●	○	●	○	●	○	●
240024	Oakland Army Base Transportation Infrastructure Improvements	●	○	●	○	○	○	○	○	○	●	●	●	●	●	○
240116	Powell Street Bridge Widening at Christie Avenue	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○
240278	Harrison St-Oakland Avenue Major Street Improvements	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○

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RTP ID	Project Name	Multimodal (Related to Goal 1)	Activity Center Access (Goal 2 & 3)	Transit Access by Income Group (Goals 2 & 3)	Transit Ridership per Revenue Hour (Goal 3)	Avg Travel Time – Auto (Goals 4 & 5)	Avg Travel Time – Carpool (Goals 4 & 5)	Avg Travel Time – Truck (Goals 4 & 5)	Avg Travel Time – Transit (Goals 4 & 5)	Ratio of Peak to Off-Peak Travel Time (Goals 4 & 5)	Pavement Condition (Goal 7)	Transit Vehicle Condition (Goal 7)	Crashes All Modes (Goal 8)	Avg Non-Motorized Travel Time (Goal 9)	GHG Emissions (Goal 9)	Fine Particle Emissions (Goal 9)
240279	Mandela Parkway and 3 <sup>rd</sup> Street Corridor Commercial/Industrial Area Street Reconstruction	○	○	○	○	●	●	●	●	●	●	○	○	○	○	●
240280	Woodland – 81 <sup>st</sup> Avenue Industrial Zone street reconstruction	●	○	●	○	○	○	○	○	○	●	●	●	●	●	○
240282	Tidewater District Street Reconstruction	●	●	○	●	●	●	●	●	●	○	●	○	●	○	●
240318	I-80 Ashby Interchange	○	○	○	○	●	●	●	●	●	●	○	○	○	○	●
<b>Central County Planning Area</b>																
22021	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	●	●	○	●	●	●	●	○	●	○	●	○	●	○	●
230088	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger Phases 1 and 2: I-880 extend NB HOV lanes	●	●	○	●	●	●	●	○	●	○	●	○	●	○	●
240037	I-880 Winton Avenue interchange improvements	○	○	○	○	●	●	●	○	●	●	○	○	○	○	●
240047	I-880 West A Street Interchange	○	○	○	○	●	●	●	○	●	●	○	○	○	○	●
240092	Lewelling Boulevard/Hesperian Boulevard Intersection Improvements Project (I-880 Hesperian/Lewelling Interchange)	●	●	○	●	●	●	●	○	●	○	●	○	●	○	●
240113	BART Hayward Maintenance Complex	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○
240180	BayFair Connection (Capacity Improvements)	●	●	○	●	●	●	●	○	●	○	●	○	●	○	●
240249	San Leandro Street Circulation and Capacity Improvements	●	●	○	●	●	●	●	○	●	○	●	○	●	○	●
240562	Rte 92/Clawiter Road Whitesell interchange improvement, Phase 2	○	○	○	○	●	●	●	○	●	●	○	○	○	○	●
240657	I-580 Spot Intersection Improvements	○	○	○	○	●	●	●	○	●	●	○	○	○	○	●

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RTP ID	Project Name	Multimodal (Related to Goal 1)	Activity Center Access (Goal 2 & 3)	Transit Access by Income Group (Goals 2 & 3)	Transit Ridership per Revenue Hour (Goal 3)	Avg Travel Time – Auto (Goals 4 & 5)	Avg Travel Time – Carpool (Goals 4 & 5)	Avg Travel Time – Truck (Goals 4 & 5)	Avg Travel Time – Transit (Goals 4 & 5)	Ratio of Peak to Off-Peak Travel Time (Goals 4 & 5)	Pavement Condition (Goal 7)	Transit Vehicle Condition (Goal 7)	Crashes All Modes (Goal 8)	Avg Non-Motorized Travel Time (Goal 9)	GHG Emissions (Goal 9)	Fine Particle Emissions (Goal 9)
<b>South County Planning Area</b>																
21123	Union City Intermodal Station infrastructure improvements (Phase 2)	●	●	●	●	○	○	○	●	○	○	●	●	●	●	○
21126	SR 84 WB HOV on ramp from Newark Blvd	○	○	●	○	●	○	●	○	●	●	○	○	○	○	●
21482	Extend Fremont Boulevard to connect to I-880/Dixon Landing Road	○	○	●	○	●	○	●	○	●	●	○	○	○	○	●
21484	Kato Road widening from Warren Avenue to Millmont	●	●	●	○	○	●	○	○	○	●	●	●	●	●	○
22009	Capitol Corridor intercity rail service expansion (Oakland to San Jose)	●	●	●	●	○	●	○	●	○	○	●	●	●	●	○
22042	I-680 for NB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lanes)	●	●	●	○	○	●	○	○	○	●	●	●	●	●	○
22062	Irvington BART Station	●	○	○	●	●	○	●	●	●	○	●	○	●	○	●
22779	Route 262/I-880 interchange improvements, Phase 2 – Construct grade separation at Warren Avenue/Union Pacific Railroad	○	○	●	○	●	○	●	○	●	●	○	○	○	○	●
94506	East-West Connector Project in North Fremont and Union City	●	●	●	○	○	○	○	●	○	●	●	●	●	●	○
98139	Right-of Way Preservation and track improvements in Alameda County	●	○	○	●	●	○	●	●	●	○	●	○	●	○	●
230101	Union City Passenger Rail Station & Dumbarton Rail Segment G Improvement Union City BART Phase 2/Passenger Rail Station	●	○	○	●	●	○	●	●	●	○	●	○	●	○	●
230103	Grade Separation in the Decoto neighborhood	●	●	●	●	○	●	○	●	○	○	●	●	●	●	○
230110	Route 262 Mission Boulevard Cross Connector Improvements between I-680 and Warm Springs Boulevard SR 262 Mission Blvd Improvements	●	●	●	○	○	●	○	○	○	●	●	●	●	●	○
230114	Auto Mall Parkway Cross Connector Widening between I-680 and I-880	●	●	●	○	○	●	○	○	○	●	●	●	●	●	○
240018	Dumbarton Rail Corridor Phase I	○	●	●	○	○	○	○	○	○	○	○	●	○	●	○

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RTP ID	Project Name	Multimodal (Related to Goal 1)	Activity Center Access (Goal 2 & 3)	Transit Access by Income Group (Goals 2 & 3)	Transit Ridership per Revenue Hour (Goal 3)	Avg Travel Time – Auto (Goals 4 & 5)	Avg Travel Time – Carpool (Goals 4 & 5)	Avg Travel Time – Truck (Goals 4 & 5)	Avg Travel Time – Transit (Goals 4 & 5)	Ratio of Peak to Off-Peak Travel Time (Goals 4 & 5)	Pavement Condition (Goal 7)	Transit Vehicle Condition (Goal 7)	Crashes All Modes (Goal 8)	Avg Non-Motorized Travel Time (Goal 9)	GHG Emissions (Goal 9)	Fine Particle Emissions (Goal 9)
240051	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	●	○	○	●	●	○	●	●	●	○	●	○	●	○	●
240052	I-880/Whipple Road Interchange Improvement	○	○	●	○	●	○	●	○	●	●	○	○	○	○	●
240053	Whipple Road from I-880 to Mission Boulevard Widening and Enhancement	●	●	●	●	○	●	○	●	○	○	●	●	●	●	○
240216	Dumbarton Rail Corridor Phase II	●	●	●	●	●	○	○	○	●	○	○	○	●	●	●
240263	Upgrade Relinquished Route 84 in Fremont (SR 84 Relinquished Route Upgrade)	●	●	●	●	○	●	○	●	○	○	●	●	●	●	○
240264	Widen Fremont Boulevard from I-880 to Grimmer Boulevard	●	●	●	●	○	●	○	●	○	○	●	●	●	●	○
240272	Thornton Avenue Widening	●	●	●	○	○	●	○	○	○	●	●	●	●	●	○
240304	Platform Extension at Alameda and San Joaquin County ACE Stations	●	●	●	●	○	●	○	●	○	○	●	●	●	●	○
East County Planning Area																
21100	I-580 Vasco interchange	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
21475	I-580 First St. interchange	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
21477	I-580 Greenville interchange	●	●	●	○	○	●	○	○	●	●	●	●	●	●	○
21489	I-580/Foothill/San Ramon Interchange improvements	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
22664	I-580 WB Express Lane from Greenville Road to Foothill Blvd	●	●	●	●	○	○	○	●	●	○	●	●	●	●	○
22667	BART to Livermore Extension Phase 2	●	●	●	●	●	○	○	○	●	○	○	○	●	●	●
22765	I-580/I-680 HOV Direct Connector – Project Development	●	●	●	○	○	●	○	○	●	●	●	●	●	●	○
22776	SR 84 Expressway Widening (Pigeon Pass to Jack London)	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
230086	I-580 Interchange Improvements at Hacienda Drive and Fallon Road – Phase II	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●

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RTP ID	Project Name	Multimodal (Related to Goal 1)	Activity Center Access (Goal 2 & 3)	Transit Access by Income Group (Goals 2 & 3)	Transit Ridership per Revenue Hour (Goal 3)	Avg Travel Time – Auto (Goals 4 & 5)	Avg Travel Time – Carpool (Goals 4 & 5)	Avg Travel Time – Truck (Goals 4 & 5)	Avg Travel Time – Transit (Goals 4 & 5)	Ratio of Peak to Off-Peak Travel Time (Goals 4 & 5)	Pavement Condition (Goal 7)	Transit Vehicle Condition (Goal 7)	Crashes All Modes (Goal 8)	Avg Non-Motorized Travel Time (Goal 9)	GHG Emissions (Goal 9)	Fine Particle Emissions (Goal 9)
230099	I-580/I-680 Improvements Phase 1	●	●	●	○	○	●	○	○	●	●	●	●	●	●	○
240038	Dougherty Road Widening from Sierra Lane to North city Limit	●	●	●	●	○	○	○	●	●	○	●	●	●	●	○
240059	I-680 widening for NB HOV/HOT Lane from Route 84 to Alcosta Blvd	●	●	●	●	○	○	○	●	●	○	●	●	●	●	○
240061	I-680 widening for SB HOV/HOT from Alcosta Blvd to Route 84	●	●	●	●	○	○	○	●	●	○	●	●	●	●	○
240062	SR 84 Widening and SR84/I680 Interchange	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
240106	SR 84/Sunol Improvements	●	●	●	○	○	●	○	○	●	●	●	●	●	●	○
240132	El Charro Road Construction	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
240139	I-680 Stoneridge Drive overcrossing widening	●	●	●	○	○	●	○	○	●	●	●	●	●	●	○
240141	I-680 Sunol Boulevard Interchange (Non-Capacity Increasing Freeway/ Expressway Interchange Modifications)	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
240144	I-580 Santa Rita Interchange improvements	○	○	●	○	●	●	●	●	●	●	○	○	○	○	●
240196	BART to Livermore Extension Phase 1	○	○	○	●	○	○	○	○	○	○	○	○	○	○	○
240250	Dublin Boulevard Widening from Sierra Court to Dublin Court	●	●	●	●	○	○	○	●	●	○	●	●	●	●	○
240254	Greenville Widening	●	●	●	○	○	●	○	○	●	●	●	●	●	●	○
240261	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	●	●	●	○	○	●	○	○	●	●	●	●	●	●	○

● = High, ● = Medium, and ○ = Low.



## 4.0 CWTP Project and Program Grouping

This section presents the results of grouping projects and programs based on relatively similar levels of performance and estimated cost in the screening and scenario evaluation stages described in previous sections. Groups were created to provide a straightforward methodology and clear results that reflect project evaluation. The performance evaluation results were compared for all projects and programs. Percentile sections were used to create high, medium, and low sectors for evaluation performance values.

The Group results are displayed in Tables 4.1 to 4.4 below, organized by Group and then by Planning Area. Table 4.1 represents the Program Groups, and Tables 4.2 to 4.4 present the Capital Project Groups. Projects and programs were grouped using different methodologies because projects do not have static costs, which were adjusted in the different modeling scenarios to reflect different possible spending priorities in the modeling scenarios.

Program Groups were created by averaging the evaluation values from both the screening and scenario evaluation stages to create total performance value. The top performing programs are Group 1, the middle performing programs were in Group 2, and the programs with lowest performance values were Group 3.

Project Groups incorporated both performance values and estimated project cost. This also allows projects to be evaluated relative to CWTP Goal 6, Cost Effectiveness, which in this methodology is defined as the performance evaluation value in relation to the estimated project cost. Project costs were organized into three groups similar to project performance by using logical breakpoints. Screening and scenario results were combined and averaged with each goal equally weighted (each goal performance value has the same minimum and maximum possible value) to create one total performance value for each project. A project's total performance value and capital cost determined in which of the three Groups the project was placed. The Groups were then organized to reflect similar performance and cost, such that:

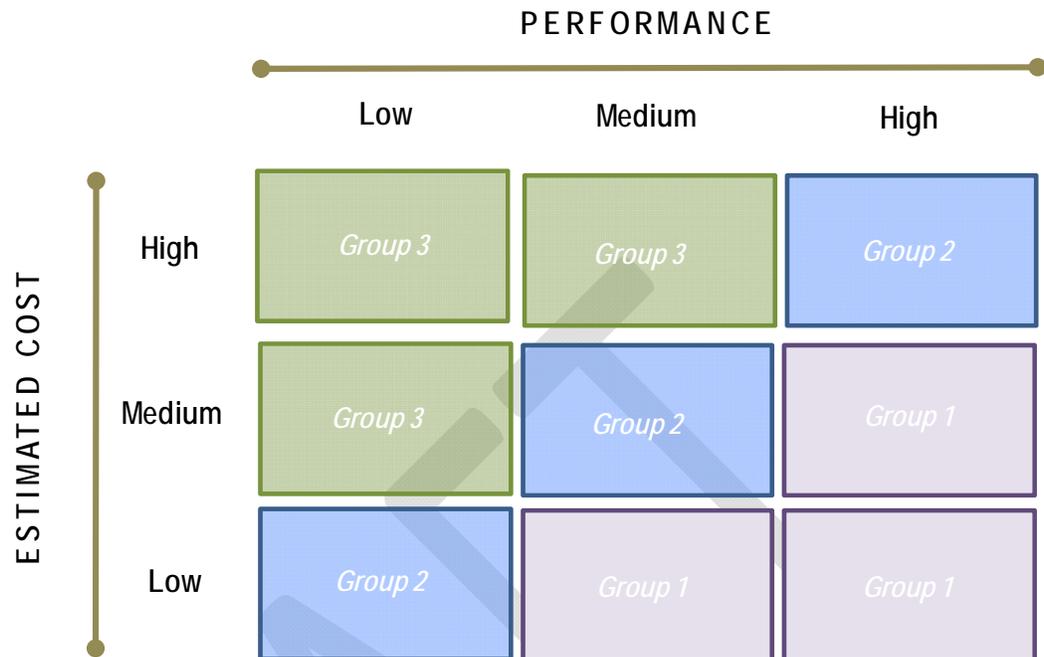
- **Group 1.** High performance, low and medium cost; and medium performance, low cost.
- **Group 2.** High performance, high cost; medium performance, medium cost; and low performance, low cost.
- **Group 3.** Medium performance, high cost; and low performance, medium to high cost.

The Groups should not be interpreted as indicators of “good” or “bad” projects. Rather, the Groups are a way to identify projects that offer similar performance

value. Project Groups, given the costs information, offer an equivalent performance versus cost value. In this way, the Cost Effective Goal is evaluated. The details of the process used to group projects are as follows below.

- **Assemble All Performance Measures.** As noted above, the grouping process combined project performance results from project screening (also known as “qualitative” screening) and from project-level performance from the scenario analysis (also known as “quantitative” screening). Based on performance for each metric, a project had been given a high, medium, or low measure for each metric in each scenario.
- **Calculate Project Composite Performance.** The performance measure values were averaged to create one value for each CWTP Goal in each evaluation stage. The measure results were then averaged for each project across each evaluation stage to create a performance value for each CWTP goal and for each project. The average value of each of the nine Goals for each project was used to determine a project’s composite performance.
- **Chart Performance Results with Estimated Project Cost.** The composite performance value was displayed on a chart with the estimated project capital cost, as shown on Figure 4.1. Project performance is shown on the horizontal axis, with “lower” performing projects plotted on the left and higher performing projects plotted to the right. Cost is shown on the vertical axis from zero dollars at the low end of the axis to \$3 billion at the high end.
- **Establish Cost Thresholds.** The cost data was analyzed to create the top, middle, and lower three cost groups. The percentile values were then adjusted so that project costs do not fall too closely to threshold values. Natural break points were found at \$30 million and \$160 million, with 27 projects costing more than or equal to \$160 million, 18 projects costing less than \$160 million and more than \$30 million, and 27 projects costing less than \$30 million.
- **Establish Performance Thresholds.** Similarly, the performance data shown on the ‘x-axis’ in Figure 4.1 was analyzed to identify break points that might result in three roughly equal-sized groups. Based on this analysis, 21 projects had “low” performance values compared to all other projects, 35 projects had “medium” performance values compared to all other projects, and 20 projects had “high” performance compared to all other projects.
- **Establish Project Groups.** The nine quadrants created by the cost and performance thresholds were grouped to create project groups with balanced numbers of projects. See the bullets above for which quadrants were included in each Group. Group 1 had 24 projects, Group 2 had 34 projects, Group 3 had 18 projects.

Figure 4.1 Project Grouping Example



Again, note that the project groups are not indicators of “good” or “bad” projects. The grouping process was a way to group projects by performance vs. cost value for ease of analysis and usefulness in the planning process. In fact, all projects within a group should be viewed as having equivalent performance vs. cost value. The grouped projects and programs were intended only to be one tool used in selecting projects and programs for the CWTP. Other factors, such as available funding, programmatic funding levels, and the creation of unified investment strategies within corridors and subareas, could lead to reasonable decisions to select a subset of projects from all three groups. For the draft CWTP, the following should also be considered:

- “Low Hanging Fruit” - high performing, low cost projects and programs that produce immediate results.
- Projects and programs coming from a prior process with established consensus.
- Projects and programs that leverage high performing projects and programs or have other synergistic benefit.
- Projects and programs that leverage committed funds - low ask for project completion.
- Projects and programs that support accepted investment strategy.
- Consideration of projects and programs that meet other criteria that have traditionally been important to the county, such as maintenance/fix-it-first and congestion relief.

Table 4.1 Evaluation Results, Programs

#	Program Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance
<b>Group 1. High Relative Performance</b>											
1	Bicycle and Pedestrian Program	●	●	◐	●	◐	◐	○	●	●	●
2	Transit Enhancements, Expansion and Safety Program	●	●	●	●	●	●	●	◐	●	●
3	Transit and Paratransit Operations and Education Program	●	●	●	●	●	●	◐	◐	●	●
4	CBTP Implementation Program	●	●	●	●	◐	●	◐	◐	●	●
11	TDM and Parking Management Program	●	◐	●	●	◐	●	○	◐	◐	●
<b>Group 2. Medium Relative Performance</b>											
5	Local Road Improvements Program	◐	◐	◐	●	●	◐	●	●	○	◐
6	Local Streets and Roads O&M Program	◐	◐	◐	●	●	◐	●	◐	◐	◐
9	Transportation and Land Use (PDA) Program	●	●	●	◐	◐	●	○	◐	◐	◐
12	Goods Movement Program	◐	○	○	●	●	◐	●	●	◐	◐
14	Environmental Mitigation Program	◐	◐	◐	●	◐	◐	◐	●	●	◐
<b>Group 3. High Relative Performance</b>											
7	Highway, Freeway, Safety and Non-Capacity Improvements Program	○	○	◐	●	◐	◐	●	◐	○	○

#	Program Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance
8	Bridge Improvements Program	●	○	○	●	●	●	●	●	○	○
10	Planning and Outreach Program	○	○	○	●	●	●	○	●	●	○
13	PDA Support – Non-Transportation Program	○	●	●	●	○	●	○	○	●	○
15	Transportation Technology and Revenue Enhancement Program	●	○	●	●	●	●	●	○	●	○

\* The Cost Effective Goal is evaluated by grouping the projects and programs by similar performance-versus-cost groupings. See Section 4.0 below for more detail on how this metric was incorporated into this evaluation stage.



