

Final

Central County Action Plan



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Prepared For:
TRANSPAC

CENTRAL COUNTY ACTION PLAN

for

Routes of Regional Significance

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1. INTRODUCTION

The Central County Action Plan is intended to address the key transportation issues that Central County will face over the next twenty-six years. The plan was developed through the cooperative, multi-jurisdictional planning process called for in Measure C (1988), and renewed and updated in Measure J (2004). The study area for this plan includes the jurisdictions of Walnut Creek, Pleasant Hill, Clayton, Concord, Martinez and unincorporated Contra Costa County, as shown in Figure 1-1. With ongoing participation of elected officials and staff from these local jurisdictions, this Action Plan continues the cooperative process established by TRANSPAC jurisdictions for addressing current and future transportation issues along the regional corridors serving Central County.

The Complete Streets Act of 2007 created by California Assembly Bill 1358 amended Government Code Sections related to General Plans and General Plan Guidelines. It required that commencing January 1, 2011 cities and counties modifying the Circulation Element of their General Plan must provide a “balanced, multimodal transportation network that meets the needs of all users of the streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the General Plan” (GC 65302(b) (2) (A)). Each new update of the Circulation Element of a General Plan must document how this has been achieved in the plan update.

The previous Action Plan, adopted in 2009, encompassed growth forecasts to 2030. This 2014 Action Plan analyzes the expected household and job growth forecasts for Central County to 2040.

1.1 Action Plan Tenets

TRANSPAC has established six tenets to guide the development of region-wide objectives and actions for managing the efficiency of the transportation network. The tenets recognize that, because capacity expansion projects are limited, as Central County continues to grow, improvements to the transportation system will need to focus more on demand and efficiency, rather than solely on capacity improvements.

The tenets were developed under two key assumptions, based on the adopted general plans of Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek, and Contra Costa County. Central County is 85 to 90 percent “built out” and most development will be infill.

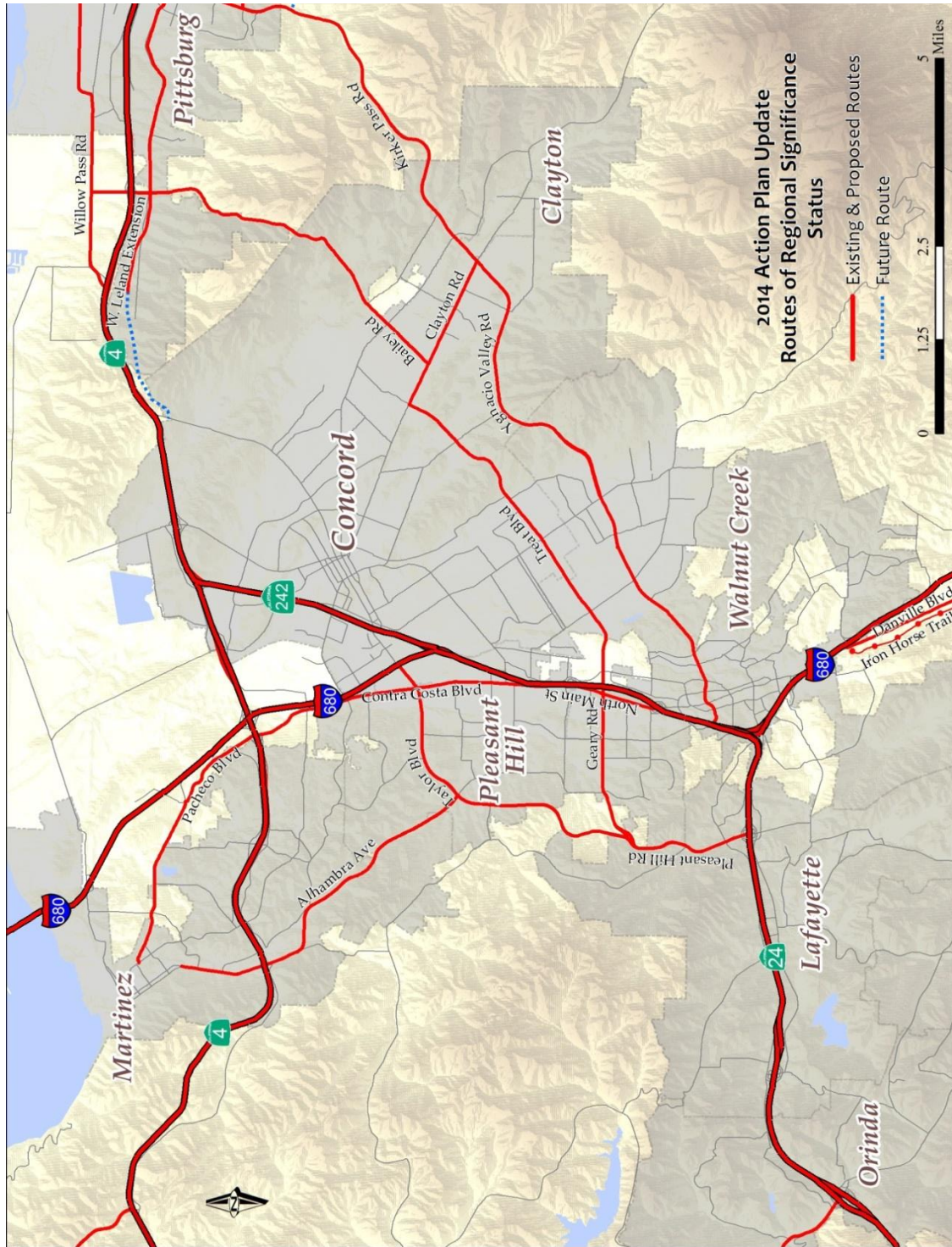
Although infill development that occurs near transit facilities and downtowns will generate fewer new vehicle trips, this development will add both ridership to public transit and traffic to already congested roadways.

- TRANSPAC supports the planning for and management of the transportation system in coordination with other community interests.
- TRANSPAC supports the improvement and management of freeway corridors to facilitate regional travel and to encourage interregional travelers to use the freeways and transit network rather than local and arterial streets.
- TRANSPAC supports traffic management strategies for arterial Regional Routes, including use of signal timing to manage peak through-traffic volumes.
- TRANSPAC supports the enhancement and expansion of alternatives to single-occupant vehicles to improve mobility choices including ferry service, transit, bicycle and pedestrian facilities.
- TRANSPAC supports 511 Contra Costa's mission to reduce mobile source greenhouse gas emissions.
- TRANSPAC supports the development and coordination of transportation-oriented Emergency Management Plans among local jurisdictions, regional agencies, and state agencies.

These tenets also govern the development of a set of actions, measures and programs that the local jurisdictions of Central County are committed to implementing as a condition of compliance with the Measure J Growth Management Program.

The projects in TRANSPAC's 2014 Action Plan focus on a few critical roadway capacity expansion projects and on other projects that will improve operations, enhance the bicycle and pedestrian network, support transit, and maintain existing facilities.

Figure 1-1: Central County Routes of Regional Significance



1.2 Action Plan Requirements

The passage of Measure C in 1988, a one-half percent sales tax, included an