**Table 4.2 Evaluation Results, Group 1 Projects (\$789 Million) – High Performance, Low and Medium Cost; and Medium Performance, Low Cost**

Revised July 28, 2011

RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>North</b>												
22002	I-880 NB HOV lane extension from HOV terminus at Bay Bridge approach to Maritime	●	●	●	●	●	NA	●	●	●	●	\$19.00
22780	AC Transit Grand-MacArthur BRT	●	●	●	●	○	NA	●	●	●	●	\$36.00
230243	Access Improvements to West End Transit Hub on Mariner Square Drive (MSD)	●	●	●	●	○	NA	●	●	●	●	\$4.40
240116	Powell Street Bridge Widening at Christie Avenue	●	●	●	●	○	NA	●	●	●	●	\$4.80
240278	Harrison St-Oakland Avenue Major Street Improvements	●	●	●	●	○	NA	●	●	●	●	\$12.40
240280	Woodland-81 <sup>st</sup> Avenue Industrial Zone street reconstruction	●	○	●	●	○	NA	●	●	●	●	\$11.50
240282	Tidewater District Street Reconstruction	●	●	●	●	●	NA	●	●	○	●	\$4.60
<b>Central</b>												
240092	Lewelling Blvd./Hesperian Blvd. Intersection Improvements Project (I-880 Hesperian/Lewelling Interchange)	●	●	●	●	○	NA	●	●	○	●	\$5.00
240180	BayFair Connection (Capacity Improvements)	●	●	●	●	○	NA	●	●	○	●	\$150.00

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RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>South</b>												
21123	Union City Intermodal Station infrastructure improvements (Phase 2)	●	●	●	○	○	NA	●	●	●	●	\$25.50
21126	SR 84 WB HOV on ramp from Newark Blvd	○	○	●	●	●	NA	●	●	●	●	\$12.80
21484	Kato Road widening from Warren Ave. to Milmont	●	●	●	●	○	NA	●	●	●	●	\$12.30
230110	Route 262 Mission Boulevard Cross Connector Improvements between I-680 and Warm Springs Boulevard SR 262 Mission Blvd Improvements	●	●	●	●	○	NA	●	●	●	●	\$19.50
230114	Auto Mall Parkway Cross Connector Widening between I-680 and I-880	●	●	●	●	○	NA	●	●	●	●	\$24.40
240051	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	●	○	●	●	●	NA	●	●	○	●	\$10.00
240263	Upgrade Relinquished Route 84 in Fremont (SR 84 Relinquished Route Upgrade)	●	●	●	●	●	NA	●	●	●	●	\$43.30
240264	Widen Fremont Boulevard from I-880 to Grimmer Boulevard	●	●	●	●	○	NA	●	●	●	●	\$4.60
240272	Thornton Avenue Widening	●	●	●	●	○	NA	●	●	●	●	\$9.20
240304	Platform Extension at Alameda and San Joaquin Co. ACE Stations	●	●	●	●	●	NA	●	●	●	●	\$5.00

Revised July 28, 2011

RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective*	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
East												
21477	I-580 Greenville interchange	●	○	○	○	○	NA	●	●	●	●	\$46.00
21489	I-580 /Foothill/San Ramon Interchange improvements	○	○	○	○	●	NA	●	●	○	○	\$3.60
22664	I-580 WB Express Lane from Greenville Road to Foothill Blvd	○	○	○	●	○	NA	○	●	●	●	\$16.50
240059	I-680 widening for NB HOV/ HOT Lane from Route 84 to Alcosta Blvd	○	●	○	●	○	NA	○	●	●	●	\$136.40
240061	I-680 widening for SB HOV/ HOT from Alcosta Blvd to Route 84	○	●	○	●	○	NA	○	●	●	●	\$136.40
240106	SR 84/Sunol Improvements	●	●	●	●	○	NA	●	●	●	●	\$8.30
240139	I-680 Stoneridge Drive overcrossing widening	●	●	○	●	●	NA	●	●	●	●	\$4.80
240254	Greenville Widening	●	○	○	○	○	NA	●	●	●	○	\$10.00
240261	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	●	●	○	●	●	NA	●	●	●	●	\$12.80

● = High, ○ = Medium, and ○ = Low.

\* The Cost Effective Goal is evaluated by grouping the projects and programs by similar performance-versus-cost groupings. See Section 4.0 below for more detail on how this metric was incorporated into this evaluation stage.

**Table 4.3 Evaluation Results, Group 2 Projects (\$5.45 Billion) – High Performance, High Cost; Medium Performance, Medium Cost; and Low Performance, Low Cost**

Revised July 28, 2011

RTPID	Project Name	Goal 1. Multimodal	Goal 2 Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>North</b>												
21144	I-80 Gilman Street Interchange Improvements	●	○	●	●	●	NA	●	●	●	○	\$25.20
22082	7th Street Grade Separation & Roadway Improvement Project	●	●	●	●	●	NA	●	●	●	●	\$220.50
22089	Martinez Subdivision	○	●	●	●	●	NA	●	●	●	●	\$100.00
22455	AC Transit East Bay Bus Rapid Transit (BRT)	●	●	●	●	●	NA	●	●	●	●	\$211.00
22760	Outer Harbor Intermodal Terminal (OHIT)	●	○	●	●	●	NA	●	●	●	●	\$216.70
98207	I880 Broadway/Jackson Interchange, ramp and circulation Improvements; and Alameda Point, Downtown Oakland, and Jack London Square Transit Access	●	●	●	●	●	NA	●	●	○	●	\$189.30
230170	I-880: 42 <sup>nd</sup> /High Street Access Improvements	○	○	●	●	●	NA	●	●	●	○	\$17.10
240024	Oakland Army Base Transportation Infrastructure Improvements	●	●	●	●	●	NA	●	●	●	●	\$208.60
240318	I-80 Ashby Interchange	○	●	●	●	●	NA	●	●	●	●	\$51.90

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RTPID	Project Name	Goal 1. Multimodal	Goal 2 Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>Central</b>												
22021	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	●	●	●	○	●	NA	●	●	○	●	\$40.00
230088	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger Phases 1 and 2: I-880 extend NB HOV lanes	●	●	●	●	●	NA	●	●	○	●	\$276.00
240037	I-880 Winton Avenue interchange improvements	○	●	●	●	●	NA	●	●	●	○	\$25.00
240047	I-880 West A Street Interchange	○	●	●	●	●	NA	●	●	●	●	\$42.50
240249	San Leandro Street Circulation and Capacity Improvements	●	●	●	●	○	NA	●	●	○	○	\$11.00
240657	I-580 Spot Intersection Improvements	○	●	●	●	●	NA	●	●	●	●	\$60.00
<b>South</b>												
22009	Capitol Corridor intercity rail service expansion (Oakland to San Jose)	●	●	●	●	○	NA	●	●	●	●	\$510.50
22042	I-680 for NB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lanes)	●	●	●	●	●	NA	●	●	●	●	\$203.60
22062	Irvington BART Station	●	○	●	●	○	NA	●	●	○	●	\$123.00

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RTPID	Project Name	Goal 1. Multimodal	Goal 2 Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
22779	Route 262/I-880 interchange improvements, Ph 2 – Construct grade separation at Warren Avenue/Union Pacific RR	○	○	●	●	●	NA	●	●	●	●	\$78.00
94506	East-West Connector Project in North Fremont and Union City	●	●	●	●	○	NA	●	●	●	●	\$190.00
98139	Right-of Way Preservation and track improvements in Alameda County	●	●	●	●	●	NA	●	●	○	●	\$600.00
230103	Grade Separation in the Decoto neighborhood	●	●	●	○	○	NA	●	●	●	●	\$130.00
240053	Whipple Road from I-880 to Mission Boulevard Widening and Enhancement	●	●	●	●	○	NA	●	●	●	●	\$100.00
<b>East</b>												
21100	I-580 Vasco interchange	○	●	●	●	●	NA	●	●	●	●	\$60.00
21475	I-580 First St. interchange	●	○	●	●	●	NA	●	●	●	●	\$40.00
22765	I-580/I-680 HOV Direct Connector – Project Development	●	●	●	●	●	NA	●	●	●	●	\$1,167.00
230099	I-580/I-680 Improvements Phase 1	●	●	●	●	●	NA	●	●	●	●	\$528.00
240038	Dougherty Road Widening from Sierra Lane to North City Limit	●	○	●	●	○	NA	●	●	●	○	\$18.40

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RTPID	Project Name	Goal 1. Multimodal	Goal 2 Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
240141	I-680 Sunol Boulevard Interchange (Non-Capacity Increasing Freeway/ Expressway Interchange Modifications)	○	○	●	●	●	NA	●	●	●	○	\$1.20
240144	I-580 Santa Rita Interchange improvements	○	○	●	●	●	NA	●	●	●	○	\$2.50
240250	Dublin Boulevard Widening from Sierra Court to Dublin Court	●	○	●	●	○	NA	●	●	●	○	\$4.20

● = High, ● = Medium, and ○ = Low.

\* The Cost Effective Goal is evaluated by grouping the projects and programs by similar performance-versus-cost groupings. See Section 4.0 below for more detail on how this metric was incorporated into this evaluation stage.

**Table 4.4 Evaluation Results, Group 3 Projects (\$7.32 Billion) – Low and Medium Performance, High Cost; and Low Performance, Medium to High Cost**

Revised July 28, 2011

RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Afford-able & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
<b>North</b>												
22769	I-880 at 23 <sup>rd</sup> /29 <sup>th</sup> Avenue interchange safety and access improvements	○	●	●	●	●	NA	●	●	●	○	\$102.00
230604	Contra Flow Lanes on Westbound Lanes of San Francisco-Oakland Bay Bridge	●	○	●	●	●	NA	●	●	○	●	\$610.50
240279	Mandela Parkway and 3 <sup>rd</sup> Street Corridor Commercial/Industrial Area Street Reconstr.	○	●	●	●	●	NA	●	●	●	○	\$157.00
<b>Central</b>												
240113	BART Hayward Maintenance Complex	●	●	●	●	○	NA	●	●	●	●	\$585.00
240562	Rte 92/Clawiter Road Whitesell interchange improvement, Ph 2	○	○	●	●	●	NA	●	●	●	○	\$52.00
<b>South</b>												
21482	Extend Fremont Blvd to connect to I-880/Dixon Landing Rd	●	○	●	●	○	NA	●	●	●	○	\$47.80
230101	Union City Passenger Rail Station & Dumbarton Rail Seg.G Improvement Union City BART Phase 2/Passenger Rail Station	●	●	●	●	●	NA	●	●	○	●	\$180.00
240018	Dumbarton Rail Corridor Phase I	●	●	●	●	●	NA	○	●	○	●	\$164.00

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RTPID	Project Name	Goal 1. Multimodal	Goal 2. Accessible, Affordable & Equitable	Goal 3. Integrated w/Land Use	Goal 4. Connected	Goal 5. Reliable & Efficient	Goal 6. Cost Effective	Goal 7. Well Maintained	Goal 8. Safe	Goal 9. Clean & Healthy Environment	Composite Performance	Estimated Cost (\$ Million)
240052	I-880/Whipple Road Interchange	○	○	●	●	●	NA	●	●	●	○	\$60.00
240216	Dumbarton Rail Corridor Phase II	●	●	●	●	●	NA	○	●	●	●	\$716.00
East												
22667	BART to Livermore Extension Phase 2	●	○	●	●	●	NA	○	●	●	○	\$2,927.00
22776	SR 84 Expressway Widening (Pigeon Pass to Jack London)	○	●	●	●	●	NA	●	●	●	○	\$136.50
230086	I-580 Interchange Improvements at Hacienda Drive and Fallon Road – Phase II	○	○	●	●	●	NA	●	●	●	○	\$37.60
240062	SR 84/I-680 interchange and SR 84 Widening	○	○	●	●	●	NA	●	●	●	○	\$244.00
240132	El Charro Road Construction	●	○	●	●	●	NA	●	●	●	○	\$49.00
240196	BART to Livermore Extension Phase 1	●	○	●	●	○	NA	○	●	○	●	\$1,250.00

● = High, ● = Medium, and ○ = Low.

\* The Cost Effective Goal is evaluated by grouping the projects and programs by similar performance-versus-cost groupings. See Section 4.0 below for more detail on how this metric was incorporated into this evaluation stage.

# **A. Submitted Transportation Investments**

DRAFT



Table A.1 2012 CWTP Project List for Alameda CTC

#	RTPID	Project Sponsor	Project Name	Project Description	Planning Area	Investment Type	\$ in Millions			
							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
Countywide Local Projects										
1	22455	AC Transit	AC Transit East Bay Bus Rapid Transit (BRT)	Makes major transit improvements to the most heavily-traveled corridors in AC Transit's service area. The Full-Scale Bus Rapid Transit improvements would include: dedicated lanes, traffic signal priority, new transit stations, boarding platforms, pre-paid boarding.	multi	New Commitment	\$211.0	38.7	0	173.1
2	22780	AC Transit	AC Transit Grand-MacArthur BRT	Provides for major transit improvements to one of the most heavily-traveled corridors in AC Transit's service area. The Full-Scale Bus Rapid Transit improvements would include queue jump lanes and peak period travel lanes, traffic signal priority, new transit stations or boarding platforms, real-time passenger information and rider amenities.	1	New Commitment	\$36.0	3.6	33	0
3	22021	AC Transit	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	To expand AC Transit transfer centers for express and local bus service in Central Alameda County (including Park and Ride lots near Southland Shopping Center or Chabot College) and Northern Alameda County (including downtown transit center at Center/Shattuck in Downtown Berkeley).	multi	New Commitment	\$40.0	10	30	0
4	22042	ACTC	I-680 NB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lanes)	Constructs HOV/HOT lanes on I-680 from Route 237 to Route 84 in Santa Clara and Alameda Counties, including ramp metering throughout the project limits.	3	New Commitment	\$203.6	0	182.1	21.5
5	240059	ACTC	I-680 widening for NB HOV/HOT Lane from Route 84 to Alcosta Blvd	Construct a HOV/HOT lane on I-680 from Route 84 to Alcosta Blvd	4	Vision	\$136.4	0	136.4	0
6	240061	ACTC	I-680 widening for SB HOV/HOT from Alcosta Blvd to Route 84	Constructs HOV/HOT lane on I-680 from Alcosta Blvd to Route 84	4	New Commitment	\$136.4	0	136.4	0
7	22664	ACTC	I-580 WB Express Lane from Greenville Road to Foothill Blvd	Convert the I-580 Westbound HOV Lane to an Express Lane from Greenville Road in Livermore to San Ramon Rd./Foothill Rd in Dublin/Pleasanton. Access limited to designated ingress/egress points.	4	New Commitment	16.5	0.0	12.1	4.4
8	21116	ACTC	I-580 widening for HOV and Aux Lanes EB from Hacienda Rd to Greenville Rd and WB from Greenville Road to Foothill/San Ramon Rd	Widen I-580 in both directions to add HOV and auxiliary lanes.	4	Committed	\$291.3	0	0	291.3
9	230088	ACTC	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger - Phase 1 lanes between I-238 and Hegenberger	Extend the existing northbound I-880 HOV lane from north of Hacienda Avenue to Hegenberger. The first phase, funded through the Central County Freeway Study LATIP, would extend from north of Hacienda to north of Davis in Planning Area 2. The second phase would continue the extension to Hegenberger in Planning Area 1. Both phases would be converted to HOT lanes. Phase 1 includes two additional LATIP projects that would be done concurrently with the HOV/HOT lane extension: Washington Avenue Interchange improvements and bridge widening and I-238 Northbound Connector Project.	1, 2	New Commitment	\$207.6	207.6	0	0
10	230089	ACTC	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger - Phase 2 -lanes north from Hacienda Ave	Extend the existing northbound I-880 HOV lane from north of Hacienda Avenue to Hegenberger. The first phase, funded through the Central County Freeway Study LATIP, would extend from north of Hacienda to north of Davis in Planning Area 2. The second phase would continue the extension to Hegenberger in Planning Area 1.	2	New Commitment	\$68.4	68.4		0
11	22670	ACTC	I-880 widening for SB HOV lane from Hegenberger Rd to Marina Blvd (reconstruct bridge at Davis St. and Marina Blvd.)	Constructs HOV lanes on I-880: SB from Hegenberger Road to Marina Boulevard (includes reconstructing bridges at Davis Street and Marina Boulevard)	2	Committed	\$109.4	0	0	109.4
12	240062	ACTC	SR 84 / I-680 interchange and SR 84 Widening*	Construct interchange improvements for the Route 84/I-680 Interchange, widen Route 84 from Pigeon Pass to I-680 and construct aux lanes on I-680 between Andrade and Route 84.	3	Vision	\$244.0	0	244	0
13	230241	ACTC	I-238 HOV/HOT lane	Widen I-238 between I-580 and I-880 from 6 lanes to 8 lanes to accommodate an	2,4	Vision	\$216.0	0	216	0

#	RTPID	Project Sponsor	Project Name	Project Description	Planning Area	Investment Type	\$ in Millions			
							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
				HOV/HOT lanes in both directions. Project would include HOV/HOT connectors at the I-238/I-880 and I-238/I-580 interchanges.						
14	240050	ACTC	I-580 EB Express (HOT) Lane from Hacienda Road to Greenville Road	Convert existing eastbound HOV lane to a two lane Express Lane Facility.	4	Committed	\$19.0	0	0	19
15	240076	ACTC	I-580 EB Auxiliary Lane Project (Isabel to Livermore Ave; Livermore Ave to First)	Construct Eastbound Auxiliary Lanes between Isabel Avenue and North Livermore Avenue and North Livermore Avenue and First Street. The project will also widen the Arroyo Las Positas Bridge at two locations and provide additional improvements to accommodate a future Express Lane facility.	4	Committed	\$40.0	0	0	40
16	94506	ACTC	East-West Connector Project in North Fremont and Union City	Construct an improved east-west connection between I-880 and Route 238 (Mission Blvd.) comprised of a combination of new roadways along preserved rights of way and improvements to existing roadways and intersections along Decoto Road, Fremont Boulevard, Paseo Padre Parkway, Alvarado-Niles Road and Route 238 (Mission Boulevard).	2	New Commitment	\$190.0	83.3	0	106.7
17	230099	ACTC	I-580/I-680 Improvements (NB I-680 to WB I-580)	Provide a northbound 680 to westbound 580 connector and widen the existing westbound I-580 to southbound I-680 loop ramp as a first phase of the interchange improvement project. Includes EB BART bus ramp.		New Commitment	528.0	0.0	528.0	0.0
18	22769	ACTC	I-880 at 23rd/29th Avenue interchange safety and access improvements	Provides for the improvements to Northbound I-880 at 23rd and 29th Avenue Interchange by improving the freeway on and off ramp geometrics. The project will also replace the structures of these overcrossings. The project also includes modifications of local streets, landscape enhancement, and construction of a soundwall.	1	New Commitment	\$102.0	3.5	0	98.5
19	22765	ACTC	I-580/I-680 HOV Direct Connector - Project Development*	(Project development to ) construct HOV Direct Connectors at I-580/I-680 Interchange (includes Options 1 & 2 from PID document)	4	New Commitment	\$1,167.0	17.2	\$1,149.8	0
20	22776	ACTC	SR 84 Expressway Widening (Pigeon Pass to Jack London)*	Widen Route 84 from 2 lanes to 4 lanes from north of Pigeon Pass to Stanley Blvd.; and from 2 lanes to 6 lanes from Stanley Blvd. to Jack London Boulevard.	4	New Commitment	\$136.5	10	0	126.5
21	230052	ACTC	I-880 NB and SB auxiliary lanes	NB and SB 880 between West A and Winton, and NB 880 between A Street and Paseo Grande. To reduce weaving conflicts between through traffic and exiting traffic at A Street or at Winton Avenue.	2	Committed	15.4	0	0	15.4
22	230054	ACTC	I-880 Auxiliary Lanes between Whipple and Industrial Parkway West	Construct Auxiliary Lanes on NB and SB I-880 between Whipple Road and Industrial Parkway West. NB lanes between Industrial Parkway and Alameda Creek SB lanes between Industrial and Whipple Road	2	Committed	9.5	0	0	9.5
23	240047	ACTC	I-880 West A Street Interchange Reconstruction*	Reconstruct interchange to accommodate widening of A Street from 5 lanes to six lanes underneath the overpass. This will require constructing one additional freeway lane in each direction. This would also involve intersection and signal modifications.	2	New Commitment	42.5	0.0	0.0	42.5
24	21144	ACTC /City of Berkeley	I-80 Gilman Street Interchange Improvements	Reconfigure Interstate 80/580 at Gilman Avenue Interchange to providing dual roundabouts to reduce congestion and increase safety at IC of I-80, Eastshore Highway and West Frontage Road.	1	New Commitment	25.2	23.8	0.0	1.4
25	230110	ACTC/ City of Fremont	Route 262 Mission Boulevard Cross Connector Improvements between I-680 and Warm Springs Boulevard	This project will increase the mobility between I-680 and I-880 by improving the most direct and heavily used east-west cross-connector corridor in Alameda County. This project will widen Mission Blvd to 3 lanes in each direction throughout the I-680 interchange. It will extend the WB right turn lane from Warm Springs to Mohave. It will extend both WB left turn lanes at Warm Springs an additional 130 ft. It will regrade and rebuild the NB and SB I-680 on and off ramps. It will install 2 new intersections with street lights and storm drain treatment at the NB and SB I-680 on and off ramps. It will relocate existing facilities on WB Mission Blvd between Warm Springs and Mohave.	3	New Commitment	19.5	19.5	0.0	0.0
26	240092	Alameda County	Lewelling Blvd. / Hesperian Blvd. Intersection Improvements Project (I-880 Hesperian/Lewelling	Reconfigure lanes to improve traffic circulation and reduce traffic congestion.	2	New Commitment	5.0	0.0	5.0	0.0

#	RTPID	Project Sponsor	Project Name	Project Description	Planning Area	Investment Type	\$ in Millions			
							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
			Interchange)*							
27	240106	Alameda County	SR-84/Sunol Improvements*	Improve SR-84 between I-580 and Sunol	4	New Commitment	8.3	2.0	6.3	0.0
28	240657	Alameda County	I-580 Spot Intersection Improvements*	I-580 Spot intersection improvements (East Lewelling & Hesperian / Castro Valley Blvd. & Foothill Blvd. / Foothill Blvd. & Grove Way / Castro Valley Blvd. & Stanton Ave. / Castro Valley Blvd. & Grove Way/Crow Canyon Rd./Hopyard Rd. & Owens Drive / Airway Blvd. & North Canyon Parkway)	2,4	New Commitment	60.0	6.0	54.0	0.0
29	240113	BART	BART Hayward Maintenance Complex	PHASE 1: The Hayward Yard Maintenance Complex ("HMC") will include acquisition and use of four warehouses outside of the current west boundary of the yard. The three of these four existing warehouse structures that are proposed for Component Repair, Central Warehouse, and M&E use would be seismically upgraded and retrofitted for BART use, and the fourth would be demolished and a new overhaul shop would be constructed in its place. The existing vehicle inspection area would be enlarged from one bay to four bays. South of Whipple Road work will include additional connecting track, track crossovers, and switches.Phase 2: Storage Tracks will be provided for up to 250 vehicles East side of the Hayward Yard. Including additional connecting track, track crossovers, and switches. A flyover will be provided access to and from storage tracks to mainline tracks.	2	Vision	\$585.0	0	579.7	5.3
30	22002	Caltrans	I-880 NB HOV lane extension from existing HOV terminus at Bay Bridge approach to Maritime on-ramp	Extend HOV Lane on NB I-880 from existing HOV terminus at Bay Bridge approach to the Maritime on-ramp to provide HOV access from Maritime to the SFOBB toll plaza.	1	New Commitment	\$19.0	19	0	0
31	21126	Caltrans	SR 84 WB HOV on ramp from Newark Blvd	Route 84 westbound HOV on-ramp from Newark Boulevard	3	New Commitment	\$12.8	12.8	0	0
32	22990	Caltrans	SR 262 (Mission) widening from I-880 to Warm Springs Boulevard (including reconstructing Route 262/I-880 and Route 262/Kato Road interchanges) and reconstruct Union Pacific Railroad underpasses	Serves as Phase 1B of the overall project in Santa Clara and Alameda Counties on I-880 from Route 237 to Fremont Blvd and in Alameda County on Route 262 from I-880 to Warm Springs Blvd. The overall project will reconstruct the Route 262(Mission Boulevard)/Warren Avenue/I-880 Interchange and widen I-880. This phase 1B will complete the widening on Route 262 and reconstruct two UPRR underpasses.	3	Committed	\$58.1	0	0	58.1
33	230243	City of Alameda	Access Improvements to West End Transit Hub on Mariner Square Drive (MSD)	The project includes expansion and realignment of MSD to accommodate access by AC Transit busses and car sharing. Other project components enhancing access to the West End Transit hub include signal modifications, pedestrian, and bicycle improvements.	1	Vision	4.4	0.0	4.4	0.0
34	98207	City of Alameda/City of Oakland	I880 Broadway/Jackson Interchange, ramp and circulation Improvements; and Alameda Point, Downtown Oakland, and Jack London Square Transit Access	1. Offers Transit access (BRT) between the cities and the PDAs by constructing a Bus Rapid Transit (BRT) facility from Alameda Naval Station PDA to 12th Street BART station with a goal to provide 15-minute headways. 2. Reduces freeway weaving at I-880/I-980 interchange, enhances pedestrian access in Oakland near Chinatown Senior Center. 3. Provides multimodal access and enhances goods movement on I-880 and into Oakland and Alameda by providing new on-ramp at Market Street at 6th Street and an off-ramp at Martin Luther King Way and 5th Street. 4. Reduces operational deficiencies for all vehicle movement between the cities of Alameda and Oakland through the Posey and Webster Tubes and in downtown Oakland. 5. Develops bike and pedestrian improvements to enhance connectivity between Chinatown and Jack London Square. 6. Provides a Park and Ride Facility along Mariner Square Drive in Alameda near the Posey Tube entrance. 7. Incorporates Intelligent Transportation Systems along the freeway and on major arterials including Webster Street and Ralph Appezatto Memorial Parkway in Alameda; and 6th Street, 5th Street, Broadway, Harrison Street, and 7th Street in Oakland. The ITS elements will provide traveler information, quicker response to emergencies and reduce delays by better managing the non-recurring congestion due to incidents. 8. Implements sustainability principles in design, construction, and operation of the project to minimize environmental impacts.	1	New Commitment	\$189.3	3	178.2	8.1
35	240038	City of Dublin	Dougherty Road Widening from Sierra Lane to North city Limit	This project proposes to widen approximately 1.9 miles of Dougherty Road from Sierra lane to North City Limit. The project will widen the existing 4-lane roadway to 6 lanes,	4	New Commitment	18.4	11.0	0.0	7.4

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				construct Class II bicycle lanes, landscaped median and street lighting.						
36	240250	City of Dublin	Dublin Boulevard Widening from Sierra Court to Dublin Court	This project proposes to widen Dublin Boulevard from Sierra Court to Dublin Court in the City of Dublin. The project includes widening of Dublin Boulevard from 4 to 6 lanes, construction of Class II bike lanes and median landscaping.	4	New Commitment	4.2	3.5	0.0	0.7
37	230086	City of Dublin	I-580 Interchange Improvements at Hacienda Drive and Fallon Road – Phase II	I-580/Fallon Road I/C Improvements (Phase 2): Reconstruction of overcrossing to provide four-lanes in each direction; reconstruction of the southbound to eastbound loop on-ramp; widening of the eastbound off-ramp to provide two exit lanes with two left turn and two right turn lanes; widening of the eastbound on-ramp; widening of the westbound off-ramp to provide two left turn and two right turn lanes; widening the westbound on-ramp. I-580/Hacienda Drive I/C Improvements: Reconstruction of overcrossing to provide additional northbound lane; widening of the eastbound off-ramp to include a third left-turn lane; modifying the westbound loop on-ramp; and widening the westbound off-ramp to include a third left-turn lane.	4	New Commitment	37.6	16.0	0.0	21.6
38	240261	City of Dublin	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	This project will extend and widen Scarlett Drive from Dougherty Road to Dublin Boulevard and relocate Iron Horse Trail along Scarlett Drive located in the City of Dublin.	4	New Commitment	12.8	12.8	0.0	0.0
39	240683	City of Dublin	Alamo Canal Trail under I-580*	In Dublin and Pleasanton: This project will construct a segment of the Alamo Canal Trail underneath Interstate 580 to close a gap between the section of the Alamo Canal Trail located in Dublin and Centennial Trail located in Pleasanton south of I-580. (Funding is fully committed)	4	Committed	2.7	0.0	0.0	2.7
40	240116	City of Emeryville	Powell Street Bridge Widening at Christie Avenue	Add a 350' long west bound exclusive left turn lane on the Powell Street Bridge at the intersection of Christie Avenue. This will be the second westbound left turn lane at Christie.	1	Vision	\$4.8	0	4.8	0
41	230114	City of Fremont	Auto Mall Parkway Cross Connector Widening between I-680 and I-880	Widening of Auto Mall Parkway from four to six lanes including intersection improvements and widening of bridge over UPRR.	3	New Commitment	24.4	24.4	0.0	0.0
42	22779	City of Fremont	Route 262/I-880 interchange improvements, Ph 2 - Construct grade separation at Warren Avenue/Union Pacific RR	Serves as Phase 2 of the State Route 262/I-880 Freeway Interchange Reconstruction and I-880 Widening Project. Phases 1a & 1b includes direct connectors between Route 262 with HOV bypass lanes along the on-ramps, and freeway widening to provide for the completion of HOV lanes from Alameda County to the Santa Clara County line. This application is for the Phase 2 project - Grade Separation of Warren Avenue and Union Pacific Railroad tracks	3	New Commitment	78.0	78.0	0.0	
43	21482	City of Fremont	Extend Fremont Boulevard to connect to I-880/Dixon Landing Road	Extend Fremont Boulevard (four-lane roadway with Class II bike lanes on both side and construction of portion of the Bay Trail (Class I bike facility)) on the west side of the roadway) from its southerly terminus at Lakeview Boulevard to connect with Dixon Landing Road in Milpitas.	3	New Commitment	47.8	47.8	0.0	0.0
44	240264	City of Fremont	Widen Fremont Boulevard from I-880 to Grimmer Boulevard	Widen Fremont Blvd to 6 lanes and 2 bike lanes from Grimmer Blvd to I-880, install new traffic signals at Grimmer Blvd intersection and Industrial Drive intersection.	3	New Commitment	4.6	4.6	0.0	0.0
45	240263	City of Fremont	Upgrade Relinquished Route 84 in Fremont	1) Widen Peralta Blvd from 1 lane each direction to 2 lanes and a bike lane each direction between Fremont Blvd and Paseo Padre Pkwy, and between Paseo Padre Pkwy and Mowry. 2) Widen Mowry Ave from 1 lane each direction to 2 lanes and a bike lane each direction between Thane St and Mission Blvd and reconstruct 2 railroad bridges to accommodate the widened roadway.	3	New Commitment	43.3	46.2	0.0	0.0
46	21484	City of Fremont	Kato Road widening from Warren Ave. to Milmont	Widen Kato Road to provide a three lane street with bike lanes from north of Auburn Street to where frontage improvements are in place on both sides of the street west of Milmont Drive.	3	New Commitment	12.3	12.0	0.0	0.2
47	21093	City of Hayward	Rte 92/Clawiter Road Whitesell interchange improvement, Ph 1	The project involves improving the access to and from Route 92 in the area of existing Clawiter Road interchange and to provide some congestion relief to I-880 and several	2	Committed	27.5	0.0	0.0	27.5

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							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
				major arterials, such as Winton Avenue, Clawiter Road, and Deport Road. The PROJECT is being delivered in two phases. Phase I is comprised of local street system modification which include the following: (1) the widening of West Winton Ave. at the intersection of Hesperian Blvd. with minor signal phasing modifications at Hesperian Blvd. and Middle Lane/Southland Dr, (2) the widening and extension of Whitesell St. between Depot Rd. and SR 92, (3) installation of a new traffic signal and improvements at the eastbound SR 92 off ramp at Clawiter Rd. and Eden Landing Roads, and (4) intersection improvements at the westbound SR 92 off ramp at Clawiter Road and Breakwater Avenue. The Whitesell Street extension and widening will include two travel lanes and a bike lane in each direction with new curb, gutter, sidewalk and landscape strip on each side.						
48	240562	City of Hayward	Rte 92/Clawiter Road Whitesell interchange improvement, Ph 2	Please refer to description in 21093. Upgrades to the existing Clawiter Road interchange with SR 92, add ramps and an over-crossing for the Whitesell Street extension and would signalize ramp intersections.	2	New Commitment	52.0	0.0	0.0	52.0
49	22063	City of Hayward	Route 238 Corridor Improvements between Foothill Boulevard/I-580 and south City Limits and on SR 185 between north city limits and A Street	Adds travel lanes on Foothill Boulevard north of Mission-Foothill Jackson intersection by removing parking during the peak hours, and south of Mission-Foothill-Jackson to Palisades Street. Provides spot widening at Mission Boulevard/Carlos Bee Boulevard and improvements at Mission/Harder, Mission/Berry, Mission/Moreau High School and Mission/Tennyson. Constructs a one-way loop system in downtown Hayward by converting Foothill Boulevard between Jackson and A Street to 6 lanes northbound, A Street between Foothill Boulevard and A Street to 5 lanes westbound and Mission Boulevard to 5 lanes southbound between A Street and Jackson Street. Provide pavement overlays on Mission Boulevard south of Industrial to south City limits and construct traffic signal at Mission-Blanche. Provide pavement overlay on SB 185 north of A Street to north city limits	2	Committed	118.7	0.0	0.0	118.7
50	240015	City of Hayward	Clawiter-Whitesell Interchange (Non-Capacity Increasing Freeway/Expressway Interchange Modifications)	Construct a new diamond interchange at SR 92 and Whitesell Street which would be extended to the south of the freeway to form a T intersection with Clawiter Road. The project would provide a new on ramp from southbound Clawiter Road to SR 92 westbound on a bridge over the SR 92 westbound off ramp to Whitesell Street	2	Committed	52.0	0.0	0.0	52.0
51	240025	City of Hayward	I-880 Industrial Parkway Interchange	Reconstruct Interchange to provide a northbound off ramp and a southbound HOV bypass lane on the southbound loop off ramp. Reconstruct bridge over I-880.	2	Committed	43.0	0.0	0.0	43.0
52	240065	City of Hayward	SR 92 Industrial interchange	Widen the westbound to southbound loop off ramp and local street conform and striping improvements on Industrial Boulevard to accommodate the existing lane	2	Committed	6.0	0.0	0.0	6.0
53	240037	City of Hayward	I-880 Winton Avenue interchange improvements	Reconstructing ramps to create a partial cloverleaf interchange with signalized foot of ramp intersections. Project would reconfigure eastbound to southbound on ramp and a new connection to Southland Mall Drive opposite the southbound off ramp intersection.	2	New Commitment	25.0	0.0	0.0	25.0
54	21473	City of Livermore	Construct a 4-lane major arterial connecting Dublin Boulevard and North Canyons Parkway*	Construct a 4-lane arterial connection between the future easterly end of Dublin Boulevard in the City of Dublin and the westerly end of North Canyons Parkway in the City of Livermore. This project, along with planned improvements within the City of Dublin, would complete the freeway reliever route along the north side of I-580 between I-680 and Route 84 (Isabel Avenue). A 2-lane connection could be constructed as an initial phase.	4	Committed	12.0	0.0	0.0	12.0
55	240254	City of Livermore	Greenville Widening	Widen Greenville Road from 2 to 4 lanes between I-580 and Patterson Pass Rd.	4	New Commitment	10.0	5.0	0.0	5.0
56	21475	City of Livermore	I-580 First St. interchange	Reconstruct and modify Interchange.	4	New Commitment	40.0	5.0	0.0	35.0
57	21477	City of Livermore	I-580 Greenville interchange	Reconstruct and modify Interchange.	4	New Commitment	46.0	9.0	0.0	37.0
58	230132	City of Livermore	I-580 Isabel Phase II interchange	Complete ultimate improvements at I-580/Isabel/Route 84 Interchange to provide 6-lanes over 580 at Isabel/84 Interchange and 4-lanes over 580 at Portola flyover.	4	New Commitment	30.0	4.8	0.0	25.2

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59	21100	City of Livermore	I-580 Vasco interchange improvements	Modify I-580/Vasco Rd. Interchange. Widen I-580 overcrossing to provide 8 traffic lanes and bike lanes/shoulders. Construct auxiliary lanes on I-580 between Vasco and First Street. Add new loop ramp in southwest quadrant. Includes widening Vasco Road to 8 lanes between Northfront Road and Las Positas Road, and other local roadway improvements.	4	New Commitment	60.0	8.4	0.0	51.6
60	230157	City of Livermore	Las Positas Road Connection, Phase 2	On Las Positas Road from Arroyo Vista to 1,500' west of Vasco Road; Construct 2 lane gap closure.	4	Committed	3.5	0.0	0.0	3.5
61	240272	City of Newark	Thornton Avenue Widening	Widen Thornton Avenue from two lanes to four lanes between Gateway Boulevard and Hickory Street, a distance of approximately 5,000 feet.	3	New Commitment	9.2	8.8	0.0	0.4
62	230170	City of Oakland	I-880: 42nd/High Street Access Improvements	The project consists of extending and aligning 42nd Avenue with Alameda Avenue to provide a road parallel to High Street; widening High Street to provide additional capacity at the intersections of the freeway connector roads of Oakport Street and Coliseum Way; realigning E. 8th Street near Alameda Avenue; and extending and realigning Jensen and Howard Streets to connect High Street and 42nd Avenue. Includes modified traffic signals and intersection improvements. On High Street, the limits of construction are approximately 600 feet (190 meters) to west of I-880 and 500 feet (150 meters) to the east of I-880. On 42nd/Alameda Avenue, the limits of construction are approximately 1,000 feet (290 meters) to the west of I-880. Improvements are also proposed for Howard St./Jensen St. and E. 8th St. as well as the intersections of High St. at Oakport St. and Coliseum Wy.	1	New Commitment	17.1	11.2	0.0	5.9
63	240024	City of Oakland	Oakland Army Base Transportation Infrastructure Improvements	Infrastructure improvements at the former Army Base include: reconstructing Maritime Street to permit direct access between the marine terminals west of Maritime and the railyard to the east; realigning Burma Road and Wake Avenue to improve circulation and land utilization at the Army Base; a new access road to reduce traffic conflicts between Port-related truck traffic and visitors to the planned regional park at the east touchdown of the San Francisco-Oakland Bay Bridge; and replacement of utilities in the public right-of-ways to enable development of the Army Base.	1	New Commitment	208.6	114.7	0.0	93.9
64	22082	Port of Oakland	7th Street Grade Separation & Roadway Improvement Project	The Outer Harbor Intermodal Terminals project will construct new tracks across 7th and Maritime Streets between the Port's Joint Intermodal Terminal and the Oakland Army Base. The 7th Street Grade Separation & Roadway Improvement Project will grade separate those new railroad tracks from roadway traffic. The 7th and Maritime Street intersection will be reconfigured and the roadway will be elevated above the planned railroad tracks. The project limits are the 7th Street & I-880 interchange, the 7th and Middle Harbor Road intersection, and an approximately 1,500-foot section of Maritime Street north of 7th Street.	1	New Commitment	220.5	110.3	0.0	110.2
65	240278	City of Oakland	Harrison-Oakland Avenue Major Street Improvements	Redesign and construct the Harrison-Oakland Avenue couplet as two two-way streets. Incorporate bicycle facilities, bus enhancements, and pedestrian crossings.	1	New Commitment	12.4	3.3	8.4	0.7
66	240279	City of Oakland	Mandela Parkway and 3rd Street Corridor Commercial/Industrial Area Street Reconstruction	Reconstruct roadway network to address traffic safety concerns, rehabilitate the roadway surfaces to withstand truck traffic and address rail crossings, and provide streetscapes conducive to commercial and industrial development	1	New Commitment	157.0	12.0	145.0	0.0
67	240282	City of Oakland	Tidewater District Street Reconstruction	Reconstruct Oakport, Lesser, Tidewater, and High Streets in Oakland west of the I-880 Freeway. Do major reconstruction of streets to serve heavy truck traffic, reconfigure roadway intersection configurations, and provide public sidewalks (also bikeway on High, Lesser, and Tidewater Streets).	1	New Commitment	4.6	1.0	3.6	0.0
68	240280	City of Oakland	Woodland - 81st Avenue Industrial Zone street reconstruction	Reconstruct goods movement streets within the Woodland-81st Avenue industrial area to withstand heavy truck traffic; modify gateways, provide at-grade safe RR crossings.	1	New Commitment	11.5	2.5	9.0	0.0
69	21472	City of Pleasanton	I-680 Bernal Interchange improvements	Project includes widening of the diagonal NB on ramp, with street widening of Bernal to allow bike lanes and pedestrian improvements for each direction under the existing	4	Committed	4.0	0.0	0.0	4.0

#	RTPID	Project Sponsor	Project Name	Project Description	Planning Area	Investment Type	\$ in Millions			
							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
				structure. These widenings will include construction of auxiliary lanes to and from the north.						
70	240132	City of Pleasanton	El Charro Road Construction	Extends El Charro Road as a 4 lane divided roadway with landscaped median, six foot bike lanes and pedestrian pathway. The extension is from El Charro Road's current terminus of Stoneridge Drive southerly to Stanley Boulevard	4	New Commitment	49.0	49.0	0.0	0.0
71	21489	City of Pleasanton	I-580 /Foothill/San Ramon Interchange improvements	I-580/San Ramon Road/Foothill Road interchange improvements. Elimination of eastbound diagonal off ramp and eastbound loop off ramp. Construction of new signalized intersection for off ramp vehicles	4	New Commitment	3.6	1.1	0.0	2.5
72	240144	City of Pleasanton	I-580 Santa Rita Interchange improvements	This project will reconstruct the southbound approach of Santa Rita at Pimlico/ I-580 eastbound off ramp to add a second southbound left turn lane. This reconstruction will include alteration to the southbound loop ramp.	4	New Commitment	2.5	2.0	0.0	0.5
73	240139	City of Pleasanton	Stoneridge Drive overcrossing widening at I-680	Construction of an additional westbound lane on the Stoneridge Drive at I-680 overcrossing.	4	New Commitment	4.8	3.8	0.0	1.0
74	240141	City of Pleasanton	I-680 Sunol Boulevard Interchange (Non-Capacity Increasing Freeway/Expressway Interchange Modifications)	Signalization and ramp improvements at the Sunol Boulevard at I-680 Interchange	4	Vision	1.2	1.2	0.0	0.0
75	240200	City of Pleasanton	Stoneridge Drive Extension	Extend Stoneridge Drive in Pleasanton from its current eastern terminus at Trevor Parkway to El Charro Road. Construct six traffic signals as part of the project to allow safer local access to the roadway.	4	Committed	16.2	0.0	0.0	16.2
76	21451	City of San Leandro	East 14th Street/Hesperian Boulevard/150th Street channelization improvements	This project adds an additional left turn lane on northbound Hesperian Blvd to northbound East 14th Street, an additional left turn lane on southbound East 14th Street to eastbound 150th Street and a bus loading lane on southbound East 14th Street between Hesperian Blvd and 150th Street.	2	Committed	6.6	0.0	0.0	6.6
77	22100	City of San Leandro	I-880 Davis Street Interchange	Replaces the existing overcrossing structure with a new structure, providing higher clearance for I-880 traffic and additional travel lanes on Davis St. to improve capacity and safety along with ramp, intersection and signal improvements	2	Committed	10.2	0.0	0.0	10.2
78	230066	City of San Leandro	I-880 Marina Boulevard Interchange	Improvements to the I-880/Marina Blvd Interchange including on/off ramp improvements, overcrossing modification and street improvements	2	Committed	31.8	0.0	0.0	31.8
79	240249	City of San Leandro	San Leandro Street Circulation and Capacity Improvements	Construct Eden Road, Marina Blvd widening from Teagarden to Alvarado, Polvorosa Ave extension, and new rail crossing at east end of Aladdin Ave and its intersection with Washington Ave, Lewelling-Washington Intersection improvements	2	Vision	11.0	0.0	11.0	0.0
80	240052	City of Union City	I-880 / Whipple Road Interchange Improvement	Full interchange improvements at Whipple Road/I-880, including northbound off-ramp, surface street improvements and realignment (Union City and Hayward city limits)	3	Vision	60.0	60.0	0.0	0.0
81	230103	City of Union City	Grade Separation in the Decoto neighborhood	In conjunction with the grade separation over Decoto Road (RTPID #230101) continued grade separations of both rail lines through the residential neighborhood of Decoto.	3	Vision	130.0	130.0	0.0	0.0
82	230101	City of Union City	Union City Passenger Rail Station & Dumbarton Rail Segment G Improvement	Passenger rail improvements from Industrial Parkway in Hayward to the Shinn Yards in Fremont. Includes rail connections, grade separate the UPRR Oakland Subdivision over Decoto Road (a major arterial roadway), and a passenger rail station at Union City BART.	3	Vision	180.0	146.5	0.0	33.5
83	240051	City of Union City	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	Widen Union City Boulevard/Hesperian from two lanes to three lanes from Whipple Road in Union City to Industrial Parkway in Hayward	3	Vision	10.0	10.0	0.0	0.0
84	240053	City of Union City	Whipple Road from I-880 to Mission Boulevard Widening and Enhancement	Widen and enhance Whipple Road from I-880 in Hayward to Mission Boulevard in Union City. Improvements include bicycle and pedestrian improvements; roadway widening to accommodate two lanes of traffic in both directions, replace the existing 2-lane bridge over BART; provide additional capacity from Central Avenue to Mission Boulevard.	3	Vision	100.0	100.0	0.0	0.0

#	RTPID	Project Sponsor	Project Name	Project Description	Planning Area	Investment Type	\$ in Millions			
							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
85	94012	City of Union City	Union City Intermodal, Phase 1	Fulfills Phase 1 of this project, the essential first step of making the Union City BART Station a two-sided station accessible to a 30-acre TOD site (former PG&E site). It constructs pedestrian grade separations under the BART and UPRR tracks and reconfigures the existing BART Station to provide a new multi-modal Loop Road, a Bus Transit Facility providing 16-bus bay capacity with transit amenities, a Decoto Connector Road, and reconfigures BART surface parking lots and replacement BART parking on the Agency owned TOD site.	3	Committed	57.0	0.0	0.0	57.0
86	21123	City of Union City	Union City Intermodal Station infrastructure improvements (Phase 2)	Continue to expand and reconfigure the BART Station to establish the free pedestrian pass-through that will interface with the new passenger commuter rail station to serve Dumbarton Rail, Capitol Corridor and ACE, and connect to the adjacent TOD. Improvements include relocation and replacement of elevators and fair gates, new agent booth, bike and pedestrian accessways.	3	New Commitment	25.5	6.3	0.0	19.2
87	22760	Port of Oakland	Outer Harbor Intermodal Terminal (OHIT)	The Outer Harbor Intermodal Terminal (OHIT), a proposed intermodal rail facility and surrounding trade and logistics park, is planned to be located on the former Oakland Army Base. The proposed OHIT project will provide an expanded intermodal terminal for the Port, warehouses, a truck parking lot, and other improvements in and around the former Oakland Army Base. The project is bounded by 7th Street to the south, Maritime Street to the west, the EBMUD wastewater treatment plant to the north, and Union Pacific right of way to the east.	1	New Commitment	216.7	46.3	0.0	170.4
88	240317	Port of Oakland	Wharf Replacement and Berth Deepening at berths 60-63	Replace the existing concrete wharf at berths 60-63, and deepen the adjacent vessel berthing area to -50 feet. The work will include embankment stabilization as well. The project is located at berths 60-63, which is part of the Global Gateway Central terminal operated by Eagle Marine Services. The terminal is located at 1579 Middle Harbor Road, Oakland, CA 94607	1	New Commitment	170.0	170.0	0.0	0.0
89	22089	Port of Oakland/MTC	Martinez Subdivision	The Martinez Subdivision (Martinez) consists of the UP Right-of-Way (ROW) from the Port of Oakland (Port) to the Suisun Bay railroad bridge spanning the Carquinez Strait (Railroad mile post (mp) 2.75 through mp 31.0). The proposed project includes the addition of two additional mainline tracks from the Port of Oakland (milepost 2.75), to Stege in Richmond (milepost 9.35). The additional two mainline tracks will add the capacity to the system to allow the additional 22 freight trains per day anticipated by 2020. The project will also construct numerous crossovers and additional signaling, as well as retaining walls to support the additional track.	1	New Commitment	\$100.0	0.0	100	0
90	240318	City of Emeryville	I-80 Ashby Interchange	I-80 at Ashby Avenue - Reconstruct the Ashby Avenue Interchange. The proposed interchange elements include construction of a new bridge to replace the two existing bridges and construction of two roundabouts.	1	Vision	\$51.9	0.0	51.1	
91	240320	City of Emeryville	I-80 / Powell Street Interchange Bus stops	I-80 EB Powell Street Off-ramp Bus Bay or Additional Lane - Construct bus bays on the I-80 EB off-ramp to Powell Street and on Frontage Road near the intersection of Powell Street and Frontage Road.	1	Vision	\$2.1	0.0	2.1	
92	230091	ACTC/ MTC	Central Alameda County Integrated Corridor Mobility Program and Adaptive Ramp Metering Integrated Corridor Mobility I-880 project (580/80/880 to SR-237) – and South County LATIPs)	For the I-880, I-238 and I-580 corridors in the Central County Freeway Study, install traffic monitoring (CCTV, CMS, vehicle detection systems), emergency vehicle priority, transit signal priority, adaptive ramp metering, ramp metering stations, ramp metering HOV bypass lanes, trailblazer signs, integration of arterial traffic signals, communication networks within the study limits.	multi	Committed	\$45.7	0.0		
93	230221	ACTC	I-80 Integrated Corridor Mobility (ICM)	This project will implement Adaptive Ramp Metering (ARM) and Active Traffic Management (ATM) strategies will be employed to reduction congestion and provide incident management capabilities.	multi	Committed	\$69.1	0.0		65.7
<b>Subtotal</b>							<b>\$7,969.5</b>	<b>\$1,806.9</b>	<b>\$3,830.4</b>	<b>\$2,286.5</b>

#	RTPID	Project Sponsor	Project Name	Project Description	Planning Area	Investment Type	\$ in Millions			
							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
Regional and Multijurisdiction Projects										
94	230604	AC Transit	Contra Flow Lanes on Westbound Lanes of San Francisco-Oakland Bay Bridge	AM Peak contra flow lanes on Eastbound Lanes of San Francisco-Oakland Bay Bridge - HOT and bus only. See #230605 for the complementary Grand/Maritime HOV/Bus On-ramp component.	1	New Commitment	610.5	5	605.4	
95	98139	ACE	Right-of Way Preservation and track improvements in Alameda County	This project is proposed to acquire the Right-of-Way, PS&E, and EIR/EIS clearance for ACE Service between Stockton and Niles Junction and complete track improvements on the ACE operational corridor. Project will also expand Alameda County Station Platforms to accommodate six car trains-sets.	4	New Commitment	600.0	585.0	0.0	15.0
96	240304	ACE	Platform Extension at Alameda and San Joaquin Co. ACE Stations	Extend platforms at Alameda and San Joaquin County ACE Stations to accommodate longer train sets.		New Commitment	5.0	5.0	0.0	0.0
97	230083	ACTC	I-580 Corridor ROW Preservation	The project will identify and acquire the ultimate Right of Way (ROW) along the I-580 corridor from Hacienda Drive to Vasco Road Interchange to accommodate a transit corridor in the median of I-580.	4	Committed	\$120.7	0	0	120.7
98	240018	ACTC/ SamTrans	Dumbarton Rail Corridor Phase I*	Phase I of the Dumbarton Rail Corridor Project involves the implementation of two separate project elements which are critical to the long term objective of the provision of a regional Transbay rail service: 1. The implementation of an enhanced Transbay express bus service to provide a high level of service and improved performance. It consists of: i. Peak period – bi directional service – 30 minute service frequency between Union City and Redwood City with enhanced station stops and transit priority treatments to expedite service. ii. Peak period – bi-directional service – 15 minute service frequency - Union City to Stanford Research Park – with transit priority treatments. iii. Peak period – bi-directional service – 15 minute service frequency - Fremont to Stanford University - Park – with transit priority treatments.	3	New Commitment	108.5	63	0	45.5
99	240216	ACTC/ SamTrans	Dumbarton Rail Corridor Phase II*	Original Project – Peak period- peak direction only – 60 minute frequency service between Union City-San Francisco and 60 minute frequency service between Union City- San Jose. Westbound during the AM peak and eastbound during the PM peak (six hours of total service). 2. Rail Shuttle (Union City – Redwood City) – Bi-directional peak period – 15 minute frequency service between Union City – Redwood City. A new exclusive DRC connection would be provided to the Redwood City Station and a new platform would be constructed. C. Combined Original Project + Rail Shuttle – A combination of alternatives b and c – this alternative would consist of two components: i. Peak period- peak direction only – 60 minute frequency service between Union City-San Francisco and 60 minute frequency service between Union City- San Jose. Westbound during the AM peak and eastbound during the PM peak (six hours of total service). ii. Bi-directional peak period – 30 minute frequency service between Union City – Redwood City. A new exclusive DRC connection would be provided to the Redwood City Station and a new platform would be constructed.	3	New Commitment	770.1	511.2		258.9
100	22667	BART	BART to Livermore Extension*	Provides a rail extension from the existing station at Dublin/Pleasanton easterly to downtown Livermore and Vasco Road. Selected alignment alternative is in the I-580 median from Dublin/Pleasanton to approximately Isabel Avenue, then in a subway configuration through downtown Livermore, then in an at-grade configuration to Vasco Road. Project includes and yard and shop, and vehicle procurement. Full project cost is \$ 4,177 m. Funding needed for the full BART to Livermore extension includes the funding shown for Project #22667, as well as the \$1,105M in discretionary funding	4	Vision	4,177		2927	145.0

#	RTPID	Project Sponsor	Project Name	Project Description	Planning Area	Investment Type	\$ in Millions			
							Cost Estimate	Funding Request (Discretionary)	Funding Request (vision)	Other Fund Sources Identified
				shown as part of the BART to Livermore Ph 1 request (Project #240196). Following technical work to develop better definition of the Phase 1 project, BART may revise relationship of Phase 1 discretionary funding request to overall project funding plan.						
101	240196	BART	BART to Livermore extension Phase 1*	This project is the first phase of a multi-phase extension of BART transit service eastward from the existing Dublin/Pleasanton station, through downtown Livermore to a terminus at Vasco Road in Livermore. Phase 1 project may consist of a partial BART extension in combination with other modes. Additional and/or interim station sites as well as near-term service using other transit modes may be used to enable project phasing. Project will include yard and shop facilities as part of Phase 1 or later phases.	4	Vision	\$1,250.0	1,105.0	0	145.0
102	240180	BART	BART Bay Fair Connection	This project will modify the BART Bay Fair Station and approaches to construct a third station track and a second passenger platform, and associated crossovers, switches and other trackage, both north and south of the station. In addition to adding the platform and trackage, modifications will be needed to the train control system, some BART maintenance trackage, and other systems	Multi	Vision	\$150.0	0	150	0
103	21131	BART	BART-Oakland International Airport Connector	Establishes a 3.2 mile long Automated Guideway Transit (AGT) system running on an exclusive right-of-way along the Hegenberger Road corridor between the Coliseum BART and the planned Coliseum Amtrak Stations and the Oakland International Airport.	1	Committed	\$484.1	0	0	484.1
104	240182	BART	BART Metro Program	Advance BART Metro program (service, capacity and coverage) to align future investments in support of the region's emerging Sustainable Communities Strategy (SCS). Types of projects eventually could include trackway enhancements on the core system (pocket tracks, cross-overs, other investments to relieve mainline bottlenecks), route service changes, capacity improvements to stations and supporting facilities, infill stations, integrated transit services, and expansion of high capacity transit lines	Multi	Vision	\$625.0	0	625	0
105	21132	BART/City of Fremont	BART Warm Springs extension	Extends BART to Warm Springs. The one-station, 5.4-mile extension begins at the Fremont Station and extend to Warm Springs in southern Fremont. The proposed Warm Springs Station, just south of Grimmer Boulevard, would have approximately 2,300 parking spaces.	3	Committed	\$890.0	0	0	890
106	22062	City of Fremont/ BART	Irvington BART Station*	Construct a new BART station in Irvington Area PDA in Fremont	3	New Commitment	123.0	123.0	0.0	
107	22009	Capital Corridor	Capitol Corridor intercity rail service expansion (Oakland to San Jose)	Oakland-San Jose track improvements to increase service from 7 to 16 round trips and associated rolling stock. Resolution 3434 project.	Multi	Vision	510.5	45.0	449.7	15.8
108	22013	Caltrans	I-580 Eastbound Truck Climbing Lane	Construct I-580 eastbound truck climbing lane from Greenville Road Undercrossing to one mile east of North Flynn Road (Altamont Summit).	4	Committed	\$64.2	0	0	64.2
Subtotal							\$9,238.6	\$2,442.2	\$4,757.1	\$2,184.2

Table A.2 2012 CWTP List of Programs

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate (\$M)	Project Description
<b>1. Alameda Countywide Bicycle and Pedestrian Program - RTP ID # 240381</b>						
<b>1A. Countywide Bike Plan Capital Projects network</b>						
1		Countywide Bicycle Plan implementation	multi			Implementation of projects and programs included in the updated Countywide Bicycle Plan
2		Gap Closure and Development of Three Major Trails in Alameda County (Iron Horse, Bay Trail, East Bay Greenway Project / UPRR Corridor Improvements Project)*	multi	240347	\$494.4	Construct new segments and close existing gaps along three major trails within Alameda County: 1) Iron Horse Trail; 2) East Bay Greenway; and 3) Bay Trail. East Bay Greenway project includes acquisition of UPRR Right of Way north of Industrial Parkway in Hayward.
3	City of Berkeley	Bay Trail Extension - Berkeley Marina	1	240207	\$31.0	Complete the Bay Trail Extension to provide an accessible 1.3 mile loop trail for bicycles and pedestrians from the main spine of the Bay Trail at West Frontage Road to the Eastshore State Park, Berkeley Marina, Bay shoreline, and the proposed Berkeley Ferry Terminal.
4	City of Dublin	Iron Horse Trail Overcrossing at Dublin Boulevard near Dublin Transit Center (Bicycle/Pedestrian Enhancements)	4	240292	\$7.6	This project proposes to enhance the Iron Horse Trail located in the City of Dublin by constructing a pedestrian/bicycle bridge overcrossing at Dublin Boulevard
5	City of Dublin	Iron Horse Trail Overcrossing at Dougherty Road (Bicycle/Pedestrian Enhancements)	4	240294	\$7.9	This project will enhance the Iron Horse Trail by constructing a pedestrian/bicycle bridge overcrossing at Dougherty Road located in the City of Dublin.
6	City of Fremont	Bicycle/Pedestrian Expansion: Pedestrian and Bicycle Access Way from Downtown to Fremont BART	3	240281	\$0.5	Construct bicycle and pedestrian facilities from Fremont BART Station to Fremont Mitown in the Central Fremont PDA .
7	City of San Leandro	East Bay Greenway/UPRR Rail to Trail*	2	240322	\$26.0	4.7 miles of Bicycle and Pedestrian multi-use pathway following the existing Union Pacific Railroad Oakland Subdivision building upon the Eastbay Greenway
8	City of Hayward	Tennyson Road Pedestrian/bike bridge*	2		\$2.0	Tennyson Road Pedestrian/bike bridge from Nuestro Parqucito to South Hayward BART station – Included in Bicycle Master Plan
311	City of Pleasanton	Iron Horse Trail Construction of Ped/ Bicycle bridge over Arroyo Mocho.	4	240170	\$0.2	Phase 2 of the Pleasanton Iron Horse Trail project will provide pedestrian/bicycle bridge or ramp access to southern Zone 7 access road. Access to southern access road will eliminate Iron Horse Trail Crossing of Santa Rita Road by allowing use of undercrossing on the south side of the Arroyo
314	City of Pleasanton	Iron Horse Trail construction in South Pleasanton	4	240194	1.7	This project will complete the final leg of the Iron Horse Trail in Pleasanton, from the current terminus at Busch Road to the City Limits at Shadow Cliffs on Stanley Boulevard
<b>1B. Countywide Pedestrian Plan Capital Projects network</b>						
10		Countywide Pedestrian Plan implementation	multi			Implementation of projects and programs included in the updated Countywide Pedestrian Plan
11	City of Pleasanton	Pedestrian Gap Closure Projects over 580 and 680 - program	4	240189	\$2.0	580 pedestrian and bicycle Gap Closure project
<b>1C. Local Bike &amp; Pedestrian Plan Implementation</b>						
12		Implementation of Local Bicycle and Pedestrian Plan projects and programs	multi			Implementation of projects and programs included in local bicycle and pedestrian plans
13	Alameda County	Sidewalk Improvements	multi	240107	\$18.8	Sidewalk Projects at various locations in Alameda County unincorporated areas
318	Alameda County	San Lorenzo Creek Trail	2	240049	\$10.0	The San Lorenzo Creek project extends from Mission Boulevard to the Meek Estate. The project includes a multi-use pathway and serves the County grow opportunity area on East 14th / Mission Blvd.
14	City of Alameda	Bike and Ped Infrastructure	1	240191	\$15.6	To provide funding for bicycle and pedestrian networks in the City.
15	City of Albany	Bike/ped expansion - Cleveland Avenue Improvements	1	240352	\$1.1	The project entails continuing the Class I bikeway from the 500 block of Pierce St. through the surplus parcel of land and connect it to the bike lanes planned for Cleveland Avenue. Included in this phase is the extension of the sound wall along the 500 block of Pierce St.
16	City of Albany	Key Route Boulevard	1		\$1.5	Bicycle and pedestrian improvements - included in the update to the bike plan currently in progress
17	City of Albany	Pierce Street Bicycle Bikeway*	1		\$1.0	Included in the update to the bike plan currently in progress
18	City of Albany	San Pablo Avenue medians, rain gardens and streetscape improvements	1		\$3.0	In the San Pablo Streetscape Plan and included in the update to the pedestrian plan currently in progress
19	City of Albany	Solano Avenue pavement resurfacing and beautification	1		\$3.0	Included in the Solano Avenue Plan and included in the update to the pedestrian Master plan currently in progress

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate (\$M)	Project Description
20	City of Albany	Washington Avenue @ San Pablo	1		\$0.7	bike boulevard and intersection improvements at San Pablo Avenue - included in the update to the bike plan currently in progress
21	City of Berkeley	Complete Streets: Streetscape Improvements & Pedestrian Plan Implementation	1	240197	\$26.9	Implement Berkeley Pedestrian Master Plan, adopted 6/10. The Plan includes well developed conceptual plans, which include Safe Routes to Schools, and Safe Route to Transit elements.
22	City of Berkeley	Berkeley Bicycle Plan implementation , including Safe Routes to School and Safe Routes to Transit elements (Bicycle/Pedestrian Enhancements)	1	240206	\$17.9	Implement Berkeley Bicycle Plan, including Safe Routes to School and Safe Routes to Transit elements
23	City of Emeryville	I-80 Bike Ped Bridge (65th Street)	1	240003	\$22.4	This project includes the design and construction of a bike-ped bridge over the I-80 freeway at the location of the Ashby-Shellmound Interchange. Approaches to the crossover structure will connect to 65th Street on the east approach and to Frontage Road on the west approach.
24	City of Emeryville	Emeryville Greenway (Bicycle/Pedestrian Expansion)	1	240201	\$1.5	Expand Emeryville Greenway through design and construction of pathway(s) and landscaping on existing City owned right of way (former rail right of way).
319	City of Emeryville	Bicycle/Pedestrian Enhancements	1	240188	\$0.1	This project will complete implementation of the 1998 Bicycle and Pedestrian Plan, including bicycle boulevard stencils, bicycle detection loops/video detection at traffic signals, and installation of signs on most of the network.
25	City of Fremont	Greenbelt Gateway on Grimmer Boulevard	3	240260	\$9.0	Improvement of pedestrian and bicycle connection to Central Park between Fremont Blvd and Paseo Padre Parkway, including re-alignment of flood control channel, pedestrian path, landscape, curb, and a bridge connection to Central Park.
26	City of Fremont	Sullivan Road Undercrossing Ped/Bike Safety & Improvements	3	240262	\$1.6	Install a 5' wide walkway between Mission Blvd and Niles Blvd on the eastbound side Sullivan Underpass under the UPRR bridge. Reconfigure the intersections of Sullivan Underpass at Mission and Niles and install a new traffic signal at Mission.
27	City of Fremont	Construct Bicycle/Pedestrian Grade Separation on Blacow Road at Union Pacific railroad tracks and future BART line in Irvington Area PDA	3	240287	\$5.9	Construct a bicycle/pedestrian grade separated crossing over UPRR/BART line to connect Blacow Road and Osgood Road in the Irvington Area PDA.
28	City of Fremont	Rails to Trails Fremont UPRR/BART Corridor Trail	3	240291	\$44.0	Construct a new bicycle and pedestrian trail within UPRR/BART Corridor right of way from Niles area (UPRR/Clarke Drive junction) in north Fremont to Fremont/Milpitas City limits in the south.
29	City of Hayward	Bike-Pedestrian Enhancements*	2	240016	\$9.5	<ul style="list-style-type: none"> <li>• C Street – Grand to Filbert – narrow, increase sidewalk, construct median</li> <li>• C Street – Watkins to Mission – narrow to one lane, increase sidewalk, provide bike lane</li> <li>• Main Street – D Street to McKeever – narrow to 2 lanes, increase sidewalk and provide bike lane</li> <li>• Cannery Pedestrian bridge over the UPRR tracks in the Cannery Area.</li> <li>• Dixon Street – Valle Vista to Industrial – streetscape improvements to complement TLC project from Valle Vista to Tennyson</li> </ul>
30	City of Livermore	Bicycle/Pedestrian Expansion	4	240255	\$150.0	Implement projects identified in Bike and Ped Master Plan
31	City of Newark	Bike/Ped Enhancements: Pedestrian and Bicycle Master Plan Implementation	3	240284	\$30.0	Pedestrian and Bicycle Master Plan Implementation
32	City of Newark	Bike/Ped Expansion: Dumbarton TOD Bay Trail Railroad Overcrossing*	3	240288	\$3.0	Dumbarton TOD Bay Trail Railroad Overcrossing
33	City of Newark	Cedar Boulevard Pedestrian and Bicycle Railroad Crossing	3	240289	\$2.5	Cedar Boulevard Pedestrian and Bicycle Railroad Overcrossing
34	City of Oakland	Bicycle and Pedestrian Safety and Enhancements: Streetscapes	1	240225	\$20.0	Completion of bicycle and pedestrian projects citywide. Work includes pavement resurfacing, construction of bulbouts, medians, pedestrian refuges, widened sidewalks, installation of new street furniture, streets trees and other enhancements.
35	City of Oakland	Bicycle/Pedestrian Expansion	1	240227	\$77.0	Completion of Bay Trail Projects in Oakland, including Bike/Ped bridge over the Lake Merritt Channel, and bike/ped access around existing bridges over the Oakland Estuary. Also includes bicycle/pedestrian connections to the Bay Trail from existing facilities.
309	City of Pleasanton	Arroyo Mocho Trail Paving along Zone 7 channel	4	240173	\$3.4	This project will provide a paved class one trail from Hopyard Road to the eastern Pleasanton City Limit. This will provide a 3.2 mile paved trail between Pleasanton and Livermore Trail connection for both recreational and commute trips
310	City of Pleasanton	Arroyo Mocho Bridge Construction	4	240172	\$0.2	This project will construct a new bridge over the Arroyo Mocho to connect the south Zone 7 access road to the Hacienda Business Park
313	City of Pleasanton	Stoneridge Mall Gap Closure	4	240192	\$1.4	Mixed use development is identified around the Stoneridge Mall but significant gaps in the pedestrian pathway exist. This project closes those gaps.
36	City of Union City	Bicycle/Pedestrian Connector Over UPRR Tracks to Jobs Center	3	230100	\$20.0	Construct a pedestrian crossing over the UPRR tracks in the Union City Intermodal Station District
37	City of Oakland	Laurel District Safety and Access on MacArthur, from High Street to Seminary (LAMMPS)*	1		\$20.3	Improve safety along MacArthur Blvd between High Street and Seminary by altering lane widths, installing additional traffic signals, adding bike lanes, a path, and pedestrian crossings; move curb and gutter in sections of the street, relocate utility poles to provide ADA width sidewalks, provide retaining wall in one location.

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate (\$M)	Project Description
<b>1D. Bike Support Facilities - Capital &amp; Operations</b>						
38		Bike parking	multi			Includes bike parking, storage and changing facilities, showers
39		Bikesharing	multi			Implementation of bike-share programs
<b>1E. Infrastructure Maintenance</b>						
40		Maintenance of bike and pedestrian facilities	multi			Maintenance of bikeways, sidewalks, trails, signage, signals and other bike/pedestrian infrastructure
<b>1F. Education and Promotion Program</b>						
41		Promotion of biking and walking	multi			Examples include Bike to Work Day, Bike/Walk to School day, active transportation, etc
42		Bicycle safety	multi			Examples include Street Skills /Road I bike classes, and Share the Road campaigns
<b>1G. Crossing Guard Program</b>						
43		Crossing guard program	multi		\$30.4	Support for crossing guard programs
<b>2. Transit Enhancements, Expansion and Safety Program - RTP ID # 240382</b>						
<b>2A. Transit Capital Rehabilitation</b>						
44	ACE	Locomotive rehabilitation (6 locomotives, mid-life)	3, 4	240307	\$10.8	Mid-life Overhaul of six (6) locomotives
45	ACE	Rail Car Rehabilitation (28 pax rail cars, mid-life)	3, 4	240308	\$28.0	Mid-life overhaul of twenty-eight (28) passenger rail cars
46	ACE	Capital Spares, Minor Locomotive & Rail Car Rehabilitation	3,4	240310	\$6.2	Spare & replacement parts, mechanical and cosmetic, for rail cars and locomotives.
47	ACE	Annual Preventive Maintenance costs for rail cars and locomotives.	3,4	240311	\$9.0	Annual Preventive Maintenance costs for rail cars and locomotives.
48	City of Emeryville	Transit Station Rehabilitation	1	240247	\$3.9	Enhance Emeryville's existing transit services with installation of up to 30 bus shelters and other site amenities including benches, maps, signage and amenities for existing AC Transit and Emery Go Round routes and expansion of the Amtrak station platform in Emeryville.
49	City of Emeryville	Transit Vehicle Rehabilitation/Replacement/Retrofit	1	240251	\$6.0	Replace 14 outdated Emery Go Round Shuttles with Low Floor Diesel, hybrid and/or CNG shuttles
50	ACE	Interoperable Communications Equipment	3,4	240297	0.2	This project will provide a scalable, cost-effective IP-based solution for quickly establishing communications between disparate systems in support of emergency response and day-to-day operations. Additional funding is being sought for Fremont and Great America.
<b>2B. Transit Capital Replacement</b>						
51	LAVTA	Transit Vehicle Rehabilitation/Replacement/Retrofit (197veh + 194 veh)	4	94527	\$163.2	LAVTA will need to replace 197 fixed-route vehicles and perform mid-life rehabilitations on 194 vehicles through 2040. This program is intended to provide funding for the Authority's fleet replacement and rehabilitation requirements. Vehicle replacement includes replacing all vehicle components including all ITS, fareboxes, radios, and equipment necessary for safe and efficient fleet operations.
<b>2C. Vehicle Expansion</b>						
52	AC Transit	Additional Fleet Vehicles To Support Improved Transit Service	multi	21154	\$74.6	Purchases rolling stock for enhanced transbay, local, or express services
53	ACE	ACE Vehicles	3, 4	240314	\$0.3	Purchase of bucket truck for Maintenance Department. Purchase of tow-behind sweeper for Maintenance Department for parking lot and private roadway upkeep. Purchase of two (2) all electric vehicles with sufficient range to travel to and from San Jose with incidental stops at stations and vendors without recharging en-route or using any on-board fuel. Estimated range needed is greater than 200 miles after 10 years of normal battery usage.
54	BART	BART Rail Vehicle Capacity Expansion- 225 cars (Alameda County portion)	multi	240073	\$444.0	Purchase 225 additional cars to accommodate future increases in ridership.
<b>2D. Safety and Security for Passengers and System (including seismic retrofit)</b>						
55	AC Transit	Safety and security improvements*	multi	230098	\$24.5	This project encompasses a number of capital elements to ensure AC Transit vehicles and facilities are safe and secure for the passengers, including: bus video and facility surveillance system with data storage; mobile communications vehicle; emergency generator systems at operating divisions; Emergency Operations Center Upgrades; Transfer Centers/Stop surveillance program; and "Hardening" upgrades to operating divisions and temporary Transbay terminal.

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56	ACE	On-board Security Cameras	3, 4	240275	\$0.1	On-Board, remotely accessible security cameras and associated infrastructure to include Wi-Fi networking on each rail car.
57	ACE	Security Cameras at the Alameda & SJ Stations	3, 4	240295	\$1.9	IP-Based video surveillance system for all San Joaquin County stations, Vasco, Pleasanton, and Alameda County Stations.
58	BART	BART Security Program (Alameda County portion)	multi	240072	\$86.4	Project will improve or enhance BART security to protect the patrons and the system. Projects to be implemented include: 1) Emergency Communications; 2) Operations Control Center; 3) Locks & Alarms; 4) Public Safety Preparedness; 5) Structural Augmentation; 6) Surveillance - CIP Track Two Portion; and 7) weapons Detection Systems.
<b>2E. Station and Stops Improvements (access, expansion and amenities)</b>						
59	AC Transit	Livable Communities/Complete Streets/ADA	multi	240373	\$15.0	Complete Streets improvements, including Livable Communities Ped Improvements, ADA curb cuts, ped countdowns, improved sidewalks, signage and bike improvements along transit corridors. Includes: \$13.2 for Alameda County and \$1.8 for Contra Costa County
60	ACE	Information Display Kiosks at ACE stations & on-board rail cars	3, 4	240240	\$0.5	Information displays and accompanying infrastructure to provide real time arrival and departure information for ACE and connecting transit/shuttle services. General information, announcements, and advertisements could also be accommodated.
61	ACE	ACE Station Improvements	3, 4	240241	\$0.3	Passenger shelters, including solar lighting and power infrastructure, street furniture, ADA-accessibility.
62	BART	BART Station Capacity (Alameda County portion)	multi	240075	\$294.7	Makes station capacity improvements at 43 BART stations throughout the District. Types of improvements include faregate, stair, and elevator additions; and platform modifications, including platform widening, escalator additions, train-screens, and doors.
63	City of Berkeley	Downtown Berkeley BART Plaza and Transit Area Enhancements	1	240217	\$5.9	Complete construction of all elements of Downtown Berkeley BART Plaza improvements, including transit architecture (custom bus shelter, BART primary (rotunda) & secondary entrance canopies), wayfinding signage, capacity improvements, and place-making through new hardscape, street furniture, public art, street trees, and low impact development features.
64	City of Berkeley	Berkeley Ferry Terminal Access Improvements	1	240226	\$106.0	Construct capital expenditures for Berkeley WETA Ferry Terminal-associated landside improvements including roadway improvements, parking, lighting, traffic signal controls, surface transit infrastructure, bicycle and pedestrian infrastructure.
65	City of Oakland	Downtown (12th and 19th Street) BART Stations Transit Enhancements	1	240232	\$139.0	Downtown (12th and 19th Street) BART Stations Transit Enhancement. Enhance pedestrian and bicycle access to downtown BART stations through streetscape projects incorporating pedestrian enhancements, construction of safe basements underneath sidewalks, paving, sidewalks, bicycle facilities, bicycle storage and bike station development, and signage.
66	LAVTA	Bus Stop Improvements*	4	230148	\$4.1	LAVTA desires to improve bus stops throughout Dublin, Pleasanton, and Livermore to provide ADA access where access does not exist and improved amenities such as passenger shelters, benches, trash receptacles, system maps and schedules, solar lighting, accessibility upgrades, etc.
67	AC Transit	Telegraph/International/E. 14th ped improvements (non pavement)*	1, 2		\$26.0	
325	City of Fremont	BART Warm Springs Station West side Access Improvements	3		\$11.0	The proposal is to construct station access structure on the west side of the new Warm Springs BART Station. The purpose is to provide access to BART from the proposed 480-acre TOD area west of the new BART station. The access to transit from this site is vital to successful development of the area for mixed uses comprising of residential/commercial/R&D. The \$11 m project cost includes the full cost of a BART bridge, including 20-foot wide bridge, ramps, elevators, canopy, lighting, additional fare gates, ticket vending machines, and a station agent booth on the west side of the station. It also includes acquisition of two acres where the access structure lands
<b>2F. System capacity (to allow increased use of systems)</b>						
68	AC Transit	Transit Management Systems*	multi	240205	\$54.7	Computer Aided Dispatch Upgrades, including Automatic Vehicle Locator and Real Time Passenger Information. Bus enhancements including automatic passenger counters, internal text messaging and associated system upgrades required for enhancements to function.
69	ACE	Altamont Rail Corridor (Upgrades) Rehabilitation- Track, positive train control, and signaling upgrade	3, 4	240305	\$12.5	Track, positive train control, and signaling upgrades along the existing and planned Altamont Commuter Express operational corridors.
70	ACE	Fiscal System modernization	3, 4	240312	\$0.2	Includes cash registers, updated fiscal management software (Caselle Clarity), updated computers, and associated infrastructure
71	BART	BART System Capacity (Alameda County portion)	multi	240089	\$78.3	Make investments across BART system including train control modifications to operations control center and integrated control system; traction power upgrades, 3rd rail feeder cables, negative return capacity in yards, and 1/4 of traction power substations; ventilation in underground stations to handle increased passenger loads; crossovers can reduce fleet demand by 16-30 BART cars, while allowing for more operational flexibility (mitigation of delays, more frequent evening and weekend service).
315	City of Fremont	Construct Altamont Commuter Express/Capitol Corridor Station at Auto Mall Parkway	3	240268	15	Construct a new train station (side platform) at the west end of Auto Mall Parkway in Fremont to serve Altamont Commuter Express and Capitol Corridor trains

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<b>2G. Maintenance Facilities Expansion</b>						
72	AC Transit	Maintenance Facility Efficiency Upgrades	multi	21159	\$80.0	Expand/enhance AC Transit facilities such as environmental sustainability projects, heavy equipment, IT infrastructure, other facility improvements.
73	LAVTA	LAVTA maintenance/operations facility	4	21151	\$47.3	Constructs a new maintenance facility. LAVTA has outgrown its existing facility. The current facility was designed for no more than 43 vehicles, both motorbus and demand response. The current LAVTA fleet consists of 75 motor buses and 18 demand response vehicles. The proposed facility would incorporate facilities and parking for up to 160 buses, which will equip LAVTA for the growth anticipated in the Tri-Valley.
74	LAVTA	Maintenance Facilities Improvements	4	230151	\$4.1	LAVTA owns and maintains three main facilities: the administrative, operations, and maintenance facility, the Livermore Transit Center, and the Atlantis Satellite Bus Facility. As these facilities age, regular on-going maintenance, major and minor, is required to maintain the assets in a state of good repair. This program would provide on-going funding to maintain and extend the useful life of the Authority's three main facilities.
75	AC Transit	66th Ave Upgrade to Operational Facility	multi		\$12.0	
324	WETA	Construct new Operations and Maintenance Facility in Alameda.	multi	240014	\$37.0	This project provides the landside site and infrastructure improvements required to house a Central Bay Operations and Maintenance Facility to serve as the central San Francisco Bay base for WETA's ferry fleet, administrative offices, Operations Control Center (OCC) and Emergency Operations Center (ECO). The landside components include fueling, shop, warehouse and office facilities, as well as security, access and mooring facilities. \$24.5 m identified in existing funding. which includes \$22m in Measure B funds.
<b>2H. Environmental Program</b>						
76	AC Transit	Environmental projects	multi	230121	\$67.0	The project would be to reduce AC Transit's carbon footprint, as well as address other environmental issues associated with bus transit operations such as ZEB fueling and maintenance facility. The program would also implement projects to reduce the energy currently used at operating facilities by installing solar panels to reduce the lighting costs for our facilities. To address environmental issues currently facing the agency, the project would also include programs to enhance our wastewater treatment programs to better manage our industrial wastewater systems, including: upgrades and/or replacement of our underground fuel tanks and the related clean-up of historical contamination; continued efforts in preventing contaminants from entering storm water drains at facilities.
77	AC Transit	Greening of Vehicles - environmental program	multi		\$2.6	
78	AC Transit	Alternative Fueling Facilities (D3,D6, CMF)	multi		\$37.0	
<b>3. Transit and Paratransit Operations and Maintenance Program - RTP ID # 240383</b>						
<b>3A. Transit and Paratransit Operations and Expansion (Including TPM and TSM)</b>						
79		Transit Operations	multi			Maintain existing transit service , restore previously cut transit services, and expand existing and new transit services
80		Paratransit Operations (mandated and non-mandated)	multi			Maintain and expand paratransit service operations
322	AC Transit	Transit Priority Measures	multi	230111	264	Transit Priority Measures (TPM), corridor or street improvements, and rider amenities within Alameda County to protect buses from degrading speeds on arterials while providing passenger amenities to encourage increased ridership, such as: signal timing, signal priority and queue jump lanes; more frequent service levels; passenger loading stations or amenities; real-time passenger information; and street and sidewalk geometric changes to assist bus operations (bus bulbs if appropriate), as well as a HOV facilities on bridges and appropriate access roadways. Also includes single intersection-level improvements not included in a larger corridor projects.
81	AC Transit	College/ Broadway Corridor Improvements - Transit Priority Measures	1	240372	\$5.0	Improves speed and reliability for bus transit on the College/Broadway/University/Alameda corridor. Includes queue jump lanes, transit signal priority, pedestrian amenities and improvements, safety and security enhancements, geometric improvements to assist bus operations and real-time passenger information.
82	ACE	UPRR Capital Access Fee	3, 4	240274	\$1.9	As part of the second amendment to the SJRRC/UPRR Trackage Rights Agreement approved December 2003, an annual Capital Access Fee is required in January of each year to operate ACE trains on the 86 mile corridor.
83	ACTC	Transit enhancements, i.e. Transit Priority Measures	multi	21992	\$43.0	Transit Priority Measures (TPM), Corridor or street improvements and rider amenities within Alameda County to protect buses from degrading speeds on arterials while providing passenger amenities to encourage increased ridership, such as: signal timing, signal priority and queue jump lanes; more frequent service levels; passenger loading stations or amenities; real-time passenger

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						information; street and sidewalk geometric changes to assist bus operations (bus bulbs if appropriate). Also includes single intersection-level improvements not included in a larger corridor projects.
84	City of Alameda	Rapid Bus Service - City of Alameda and Alameda Point PDA (Alameda Naval Station) to Fruitvale BART*	1	240077	\$9.0	Implement Rapid Bus Service from Alameda Point PDA via Webster Street, Lincoln Avenue, Tilden Way, Fruitvale Avenue Bridge (Miller Sweeney Bridge), and Fruitvale Avenue to Fruitvale BART Station.
85	City of Berkeley	Downtown Berkeley Transit Center	1	240179	\$26.8	Design and construct a Downtown Berkeley Transit Center, potentially including bus turn-around, boarding platforms, visitor information facilities, and safe pedestrian access to transit.
86	AC Transit	Foothill TSP - Transit Priority Measures	2		\$2.0	
87	AC Transit	Grand/MacArthur Corridor Improvements - Transit Priority Measures	1		\$3.6	
88	AC Transit	Speed Protection in Urban Core	multi		\$48.0	
89	City of Berkeley	I-80 Corridor Transit Service	1		\$20.0	Restore Service to 2009 Levels to Higher Density neighborhoods. Lifeline Service for low-income communities • I-80 adjacent elements of South & West Berkeley Community-Based Transportation Plan • West Berkeley Circulation Master Plan • AC Transit Service Plan
90		Adjustments to AC Transit Service	multi		\$226.2	Per year, for service changes to routes 77, 84, 93, 97, 99 and new door-to-door service for South Hayward and Bayfair BART.
91		Transit Service Restoration and Enhancement*	multi		\$750.0	Restoration of AC Transit service. Implementation of City's Transit First Policy. Development of service improvements to Trunk Lines 51 and 1R. Traffic signal transit optimization. * Transit-First Policy (Council Resolution 58,731-N.S.) * AC Transit Line 51 and 1R Studies
<b>3B. Transit Fare Incentives</b>						
92	ACE	ACE eTicketing	3, 4	240253	\$1.5	Electronic fare collection system with seamless Clipper integration and associated infrastructure.
93	Alameda County Office of Education	Student Bus Pass*	multi		\$375.0	Provide free bus passes to all middle and high school students in Alameda County
<b>3C. Travel Training, Education and Promotion Programs</b>						
94		<i>See under Section 10 Planning and Outreach, and Section 11 TDM</i>				
<b>4. Community Based Transportation Plan (CBTP) Implementation Program - RTP ID # 240384</b>						
95		CBTPs - implementation of specific recommendations - including transit, local road, streetscape, bike, pedestrian and TDM elements	multi			Includes (City of) Alameda CBTP, Central Alameda County CBTP, West Oakland CPTP, Central and East Oakland CBTP, and South and West Berkeley CBTP.
96	City of Emeryville	Lifeline Transportation	1	240209	\$0.1	Continue operation of the Emeryville Lifeline Transportation Program, a door to door shuttle called "8 to Go" for the duration of the Plan's funding cycle.
97	City of Emeryville	Regional Planning and Outreach - develop a CBTP	1	240242	\$0.0	Develop a Community Based Transportation Plan to: 1) provide reliable, safe, and affordable access to regional transit infrastructure in adjacent communities (Oakland and Berkeley) to residents of Emeryville; and 2) in collaboration with Oakland and Berkeley provide reliable, safe and affordable access to Emeryville jobs and retail destinations to the residents of West Berkeley and North Oakland, by addressing barriers to cross-jurisdictional, multimodal travel.
98		Explore a Role for the Alameda County Guaranteed Ride Home Program	multi			
99	In Ashland, Cherryland and S. Hayward	Bicycle Parking	2		\$0.1	Operating Costs: \$0 - \$50/year per unit for maintenance; Capital Costs: \$200 - \$450 per bike rack unit; \$3000 per 8-10 unit bike lockers
100	In Ashland, Cherryland and S. Hayward	Bus Shelters	2		\$0.2	\$215,000. Operating Costs: Up to several thousand dollars per year (depending on vandalism); Capital Costs: Free per high-traffic location
101	In Ashland, Cherryland and S. Hayward	Sidewalks in Cherryland	2		\$36.0	\$36,000,000. Operating Costs: Some maintenance costs; Capital Costs: \$500,000 per block
102	In Ashland, Cherryland and S. Hayward	Lighting	2		\$0.1	\$120,000. Operating Costs: \$42/year per unit (electric charge only); \$95-\$120/year electricity and maintenance; Capital Costs: \$12,000 for a new light pole; \$2,000 - \$3,000 if light can use an existing pole and wiring
103	In Ashland, Cherryland		2		\$0.3	Operating Costs: Some maintenance costs included as part of street maintenance costs; Capital Costs: \$30,000 per roadway

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	and S. Hayward	Bicycle Lanes				mile for striping and signage
104	In Ashland, Cherryland and S. Hayward	Bicycle Purchase Assistance	2		\$1.0	Operating Costs: program cost depends on available funds - \$20,000/year for administration as part of an existing program; Capital Costs: \$200/bicycle, lock, and helmet
105	in Central and E. Oakland	Streetscape and bus stop improvements along transit corridors, at BART stations, and existing CEDA streetscape improvement projects	1		\$8.9	\$1.7 million to \$8.9 million, depending on the length of the corridor and the scope of work (e.g. whether the project includes utility undergrounding, street resurfacing, signal upgrades, landscaping, custom bus shelters or standard bus shelters, decorative paving or standard paving).
106	in Central and E. Oakland	Improve bicycle connections to BART stations Class 3A Bicycle Route on East 12th Street from Fruitvale Ave to 40th Ave (signing and striping and/or lane conversion projects)	1		\$0.0	\$37,500. The City of Oakland Bicycle Master Plan estimates that a Class 3A Arterial Bike Route has a unit cost of approximately \$75,000 per mile. This project is 0.50 miles in length.
107	in Central and E. Oakland	Improve bicycle connections to BART stations Class 2 Bicycle Lane on San Leandro Street from 66th Ave to 85th Ave. (signing and striping and/or lane conversion projects)	1		\$0.1	\$93,000. The City of Oakland Bicycle Master Plan estimates that a Class 2 Bicycle Lane has a unit cost of approximately \$100,000 per mile. This proposed bicycle lane is 0.93 miles in length.
108	in Central and E. Oakland	Improve bicycle connections to BART stations Class 2 Bicycle Lane on Camden Street and Havenscourt Blvd from MacArthur Blvd to International Blvd (signing and striping and/or lane conversion projects)	1		\$0.1	\$132,000. The City of Oakland Bicycle Master Plan estimates that a Class 2 Bicycle Lane has a unit cost of approximately \$100,000 per mile. This proposed project is 1.32 miles in length.
109	in Central and E. Oakland	Improve bicycle connections to BART stations Class 2 Bicycle Lane on Fruitvale Ave from Foothill Blvd to East 12th Street (signing and striping and/or lane conversion projects)	1		\$0.1	\$55,000. The City of Oakland Bicycle Master Plan estimates that a Class 2 Bicycle Lane has a unit cost of approximately \$100,000 per mile. This proposed project is 0.55 miles in length.
110	in Central and E. Oakland	Coliseum BART to Bay Trail Connector Path*	1		\$2.2	\$2.2 million. The Alameda Countywide Bicycle Plan includes improvements to the 66th Avenue underpass.
111	in Central and E. Oakland	Bicycle Programs Offer Road I Courses to residents in the project area	1		\$0.5	The cost to provide Road I courses and funding to Cycles of Change is relatively low compared to more capital-intensive projects.
112	in Central and E. Oakland	Bicycle Programs Provide funding for Cycles of Change program	1		\$1.3	The cost to provide Road I courses and funding to Cycles of Change is relatively low compared to more capital-intensive projects.
113	In city of Alameda	Implement Bus Stop and Shelter Improvements	1		\$0.2	\$220 per trash can (plus \$36 weekly per trash can for servicing); approximately \$3,000 per bus stop for lighting; \$18,000 per shelter (plus \$1,500 annually per shelter for maintenance) City of Alameda
114	In city of Alameda	Improve the Pedestrian Experience in Alameda Point	1		\$0.3	\$500 to \$1,250 for street trees; \$250 to \$1,000 per tree for a program modeled after Urban Releaf; \$200 to \$400 per linear foot of landscaped medians, including irrigation; \$1,800 per tree in a planter box; \$20 per square foot of sidewalk repairs
115	In city of Alameda	Install Pedestrian Street Lights	1		\$0.5	\$8,000 to \$15,000 per lamp including trenching and electrical, plus \$100 per lamp every four years for bulb changing
116	In city of Alameda	Improve Pedestrian Access between West Alameda and Oakland	1		\$100.0	\$5 million for a pedestrian barge (plus \$2.5 million annually for operation); \$40 million for a one-way path for pedestrians and bicyclists in the Webster/Posey Tube
117	In city of Alameda	Increase Pedestrian Crossing Visibility and Safety	1		\$1.5	\$3 per linear foot for striping new crosswalks; \$80,000 to \$100,000 per lighted crosswalk; \$8,000 to \$15,000 per refuge island
118	In city of Alameda	Improve Pavement and Bicycle Striping near the Ferry Terminal	1		\$0.1	\$4 per square foot to repave roadways; \$2.30 per linear foot to stripe bicycle lanes
119	In city of Alameda	Create More Bicycle Lanes throughout Alameda	1		\$0.1	\$10,000 per linear mile
120	In city of Alameda	Increase the Bicycle Capacity Onboard Buses	1		\$0.1	\$900 to \$1,350 each for racks that mount to front of bus; \$500 to \$700 each for onboard racks
121	In city of Alameda	Increase Bicycling Options for Youth and Low-Income Residents	1		\$3.7	Cycles of Changes has an annual budget of \$146,000 and financial support should contribute to this amount or augment it.
122	In city of Alameda	Increase Pedestrian and Bicyclist Safety in the Tube	1		\$8.3	\$7 million, plus an annual cleaning cost of \$50,000
123	In city of Alameda	Improve Bicycling Access between Alameda and Oakland	1		\$50.3	\$300,000 for a bicycle shuttle (plus \$2 million annually in operating costs)
124	In city of Alameda	Increase Education Regarding Bicycling Routes and Safety	1		\$0.2	\$500 per wayfinding signage; \$10,000 for marketing material production (plus \$5,000 per printing); contributions toward the Cycles of Change annual budget of \$146,000
125	in city of Berkeley	Expansion of Berkeley Paratransit Services Taxi Scrip Program	1			
126	in S. and W. Berkeley	Bus Stop and Shelter Improvement	1		\$0.1	Shelters/benches at no cost; solar powered lighting \$700 to \$3,000 per stop/shelter, transit info. \$85-\$385 each
127	in S. and W. Berkeley	Improved Pedestrian Signal Timing	1		\$0.1	No cost, city staff can implement at no extra cost

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128	in S. and W. Berkeley	Improved Crosswalk Visibility at Uncontrolled Intersections	1		\$0.1	South and West Berkeley
129	in S. and W. Berkeley	Shared Roadway Pavement Markings	1		\$0.0	South and West Berkeley
130	in S. and W. Berkeley	Improved Pedestrian Lighting	1		\$1.0	\$768,000 to \$1,024,000
131	in S. and W. Berkeley	Secure Bicycle Parking (Provide More Locations for Safe Bicycle Storage)	1		\$0.1	South and West Berkeley
132	in S. and W. Berkeley	Education of Cyclists regarding Bicycle Boulevard Network	1		\$0.5	\$10,000 to \$20,000
133	in S. and W. Berkeley	Improved Crossing for Bicycles at Bicycle Boulevards (Improved Crossings at Bicycle Boulevards)	1		\$0.5	\$400,000 to \$500,000
134	in S. and W. Berkeley	Improved Crossing for Bicycles at Bicycle Boulevards (Shared Roadway Pavement Markings on Class II.5 Bikeways and Traffic Circle Approaches)	1		\$0.4	See "Improved Crossings at Bicycle Boulevards"
135	in W. Oakland	Pedestrian Improvements/Bikes Lanes: Mandela, 8th, Wood	1		\$1.4	
136	in W. Oakland	7th Street Streetscape Project - Phase I	1		\$1.3	West Oakland
137	in W. Oakland	Bike Lanes: Market Street	1		\$0.4	West Oakland
138	in W. Oakland	Bike Racks	1		\$0.0	\$150/rack
139	in W. Oakland	Cycles of Change	1		\$0.2	\$90,000 for two years for O&M
140	in W. Oakland	7th Street Streetscape Project - Phase II	1		\$6.0	\$5-6 million
141	in W. Oakland	Bike Lanes: Grand Avenue and 14th Street	1		\$1.1	Grand: \$200,000-\$250,000; 14th: \$500,000-\$800,000
142	in W. Oakland	Traffic Calming: Peralta Street : Design only	1		\$0.1	\$100,000 (design only)
143	in W. Oakland	Bikeway: Middle Harbor Shoreline Park	1		\$2.0	TBD: Part of multi-million roadway project that has not been designed.
144	in W. Oakland	Subsidized car sharing-W. Oakland	1		\$2.8	\$110K/Year
145	in W. Oakland	Comprehensive Transportation/Land Use Plan W. Oakland CBTP	1		\$0.2	\$150K
146	in W. Oakland	BART underground - W. Oakland	1		\$1,050.0	\$200-350M/miles
147	in W. Oakland	CBTP Project Implementation Assistance W. Oakland	1		\$0.0	\$15K
148		BART Noise Study	multi			Reduce noise impacts for neighborhoods
149		BART Rail Grinding	multi			Reduce vibration impacts on neighborhoods
150		Bus Shelters	2		\$0.2	One-time cost for forty shelters
151		Transportation Information on Cable Television	2		\$0.0	One-time cost to adapt existing video
152		Information Center	2		\$0.1	2 Communities (\$60K each per year) plus equipment (\$20K one-time)
153		Information at Stops and on Buses	2		\$0.0	Info at shelters for both equipment and materials
154		Bicycle Purchase Assistance	2		\$0.1	To provide 200 bicycles, the minimum to justify administrative costs is \$20K. per year
155		Bicycle Racks	2		\$0.0	5 per community (for 3 communities)
156		Medical Service Access (Taxi Return)	1		\$1.3	\$50k/year
157		BART Transit Village Parking	1		\$0.1	\$5K (community monitoring)
<b>5. Local Road Improvements Program - RTP ID # 240386</b>						
158		Congestion relief	multi			Congestion relief on local streets and roads

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<b>5A. Major Arterial Performance Initiative Program</b>						
159	ACTC	Arterial Performance Initiative Program	multi	230224		Focus on Metropolitan Transportation System (MTS), a companion to MTC's Freeway Performance initiative. This would include improved mobility, management of the existing system and meeting environmental targets through signal interconnect, transit priority, incident management, traveler information and intersection improvements.
<b>5B. Safety Improvements</b>						
160		Safety improvements	multi			Examples include rail crossings, roadway crossings, etc.
161		Grade separations	multi			Grade separations at rail lines and major roadways for safety for auto/ bike / pedestrians
162	Alameda County	Crow Canyon Road Safety Improvements Project	2	240094	\$15.7	The project includes roadway realignment, shoulder widening, retaining wall systems, and guardrail modifications along Crow Canyon Road between E. Castro Valley Blvd. and the Alameda / Contra Costa county line.
163	Alameda County	Patterson Pass Road Safety Improvements Project	4	240095	\$94.0	The project includes roadway realignment, shoulder widening, retaining wall systems, and guardrail modifications along Patterson Pass Road between Cross and Midway. The shoulder widening will make the roadway complete for bicyclists and pedestrians. The project construction would be completed in six phases.
164	Alameda County	Tesla Road Safety Improvements Project	4	240096	\$145.0	The project includes roadway realignment, shoulder widening, retaining wall systems, and guardrail modifications along Tesla Road between Greenville Road and the San Joaquin County line. The shoulder widening will make the roadway complete for bicyclist and pedestrians. The project construction would be completed in ten phases.
165	Alameda County	Altamont Pass Safety Improvements Project	4	240097	\$8.4	The project includes roadway realignment, shoulder widening, retaining wall systems, and guardrail modifications along Altamont Pass Road between. The shoulder widening will make the roadway complete for bicyclist and pedestrians.
166	Alameda County	Vasco Road Safety Improvements Project Phase II	4	240098	\$27.0	The project includes roadway realignment, shoulder widening, installation of median barriers along Vasco Road between Contra Costa County and the City of Livermore.
167	Alameda County	Redwood Road/A Street Improvements (I-580 to Hayward city limits)	2	240111	\$9.0	The project will improve significantly improve bicycle and pedestrian safety and access along Redwood Road / A Street between I-580 and Hayward city limit. The project includes, wider sidewalk, bicycle lanes, median islands, and improve crosswalks.
168	Alameda County	Redwood Road Safety Improvement Project (Castro Valley to Oakland)	2	240325	\$47.0	The project will improve significantly improve bicycle and pedestrian safety and access along Redwood Road between Oakland City limits and Buti Park in Castro Valley. The shoulder widening will make the roadway complete for bicyclist and pedestrians. The project construction would be completed in ten phases.
169	City of Albany	Local Road Safety - Marin Ave	1	240350	\$2.6	Marin Avenue is the primary east-west arterial serving residential and civic areas through the City and connecting to I-80/580 via Buchanan St. The proposed project entails implementing bulbouts at the intersections of Marin Avenue with the side streets to reduce the distance pedestrians have to cross the street, and implementing a median from the intersection of Marin and Cornell Avenues to the intersection of Marin and Evelyn Avenues.
170	City of Berkeley	State Route 13/Ashby Avenue Corridor Improvements	1	240202	\$7.9	Enhance pedestrian and bicycle safety, provide Safe Routes to Schools and Transit, improve traffic safety on State Route 13/Ashby Avenue in Berkeley.
171	City of Berkeley	Railroad Crossing Improvements	1	230116	\$108.2	Design and construct railway crossing improvements, including grade separation at Gilman Avenue and quadrant gates, road closures, and at-grade improvements at other crossings, per Quiet Zone Study.
172	City of Berkeley	Ashby/State Route 13 Disaster Resilience	1	240266	\$54.9	Undergrounding of utilities on Ashby/State Route 13 to ensure resiliency of emergency evacuation routes in the event of a disaster.
317	City of Emeryville	Local Road Safety - rail improvements	1	240199	\$4.9	Rail safety improvements consisting of 4-quad gates and detection technology at local roadway crossings at the UPRR main line at 65th,66th and 67th Streets consistent with Quiet Zone approval.
173	City of Fremont	Safety improvements at UPRR	3	240208	\$3.1	Improve highway-rail crossing safety at four at-grade crossings in the City of Fremont by installing raised medians, railroad gate improvements, and sidewalk. Rail crossing locations are: Fremont Blvd., Maple St., Dusterberry Way., and Nursery Ave.
174	City of Fremont	Vargas Road Safety Improvement Project from I-680 to the Vargas Plateau Regional Park	3	240265	\$5.0	Widening of Vargas Road from Pico Road to Morrison Canyon Road and widening of Morrison Canyon Road from Vargas Road to County Line to 18' wide paved road with 1' shoulder on each side and turnouts
175	City of Hayward	Tennyson Road Grade Separation	2	240055	\$13.7	Construct an underpass on Tennyson Road between Whitman and Huntwood Avenues
176	City of Newark	Central Avenue Railroad Overpass	3	21103	\$15.3	Construct a grade separation structure on Central Avenue (4-lane arterial street) at Union Pacific Railroad crossing. Project is an enhancement.
177	City of Newark	Mowry Avenue Railroad Overpass	3	240273	\$9.0	Construct a grade separation structure on Mowry Avenue at the Union Pacific Railroad crossing to provide access to Area 4 in

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate (\$M)	Project Description
						Newark.
178	City of Oakland	Local Road Safety Program: Railroad Crossings, Street Realignment	1	240221	\$7.5	Improving Railroad Crossings - existing rail crossings are generally deficient in gate arms and warning lights, at grade cross-track sidewalk access and ADA access, paving, signage, pavement markings.
179	City of Oakland	Local Road Safety	1	240222	\$10.0	Street Realignment, signal modifications, intersection modifications, guardrail installation, shoulder construction and other measures to increase the safety of existing roadways.
181	City of Oakland	Melrose - Coliseum District Street Reconstruction (formerly 'Oakland Coliseum Transportation Infrastructure Access Improvements?')	1	240290	\$13.2	Reconstruct Coliseum Way and 50th Avenue to handle heavy truck traffic, reduce safety hazards due to sight distance, and provide bicycle and pedestrian safety facilities.
321	City of Oakland	Laurel District Safety and Access on MacArthur, from High Street to Seminary (LAMMPS)	1	240277	\$20.3	Improve safety along MacArthur Blvd between High Street and Seminary by altering lane widths, installing additional traffic signals, adding bike lanes, a path, and pedestrian crossings; move curb and gutter in sections of the street, relocate utility poles to provide ADA width sidewalks, provide retaining wall in one location.
182	City of Pleasanton	(Local Road Safety )Re-alignment and addition of bike lanes to Foothill Road between Muirwood Drive North and Highland Oaks	4	240286	\$1.3	Re-alignment and addition of bike lanes to Foothill Road between Muirwood Drive North and Highland Oaks
183	City of San Leandro	Lake Chabot Road Stabilization (Chabot Ter to Astor Dr)	2	240306	\$5.0	Road embankment stabilization from Chabot Terrace to Astor Dr in San Leandro
<b>5C. Street-scape Improvements</b>						
184	Alameda County	Castro Valley Streetscape Improvements Project Phase II	2	240102	\$18.0	To create a safe, comfortable and attractive pedestrian main street for downtown Castro Valley, a series of street improvements along Castro Valley Boulevard between San Miguel and Strobridge. Calm the traffic environment by reconfiguring traffic lanes and providing on-street parking with shared bicycle access while still maintaining adequate traffic capacity on the Boulevard. Create a beautiful and inviting pedestrian environment that will encourage the community to access Castro Valley Boulevard for shopping, dining and entertainment by providing widened sidewalks with ample seating areas, a canopy of street trees and planter beds, landscaped bulb-outs, street furnishings and gateway markers.
185	Alameda County	E. 14th / Mission Blvd. Streetscape Improvements Project Phase II & III*	2	240103	\$25.8	E. 14th Street/Mission Blvd. (Route 185) Streetscape Improvement Project extends from 162nd Avenue to Rufus Court (Hayward City Limit). The project features include new widen sidewalks, transit stop improvements, intersection bulb-outs, landscaping, and raised medians.
186	Alameda County	Hesperian Blvd Streetscape Improvements Project	2	240104	\$11.8	The project includes installing wider sidewalks, reducing travel lanes, improving transit facilities, planting street trees, constructing medians, and enhancing pedestrian lighting along Hesperian Blvd. between San Leandro city limit and Hayward city limit
187	Alameda County	East Lewelling Blvd. Streetscape Improvements Project Phase II	2	240110	\$21.5	The project includes wider sidewalks, bicycle lanes, median islands, and landscaping along E. Lewelling Blvd. between Mission Blvd. and Meekland Avenue.
307	City of Alameda	Shoreline Drive streetscape; and bicycle, transit, and pedestrian access improvements	1	240080	\$19.1	Provides an enhanced Class I bike path with a landscaped median and gateway features on and near Shoreline Drive. Improved landscaping and gateway features . Improved bus stops, bicycle parking and pedestrian scaled lighting. The project also includes constructing an enhanced bicycle/pedestrian bridge on Bay Farm Island to replace the existing "Wooden Bridge", which was built in the early 1980s.
188	City of Albany	State Highway Preservation (San Pablo Ave?)	1	240354	\$2.9	The proposed project entails implementing median, sidewalk and crosswalk improvements to make this roadway easier to navigate for pedestrians and to create a more enticing environment that attract pedestrian oriented businesses.
189	City of Fremont	Fremont Boulevard Streetscape Project	3	240257	\$7.4	The Centerville PDA is one of the key locations in the City's vision to become "strategically urban" and Fremont Boulevard streetscape improvements is one of the highest-priority implementation measures in the entire Framework Plan. The City seeks funding for the following changes to Fremont Boulevard in order to promote an attractive pedestrian area and "complete street" in the heart of the Centerville PDA surrounding the Centerville Train Station: narrowing lane widths/eliminating travel lanes, introducing on-street parking to slow traffic; adding bulbouts, crosswalks, medians, and landscaping; adding new street furniture, street lighting, and signage; adding bike lanes and bicycle parking.
190	City of San Leandro	San Leandro East 14th Street Streetscape Improvements*	2	240270	\$8.3	Streetscape Improvements along East 14th Street
191	City of San Leandro	San Leandro City Streetscape Improvements	2	240271	\$21.0	Pedestrian, bicycle, streetscape, transit center, traffic safety, signal and parking improvements to support Transit Oriented Development along major travel corridors in San Leandro including MacArthur Blvd, Marina Blvd, Doolittle Dr., Bancroft Drive, W. Juana Ave and Davis Street.

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<b>5D. Coordination with Freeways</b>						
192		Better coordination between freeway and local streets	multi			Improve connections between local streets and freeways
193	City of Berkeley	I-80 University Ave interchange - Study	1	240164	\$33.1	Study and develop design of a full interchange for Interstate 80/580 at University Avenue in Berkeley to enable eastbound I-80 vehicles to exit and travel westbound.
<b>5E. Complete Streets</b>						
194		Complete Streets - implementation	multi			Implementation of Complete Streets to improve mobility for all modes: transit, bike, walking, driving
195	AC Transit	Bicycle/Pedestrian Enhancements on East Bay BRT corridor (non-transit elements)	1, 2	240371	\$24.0	Provides bike/ped improvements, street-scape elements to support BRT on Telegraph Avenue/International Blvd./E.14th street. Includes non-transit ped bulbs, lighting, curb cuts and other related improvements. Does not include transit elements, but supports project: # 22455
196	City of Berkeley	Local Streets and Roads O&M	1	240224	\$71.2	Rehabilitate and repair local streets and roads in Berkeley following Complete Streets policies, including street resurfacing, preventative maintenance, sidewalk repair and replacement, ADA curb ramp installation, bus pad installation and low-impact development Green Streets elements where feasible.
197	City of Berkeley	Non-Capacity Increasing Local Road Intersection Modifications and Channelization	1	240228	\$38.5	Berkeley Complete Streets Road Network Improvements. Restore 1-way streets to 2-way operation per Southside Plan. Reconfigure Shattuck Avenue in Downtown Berkeley for continuous 2-way traffic on west leg of Shattuck Square per Downtown Plan. Implement West Berkeley Circulation Master Plan. Study and develop reconfiguration designs for Adeline per UC Berkeley Study.
198	City of Dublin	Iron Horse bicycle, pedestrian and transit route	4	21460	\$12.8	A bicycle/pedestrian/roadway and transit lane in existing Alameda County right-of-way between the East Dublin BART station and Dougherty Road and widening of Dougherty Road from Scarlett Drive to North City Limit to accommodate transit and bicyclists. Environmental review and preliminary engineering is complete.
199	City of Oakland	Route 24 /Caldecott Tunnel Enhancements -Settlement Agreement projects*	1	230171	\$15.0	Intersection improvements, bicycle and transit access improvements and soundwalls on Route 24 in Oakland
312	City of Pleasanton	Complete Streets Project in Hacienda Business Park	4	240184	\$7.5	Redesign and construction of existing 4, 5 and 6 lane arterial and collector roadways in Hacienda Business Park to a complete street design that incorporates bike lanes, friendly transit stops, improved streetscapes and wide and connected walking paths.
200	City of Berkeley	Complete Streets: Roadway Network Improvements	1		\$11.0	Southside roadway reversion to 2-way. Shattuck Ave/Square 2-way west leg. West Berkeley Circulation Master Plan. Adeline/Ashby corridor. Berkeley Comments: • Critical Initiative #4 - Southside Plan Implementation • Critical Initiative #1080 - Downtown Plan • Critical Initiative #1041 - West Berkeley Circulation Master Plan • Departmental Initiative #936: Traffic Signal Priorities
<b>5F. Traffic calming</b>						
201	City of Hayward	Local Road Safety	2	240029	\$5.0	A lump sum to implement various traffic calming measures on local residential streets
202	City of Oakland	Harrison-Oakland Avenue Major Street Improvements	1	240278	\$12.4	Redesign and construct the Harrison-Oakland Avenue couplet as two two-way streets. Incorporate bicycle facilities, bus enhancements, and pedestrian crossings.
<b>5G. ITS/Signals</b>						
203		ITS/SMART Corridors	multi			Ongoing implementation
204	City of San Leandro	Traffic Signal Systems Upgrade	2	230198	\$2.8	Provides citywide traffic signal system elements to provide an ITS including new controllers, system communication, facilities, detection, upgrades and relocations, emergency vehicle preemption, speed, level of service monitoring along with advance detection and implementation of Adaptive Traffic Control on critical corridors of Hesperian Bl, Washington Av, San Leandro Bl, Marina Bl, Doolittle Dr, Bancroft Av, Davis St and East 14th St. and all arterials.
<b>5H Signage</b>						
205		Wayfinding Signage	multi			Installation of effective wayfinding signage

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<b>6. Local Streets and Roads Operations &amp; Maintenance (O&amp;M) Program - RTP ID # 240387</b>						
<b>6A. Pavement Rehab</b>						
206		Pavement rehabilitation	multi			Pavement rehabilitation and resurfacing to meet local PCI targets
207	Alameda County	Pavement Rehab	multi	240108	\$15.2	Pavement Rehabilitation at various locations in Alameda County unincorporated areas
208	City of San Leandro	San Leandro Local Streets & Roads Rehabilitation Project	2	240302	\$80.0	Rehabilitate San Leandro streets, including street resurfacing, preventive maintenance, sidewalk repair and replacement, ADA curb ramp installation, and bus pad installation to attain a minimum PCI average of 69.
209	City of Albany	Buchanan Overcrossing*	1		\$0.7	Rehabilitation, includes resurfacing and traffic improvements
<b>6B. Maintenance / Operations</b>						
210		O&M for local streets and roads	multi			Support maintenance and operations of local streets and roads infrastructure
220	City of Alameda	Local Streets and Roads O&M	1	240187	50	This project will provide funding for maintenance and rehab of Alameda streets. The funding will also be used for maintaining ITS infrastructure in the City.
211	City of Albany	Local Streets and Roads O&M (Solano Ave btw Masonic and Berkeley city limit)	1	240342	\$2.5	Solano Avenue is centrally located in Albany and is one of the two main commercial districts in the City. In 1995, the City rehabilitated the pavement and added streetscape and pedestrian improvements to the segment between San Pablo Avenue and Masonic Avenue (west of the BART track). This project entails pavement resurfacing and implementation of pedestrians improvements, such as bulb outs at intersections, curb ramps, and visible crosswalks at selected intersections along Solano Avenue from Masonic Avenue to the Berkeley City Limit.
212	City of Albany	Local Streets and Roads O&M	1	240343	\$2.7	Project located between the intersection of the Richmond City Limits and Buchanan Avenue. Project includes pavement resurfacing, utility undergrounding, and installation of bike lanes.
213	City of Livermore	Local Streets and Roads O&M	4	240298	\$134.0	Livermore's Pavement Maintenance Needs 2015-2035 derived from MTC P-TAP Round 11 Pavement Management Update Report
214	City of Newark	Local Streets and Roads O&M	3	240285	\$62.5	Newark local streets and roads maintenance including pavement resurfacing, pedestrian and bicycle infrastructure replacement, restriping, base failure repair, etc.
215	City of Oakland	Arterial Management Program City of Oakland ITS Local Streets and Road Operations: Citywide Intelligent Traffic System (ITS), Signal Operations	1	230169	\$26.9	Provides ITS elements including new controllers, signal interconnect/coordination, transit priority, speed and level of service monitoring, real time arrival information, CCTV, incident management, and emergency vehicle preemption along Hegenberger Road, 73rd Avenue, 98th Avenue, East 14th Street, International Boulevard, San Leandro Street, High St, MacArthur Boulevard, Telegraph Avenue and Broadway.
216	City of Oakland	Non-Capacity Increasing Local Road Rehabilitation	1	240219	\$487.0	Rehabilitate Oakland Streets, including street resurfacing, preventive maintenance, sidewalk repair and replacement, ADA curb ramp installation, and bus pad installation
217	City of Oakland	Local Streets and roads O&M: Repair and maintenance of street system (excluding roadway rehab and repair). Includes Signal Operations, Striping and Signs maintenance	1	240220	\$12.5	Repair and maintenance of street system (excluding roadway rehab and repair). Includes Signal Operations, Striping and Signs maintenance
<b>6C. ITS</b>						
218		SMART corridors coordination	multi			Ongoing program operation
324	ACTC	I-80 ICM San Pablo Corridor Arterial & Transit Improvement Project	1	230226	25.2	This is the Arterial component of I-80 ICM project. This is the corridor management along parallel arterials and the connecting roadways across Alameda County and Contra Costa County along the Interstate 80 (I-80) corridor.
219	City of Livermore	I-580 SMART corridor (Local Streets and Roads) O&M - Livermore share	4	240300	\$2.0	Livermore's share of I-580 Smart Corridor operations and maintenance plus local coordinated signal systems
<b>7. Highway, Freeway, Safety and Non-Capacity Improvements Program - RTP ID # 240388</b>						
<b>7A Interchange Improvements</b>						
<b>7B Operations incl. Ramp Metering</b>						
226		Congestion relief	multi			Ongoing program for congestion relief on/for freeways/highways
227		Safety improvements	multi			Ongoing program for safety improvements on/for freeways/highways

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<b>7C Maintenance</b>						
229		Maintenance of state highways	multi			Maintenance of state highways and freeways
<b>7D Soundwalls</b>						
230	ACTC	Soundwalls	multi	98208	\$10.0	Fulfills a countywide programmatic set aside to construct soundwalls
231	ACTC	Soundwalls - Central Alameda County Freeway Study	2	230094		To provide funds to construct soundwalls in the Central Alameda County Freeway Study area corridor at locations that are not associated with a specific LATIP project.
232	City of Berkeley	I-80 Aquatic Park Soundwall	1	240252	\$17.3	Construct innovative soundwall on Interstate 80/580 at Aquatic Park between University Avenue Interchange and Ashby Avenue Interchange.
<b>7E Freeway Service Patrol</b>						
233		Freeway Service Patrol	multi			Ongoing operation of the regional Freeway Service Patrol tow-truck service
<b>7F ITS</b>						
234		Maintenance of state highways ITS systems	multi			Maintenance of ITS on state highway system
<b>8. Bridge Improvements Program - RTP ID # 240389</b>						
<b>8A Bridge Replacement</b>						
235	Alameda County	High Street Bridge Replacement Project*	1	240099	\$40.3	Replace the existing railroad and vehicular bridges with one structure that can provide the only Lifeline access from Alameda. Provide dedicated bike lanes, median, and sidewalks. The Bridge is located on the Oakland Estuary between Marina Drive in Alameda and Tidewater Avenue in Oakland
236	Alameda County	Park Street Bridge Replacement Project*	1	240100	\$46.3	Replace the existing railroad and vehicular bridges with one structure that can provide the only Lifeline access from Alameda. Provide dedicated bike lanes, median, and sidewalks. The Bridge is located on the Oakland Estuary between Park Street in Alameda and 29th Avenue in Oakland
237	Alameda County	Fruitvale Avenue (Miller Sweeney) Lifeline Bridge Project*	1	240324	\$40.8	Retrofit the existing bridge with one structure that can provide the only lifeline access from Alameda. Provide dedicated bike lanes, median, and sidewalks. The Bridge is located on the Oakland Estuary between Tilden Way in Alameda and Fruitvale Avenue in Oakland.
<b>8B Bridge Expansion and Maintenance</b>						
238	City of Pleasanton	Bernal Bridge (west) second bridge construction (Non-Capacity Increasing Local Bridge Rehabilitation/Replacement/Retrofit)	4	240175	\$5.0	Bernal Bridge (west) second bridge construction.
<b>8C Bridge retrofit and repair</b>						
239	City of Alameda / Alameda County	Fruitvale Avenue Lifeline Bridge Project (rail and roadway)	1	240101	\$94.0	Replace the existing railroad and vehicular bridges with one structure that can provide the only Lifeline access from Alameda. Provide dedicated transit lanes, bike lanes, median, and sidewalks. The Bridge is located on the Oakland Estuary between Tilden Way in Alameda and Fruitvale Avenue in Oakland
<b>8D Bridge Operations</b>						
240	Alameda County	Estuary Bridge Operations	1	240105	\$60.0	Maintain and operate High Street, Park Street, and Miller Sweeney (Fruitvale) bridges that connect the City of Oakland and the City of Alameda.
<b>9. Transportation and Land Use Program (or PDA Program) - RTP ID # 240391</b>						
241		TOD / PDA - implementation program	multi			Develop PDA, TOD and GOA plans and implement plan recommendations
242	ACTC	CEQA Mitigation Toolkit (for land use)	multi			Develop a toolkit for land-use development that supports SCS
243	ACTC	TOD-streetscape: Telegraph/International Boulevard*	multi			
244	Alameda County	Castro Valley BART TOD	2			
245	BART	Station Access projects (Alameda County portion)	multi	22675	\$344.1	Combines parking, smart growth / TOD, transit connectivity, bicycle / pedestrian, signage and other access modes essential to meet growing demand for BART services. Prices are broad brush, but comprehensive station plans in tandem with VTA's BART capacity study will give better definition to this large project over time.

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247	City of Berkeley	San Pablo Avenue Public Improvements	1	240214	\$29.9	Implement the San Pablo Avenue Public Improvements Plan in Berkeley to support focused growth along designated Priority Development Area corridor.
248	City of Berkeley	Transit-Oriented Development Access Infrastructure	1	240321	\$40.0	To provide necessary infrastructural investments to support focused growth in Transit-Oriented Developments in Berkeley, including Downtown Berkeley and the Ashby BART Station, and all of Berkeley's designated Priority Development Areas.
249	City of Dublin	Dublin TOD : West Dublin and downtown Dublin Program*	4	240267	\$15.1	This program consists of street improvements and pedestrian enhancements within Downtown Dublin (a Priority Development Area) to support and encourage transit oriented development within walking distance of the West Dublin BART Station.
250	City of Fremont	Downtown Pedestrian Streetscape Improvements on Capitol Avenue and New Middle Road in Central Fremont PDA	3	240258	\$77.3	Fremont's 110-acre Midtown District is planned as the heart of the Central Fremont Priority Development Area (Central PDA), a mixed-use transit-oriented district located between the Fremont BART Station and the Fremont Boulevard transit corridor. Currently, the Midtown district street network does not fully support the planned future uses: a new street (referred to as "New Middle Road") and the extension of another street (Capitol Ave. from State Street to Fremont Blvd.) are necessary to provide connectivity and to reduce block lengths to a comfortable walking distance. This project proposes to construct the two new street segments and associated streetscapes, and to upgrade the streetscape along the existing length of Capitol Ave. with enhanced landscaping, paving materials, street furniture and streetlighting. This attractive public space will encourage pedestrian activity and serve as the cultural, civic, and entertainment center for Fremont over the next 20 years.
252	City of Newark	Dumbarton TOD Transportation Infrastructure Improvements	3	240293	\$1.2	Provide funding for infrastructure support to Priority Development Areas, including the City of Newark's Dumbarton TOD Project.
253	City of Newark	Dumbarton TOD/Bay Trail Connectivity Pedestrian and Bicycle Railroad Crossing	3			
254	City of Oakland	Coliseum/Oakland Airport BART Transit Enhancements (Coliseum BART parking structure )	1	240230	\$105.0	Transit Village - Coliseum/Oakland Airport BART. Construction of structured parking to replace current surface lot at the BART station. Reconfigured and expanded connections between BART/Oakland Airport Connector/Capitol Corridor/Oakland Coliseum Arena.
255	City of Oakland	West Oakland PDA/TOD Transit Enhancements*	1	240231	\$20.6	West Oakland PDA Transit Enhancement. This project includes improvements to all modes, including streetscape, bike and ped access, and infrastructure enhancements to encourage development and reuse around the West Oakland BART station and environs.
256	City of Oakland	Fruitvale/Diamond PDA: Transit Enhancements*	1	240233	\$35.4	Fruitvale/Diamond PDA Transit Enhancements - Streetscape improvements including pedestrian-scaled lighting, Sidewalk and pedestrian crossing improvements, landscaping, bus shelters, and bicycle facilities.
257	City of Oakland	Eastmont Transit Center PDA: Transit Enhancements	1	240234	\$19.7	Eastmont Transit Center PDA - planning and construction of bicycle, pedestrian and transit improvements at the Eastmont Transit Center and along major bus route corridors along 73rd Avenue, MacArthur Boulevard, Foothill Boulevard and Bancroft Avenue within the PDA.
258	City of Oakland	MacArthur BART Station PDA/TOD: Transit Enhancements*	1	240235	\$13.5	MacArthur BART Station Priority Development Area - enhanced bicycle, pedestrian, and transit connections to the BART station within the PDA boundaries. Projects include streetscape improvements on Telegraph Avenue, Martin Luther King, Jr. Way, and West MacArthur Boulevard, and bicycle connectivity improvements.
259	City of Oakland	Lake Merritt BART Specific Plan Implementation.: Transit Enhancements*	1	240236	\$5.0	Lake Merritt BART Specific Plan Implementation. Upon completion of the Specific Plan, numerous improvements will be required to re-connect the component areas of the study through multiple transportation improvements: Chinatown, Lake Merritt BART station area, Laney College, Oakland Museum, Jack London Square area, and the Estuary. Probable projects include bicycle lanes and paths, transit circulators, improved and redesigned streets, bridges, and streetscapes, sidewalks, and a possible parking garage. Because the Plan is not yet complete, we recommend a placeholder of \$5 million in the CWTP to ensure that the plan process, EIR, and any additional studies can be completed prior to design development and construction requests.
260	City of Oakland	Broadway Valdez Specific Plan Area Transit Access Improvements	1	240323	\$5.9	Broadway Valdez Specific Plan Area Transit Access Improvements.
261	City of Oakland	TOD: 19th Street BART*	1			
262	City of San Leandro	Downtown San Leandro TOD*	2	240269		This project constructs street and pedestrian improvements in the Downtown San Leandro TOD area to encourage transit oriented development within walking distance to the downtown core, San Leandro BART and East 14th Street.
263	City of San Leandro	Bay Fair BART Transit Village (TOD)	2	240296	\$70.0	This project constructs street and pedestrian improvements in the Bayfair BART PDA area to encourage transit oriented development within walking distance to the Bayfair BART Station, Bayfair Mall, Hesperian Blvd and East 14th Street.
264	in Berkeley	Asbhy BART TOD & Station Capacity Expansion*	1	230135	\$20.0	Develop Transit Oriented Development on west parking lot of Ashby BART Station, including supportive, workforce, and affordable housing, replacement BART parking, improved bike, ped, and transit access, BART Capacity improvements include new escalators.

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<b>10. Planning and Outreach Program - RTP ID # 240392</b>						
<b>10A Planning Studies and Implementation</b>						
265		Planning studies for corridors, specified areas, programs and projects	multi			Ongoing program. Examples of potential studies include: corridor studies, PDA/GOA plans, freight-movement, etc
266	ACE	Altamont Corridor Acquisition & Development/Short Haul Freight (Planning and Environmental phase)	3, 4	240276	\$0.0	Contributes local share of continuing the planning and environmental work after the HSRA funded the first 20 months of the project team effort. Given the state budget crisis, HSRA funding for this Phase II Corridor is unlikely. This funding would move the project from the Alternative Analysis to the final stages of the EIR/EIS.
267	ACE	Marketing strategies study	3, 4	240299	\$0.1	Marketing Strategies Study identifying what keeps commuters in their cars and out of public transit. Similar to the Caltrans license plate study, the Altamont Commuter Express seeks to gain a deeper understanding of why commuters continue to drive over the Altamont Pass amongst some of the most congested highways in California instead of taking alternative modes of transit. This study would identify deep consumer insights to help ACE develop and implement effective marketing and communication strategies aimed at digging deeper into the commuters' thoughts and feelings about their car, public transit, traffic congestion, etc. This study will identify the deep mental and emotional universal orientations that structure and guide how people think, feel, and act with regard to commuting.
268	ACE	Northern California Mega Region Rail Plan	multi	240301	\$0.1	This plan will examine how current and planned rail systems (ACE, BART, CalTrain, Amtrak San Joaquins, Amtrak Capitol Corridor, SMART, CAHSR) integrate with each other, other modes of transit, the transportation network, and land use patterns.
269	City of Berkeley	West Berkeley Circulation Master Plan Implementation	1	240229	\$26.7	Implement multi-modal access and circulation projects identified in West Berkeley Circulation Master Plan and West Berkeley Project Environmental Impact Report.
<b>10B Promotion/Outreach and Education about Transit, Bike, Walk, Multimodal Access (incl SR2T)</b>						
270		Outreach/Promotion/Education	multi			Covers transit, bike, walking, paratransit, alternatives to SOV driving, and other support programs
<b>10C Multi-Lingual Educational Materials</b>						
271		Multi-lingual outreach	multi			Creating non-English (and culture-sensitive) versions of transportation marketing and education materials
<b>10D School Promotion</b>						
272		Outreach to schools/ students	multi			Outreach to schools and school districts for promoting alternative modes, as well as coordination in land-use/ PDA development
<b>11. Transportation Demand Management (TDM) and Parking Management Program - RTP ID # 240393</b>						
<b>11A Parking programs</b>						
273		Parking programs / projects	multi			Parking upgrades (infrastructure, equipment)
274		Parking Management/Policies	multi			Parking policies, demand management, pricing, unbundling, etc
275	City of Berkeley	Downtown Berkeley Transit Center Parking Facility	1	240215	\$32.5	Replace Center Street Garage with new public parking facility to serve the Downtown Berkeley BART Station and proposed Transit Center. The Downtown Berkeley Transit Center Parking Facility will serve visitors to Berkeley and travelers connecting to BART, AC Transit, and Lawrence Berkeley National Lab and UC Berkeley shuttles.
316	City of Emeryville	Parking Management	1	240195	\$1.8	This project includes the second phase of the Emeryville Parking Policy and Management Implementation Plan. Phase II involves installation of 31 multi-space meters timed for short term use and 63 meters timed for long-term use in the North Hollis area, except for the low/medium density neighborhood east of Doyle Street as identified in March 2010
276	City of Oakland	Parking Management	1	240239	\$10.0	Completion of a parking management plan incorporating market based pricing and regular review of parking occupancy and pricing to best serve parking demand. Installation of modern single space and multi-space meters, directional signage, automated occupancy detectors, and other appropriate technology.
277	City of Pleasanton	Park and Ride construction on Bernal Avenue	4	240165	\$2.4	Construction of a 100 stall park and ride facility adjacent to the Bernal at I-680 interchange
<b>11B Transit Cards</b>						
278		Transit cards	multi			Examples include Clipper card, Discounted fares, multi-purpose smartcards, etc

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate (\$M)	Project Description
<b>11C School Programs</b>						
279		Safe Routes to School implementation	multi			Ongoing program implementation
280	City of Oakland	Local Road Safety - Neighborhood Traffic Safety Program and Safe Routes to Schools programs	1	240223	\$10.0	Neighborhood Traffic Safety Program and Safe Routes to Schools programs. Includes school safety and neighborhood traffic reviews and public education and crossing guards, as well as installation of hardscape traffic calming devices (bulbouts, pedestrian safety refuges, etc)
281	In city of Alameda	Expand the Safe Routes to Schools Program	1		\$12.5	
<b>11D GHG Reduction</b>						
282		GHG reduction	multi			Supports local Climate Action Plans, SCS, or addresses sea-level change
<b>11E TDM (i.e. GRH, 511)</b>						
283		Guaranteed Ride Home Program	multi			Ongoing program implementation
284	ACTC	Develop Countywide TDM/parking guidelines/ technical assistance program	multi			
285	City of Berkeley	Parking Value-Pricing Parking/TDM Program	1	230122	\$11.4	Enlarge Berkeley's pilot Value-Priced Parking and Transportation Alternatives TDM Program. Elements include upgrades to parking meters, occupancy analysis, demand-responsive pricing, enhanced enforcement, 511 Park info and wayfinding signage . Coordinated with marketing, transit passes, carsharing expansion, bikesharing, bike/ped and other TDM programs.
286	City of Oakland	Transportation Demand Management (Downtown)	1	240238	\$10.0	Downtown TDM program, including operating support for free downtown shuttle circulator (The "Free B"), TDM coordination, funding of employee Transit Pass programs, and other TDM strategies, and planning for future downtown mobility improvements
<b>11F Pricing Programs</b>						
287		Pricing programs	multi			Examples include congestion pricing, HOT lanes, variable parking fees
<b>11G Shuttles, Streetcars - Alternatives to Fixed Transit)</b>						
288		Shuttles	multi			Local shuttles to supplement fixed transit route service in support of TDM. Ongoing program
289	ACE	ACE Connecting Shuttle Services	3, 4	240303	\$0.7	Provides connecting shuttles to move ACE passenger to either other modes of transit or to their ultimate destination. Partnership with VTA, LAVTA, CCCTA, and private providers to shuttle ACE passengers to employment centers closing the 'last mile' of their commute.
290	in Oakland	Senior Shuttle Expansion	1		\$0.1	City of Oakland or Bay Area Community Services (BACS) O&M Costs \$85K/year
291	in W. Oakland	Youth library shuttle-W. Oakland	1		\$1.5	\$50-60K/Year
<b>11H Carsharing</b>						
292		Carsharing	multi		\$0.1	
293		Auto Loan Program - CBTP element	multi		\$0.1	
<b>11i Education and Marketing</b>						
294		Education and Marketing	multi			Examples include real-time transit information, 511, etc
<b>11J Travel Training</b>						
295		Travel training	multi			Programs to educate people how to use transit , tailored to their needs
<b>12. Goods Movement Program - RTP ID # 240394</b>						
296		Goods Movement Program	multi			Improvements in support of freight transportation to support economic vitality
<b>12A Truck Parking</b>						
297	ACTC	Local Air Quality and Climate Protection Strategies (Implementation of 2008 Truck Parking Study)	multi	230117	\$5.0	Implements the recommendations of the ACTC Board adopted Truck Parking Facility Feasibility and Location Study (December 2008) funded by Caltrans and managed by the CMA.

#	Sponsor/ Location	Program Name	Planning Area	RTP ID# (if application submitted)	Cost Estimate (\$M)	Project Description
<b>12B Port Operations Improvements</b>						
298	Port of Oakland	Shore power for ships at the Port of Oakland	1	240190	\$90.0	Install electric utility infrastructure throughout the Port's marine terminal area to provide shore-side power connections that allow vessels at-berth to turn off their diesel auxiliary engines.
<b>12C Truck Impacts to Local Streets - Improvements For</b>						
299	City of Oakland	Woodland - 81st Avenue Industrial Zone street reconstruction	1	240280	\$11.5	Reconstruct goods movement streets within the Woodland-81st Avenue industrial area to withstand heavy truck traffic; modify gateways, provide at-grade safe RR crossings.
<b>12D Truck Routing</b>						
300	City of Oakland	Goods Movement: Truck Facilities, Truck Route Rehabilitation	1	240237	\$20.0	Provision of truck storage facilities away from residential areas and improvement/re-routing of regional truck routes on Oakland City streets. Improve industrial load-bearing streets to withstand impact of truck movement.
<b>12E Freight Operations Improvements (rail, roads, port)</b>						
301		Truck Services at Oakland Army Base (ROW)	1		\$20.0	\$20 million (land costs only)
<b>13. Priority Development Area (PDA) Support - Non-Transportation Program - RTP ID # 240395</b>						
320	City of Livermore	Regional Air Quality and Climate Protection Strategies	4	240256	20	Construct public infrastructure and enhancements to support TOD in the PDAs
302		Non-transportation infrastructure in PDAs	multi			Includes utilities, sewers, drainage to support development in PDAs
<b>14. Environmental Mitigation Program - RTP ID # 240396</b>						
303		Environmental Mitigation for major projects	multi			Examples include off-site mitigations, banking
<b>15. Transportation Technology and Revenue Enhancement Program - RTP ID # 240397</b>						
304	Stopwaste.org	Transportation Energy from Waste	multi		\$75.0	
305		Alternative and sustainable fuel sources - use of	multi			
306		Alternative Fuel stations - comprehensive network of	multi			



## B. Transportation Projects in Alameda County with Committed Regional and Local Funding

The Baseline scenario was modeled using an “existing and committed” transportation network for the year 2035. The committed projects are those that have secured funding through regional planning process, and are either in construction or continuing to move toward construction. The list of committed projects is coordinated by Alameda CTC in cooperation with MTC. The committed projects are presented below in Table B.1.

Table B.1 Committed Transportation Projects in Alameda County

#	RTPID	Project Sponsor	Project Name	Planning Area	Cost Estimate
<b>Countywide Local Projects</b>					
8	21116	Alameda CTC	I-580 widening for HOV and Aux Lanes EB from Hacienda Rd to Greenville Rd and WB from Greenville Road to Foothill/San Ramon Rd	East	\$291.3
11	22670	Alameda CTC	I-880 widening for SB HOV lane from Hegenberger Rd to Marina Blvd (reconstruct bridge at Davis St. and Marina Blvd)	Central	\$109.4
14	240050	Alameda CTC	I-580 EB Express (HOT) Lane from Hacienda Road to Greenville Road	East	\$19.0
15	240076	Alameda CTC	I-580 EB Auxiliary Lane Project (Isabel to Livermore Ave; Livermore Ave to First)	East	\$40.0
21	230052	Alameda CTC	I-880 NB and SB auxiliary lanes	Central	\$15.4
22	230054	Alameda CTC	I-880 Auxiliary Lanes between Whipple and Industrial Parkway West	Central	\$9.5
32	22990	Caltrans	SR 262 (Mission) widening from I-880 to Warm Springs Blvd (including reconstructing Route 262/I-880 and Route 262/Kato Road interchanges) and reconstruct Union Pacific Railroad underpasses	South	\$58.1
39	240683	City of Dublin	Alamo Canal Trail under I-580*	East	\$2.7
47	21093	City of Hayward	Rte 92/Clawiter Road Whitesell interchange improvement, Phase 1	Central	\$27.5

#	RTPID	Project Sponsor	Project Name	Planning Area	Cost Estimate
49	22063	City of Hayward	Route 238 Corridor Improvements between Foothill Boulevard/I-580 and south City Limits and on SR 185 between north city limits and A Street	Central	\$118.7
50	240015	City of Hayward	Clawiter-Whitesell Interchange (Non-Capacity Increasing Freeway/Expressway Interchange Modifications)	Central	\$52.0
51	240025	City of Hayward	I-880 Industrial Parkway Interchange	Central	\$43.0
52	240065	City of Hayward	SR 92 Industrial interchange	Central	\$6.0
54	21473	City of Livermore	Construct a 4-lane major arterial connecting Dublin Blvd and North Canyons Parkway*	East	\$12.0
60	230157	City of Livermore	Las Positas Road Connection, Phase 2	East	\$3.5
69	21472	City of Pleasanton	I-680 Bernal Interchange improvements	East	\$4.0
75	240200	City of Pleasanton	Stoneridge Drive Extension	East	\$16.2
76	21451	City of San Leandro	East 14th Street/Hesperian Boulevard/150 <sup>th</sup> Street channelization improvements	Central	\$6.6
77	22100	City of San Leandro	I-880 Davis Street Interchange	Central	\$10.2
78	230066	City of San Leandro	I-880 Marina Boulevard Interchange	Central	\$31.8
85	94012	City of Union City	Union City Intermodal, Phase 1	South	\$57.0
92	230091	Alameda CTC/MTC	Central Alameda County Integrated Corridor Mobility Program and Adaptive Ramp Metering Integrated Corridor Mobility I-880 project (580/80/880 to SR-237) – and South County LATIPs)	Multiple	\$45.7
93	230221	Alameda CTC	I-80 Integrated Corridor Mobility (ICM)	Multiple	\$69.1
<b>Subtotal</b>					<b>\$7,969.5</b>
<b>Regional and Multijurisdiction Projects</b>					
97	230083	Alameda CTC	I-580 Corridor ROW Preservation	East	\$120.7
103	21131	BART	BART-Oakland International Airport Connector	North	\$484.1
105	21132	BART/ City of Fremont	BART Warm Springs extension	South	\$890.0
108	22013	Caltrans	I-580 Eastbound Truck Climbing Lane	East	\$64.2
<b>Subtotal</b>					<b>\$9,238.6</b>

Source: Alameda CTC.

Note: Total Cost Estimate for Regional and Multijurisdiction projects does not include #240196 to avoid double counting.

## C. Project Matrix

RTPID	Project Name	Estimated Cost	Unconstrained	Programmatic	Capital Projects	Land Use
21100	I-580 Vasco interchange	\$60.00	Yes		Yes	
21126	SR 84 WB HOV on ramp from Newark Blvd	\$12.80	Yes		Yes	
21144	I-80 Gilman Street Interchange Improvements	\$25.20	Yes		Yes	
21475	I-580 First St. interchange	\$40.00	Yes		Yes	
21477	I-580 Greenville interchange	\$46.00	Yes	Yes		
21482	Extend Fremont Boulevard to connect to I-880/Dixon Landing Road	\$47.80	Yes		Yes	
21484	Kato Road widening from Warren Ave. to Milmont	\$12.30	Yes	Yes		
22002	I-880 NB HOV lane extension from HOV terminus at Bay Bridge approach to Maritime	\$19.00	Yes	Yes		Yes
22021	AC Transit transfer station/park-and-ride facility in Alameda County (1. Central, 2. Northern)	\$40.00	Yes		Yes	Yes
22042	I-680 for NB HOV/HOT lane from SR 237 to SR 84 (includes ramp metering and auxiliary lanes)	\$203.60	Yes	Yes		
22062	Irvington BART Station	\$123.00	Yes		Yes	Yes
22082	7th Street Grade Separation & Roadway Improvement Project	\$220.50	Yes	Yes		
22089	Martinez Subdivision	\$100.00	Yes		Yes	
22455	AC Transit East Bay Bus Rapid Transit (BRT)	\$211.00	Yes	Yes		Yes
22664	I-580 WB Express Lane from Greenville Road to Foothill Blvd	\$16.50	Yes	Yes		Yes

22760	Outer Harbor Intermodal Terminal (OHIT)	\$216.70	Yes		Yes	
22765	I-580/I-680 HOV Direct Connector - Project Development	\$1,167.00	Yes	Yes		
22776	SR 84 Expressway Widening (Pigeon Pass to Jack London)	\$136.50	Yes		Yes	
22780	AC Transit Grand-MacArthur BRT	\$36.00	Yes	Yes		Yes
98139	Right-of Way Preservation and track improvements in Alameda County	\$600.00	Yes		Yes	Yes
98207	I880 Broadway/Jackson Interchange, ramp and circulation Improvements; and Alameda Point, Downtown Oakland, and Jack London Square Transit Access	\$189.30	Yes		Yes	Yes
230086	I-580 Interchange Improvements at Hacienda Drive and Fallon Road - Phase II	\$37.60	Yes		Yes	
230088	I-880 NB HOV/HOT Extension from north of Hacienda to Hegenberger Phase 1 and 2: I-880 extend NB HOV lanes	\$276.00	Yes		Yes	Yes
230099	I-580/I-680 Improvements Phase 1	\$528.00	Yes	Yes		
230101	Union City Passenger Rail Station & Dumbarton Rail Segment G Improvement Union City BART Phase 2 / Passenger Rail Station	\$180.00	Yes		Yes	Yes
230103	Grade Separation in the Decoto neighborhood	\$130.00	Yes	Yes		Yes
230110	Route 262 Mission Boulevard Cross Connector Improvements between I-680 and Warm Springs Boulevard SR 262 Mission Blvd Improvements	\$19.50	Yes	Yes		
230114	Auto Mall Parkway Cross Connector Widening between I-680 and I-880	\$24.40	Yes	Yes		
230157	Las Positas Road Connection, Phase 2	\$3.50	Yes	Yes		
230243	Access Improvements to West End Transit Hub on Mariner Square Drive (MSD)	\$4.40	Yes	Yes		Yes
230604	Contra Flow Lanes on Westbound Lanes of San Francisco-Oakland Bay Bridge	\$610.50	Yes		Yes	Yes

240018	Dumbarton Rail Corridor Phase I	\$164.00		Yes		
240024	Oakland Army Base Transportation Infrastructure Improvements	\$208.60	Yes	Yes		
240037	I-880 Winton Avenue interchange improvements	\$25.00	Yes		Yes	
240038	Dougherty Road Widening from Sierra Lane to North city Limit	\$18.40	Yes	Yes		Yes
240050	I-580 EB Express (HOT) Lane from Hacienda Road to Greenville Road	\$19.00	Yes	Yes		
240051	Union City Boulevard (widen to 3 lanes from Whipple Road in Union City to Industrial Parkway in Hayward)	\$10.00	Yes		Yes	Yes
240052	I-880 / Whipple Road Interchange Improvement	\$60.00	Yes		Yes	
240053	Whipple Road from I-880 to Mission Boulevard Widening and Enhancement	\$100.00	Yes	Yes		Yes
240059	I-680 widening for NB HOV/HOT Lane from Route 84 to Alcosta Blvd	\$136.40	Yes	Yes		Yes
240061	I-680 widening for SB HOV/HOT from Alcosta Blvd to Route 84	\$136.40	Yes	Yes		Yes
240062	SR 84 / I-680 interchange and SR 84 Widening	\$244.00	Yes		Yes	
240076	I-580 EB Auxiliary Lane Project (Isabel to Livermore Ave; Livermore Ave to First)	\$40.00	Yes	Yes		
240092	Lewelling Blvd. / Hesperian Blvd. Intersection Improvements Project (I-880 Hesperian/Lewelling Interchange)	\$5.00	Yes		Yes	Yes
240106	SR-84/Sunol Improvements	\$8.30	Yes	Yes		
240113	BART Hayward Maintenance Complex	\$585.00	Yes	Yes		Yes
240116	Powell Street Bridge Widening at Christie Avenue	\$4.80	Yes	Yes		Yes
240132	El Charro Road Construction	<b>\$49.00</b>	Yes		Yes	

240139	I-680 Stoneridge Drive overcrossing widening	\$4.80	Yes	Yes		
240141	I-680 Sunol Boulevard Interchange (Non-Capacity Increasing Freeway/Expressway Interchange Modifications)	\$1.20	Yes		Yes	
240144	I-580 Santa Rita Interchange improvements	\$2.50	Yes		Yes	
240180	BayFair Connection (Capacity Improvements "Wye" project)	\$150.00	Yes		Yes	Yes
240196	BART to Livermore Extension Phase 1	\$1,250.00			Yes	Yes
240196	BART to Livermore Extension Phase 2	\$2,927.00	Yes			
240216	Dumbarton Rail Corridor Phase II	\$716.00	Yes		Yes	Yes
240249	San Leandro Street Circulation and Capacity Improvements	\$11.00	Yes		Yes	Yes
240250	Dublin Boulevard Widening from Sierra Court to Dublin Court	\$4.20	Yes	Yes		Yes
240254	Greenville Widening	\$10.00	Yes	Yes		
240261	Scarlett Drive Extension from Dougherty Road to Dublin Boulevard	\$12.80	Yes	Yes		
240263	Upgrade Relinquished Route 84 in Fremont (SR 84 Relinquished Route Upgrade)	\$43.30	Yes	Yes		Yes
240264	Widen Fremont Boulevard from I-880 to Grimmer Boulevard	\$4.60	Yes	Yes		Yes
240272	Thornton Avenue Widening	\$9.20	Yes	Yes		
240278	Harrison St-Oakland Avenue Major Street Improvements	\$12.40	Yes	Yes		Yes
240279	Mandela Parkway and 3rd Street Corridor Commercial/Industrial Area Street Reconstruction	\$157.00	Yes		Yes	
240280	Woodland - 81st Avenue Industrial Zone street reconstruction	\$11.50	Yes	Yes		

240282	Tidewater District Street Reconstruction	\$4.60	Yes		Yes	Yes
240304	Platform Extension at Alameda and San Joaquin Co. ACE Stations	\$5.00	Yes	Yes		Yes
240657	I-580 Spot Intersection Improvements	\$60.00	Yes		Yes	

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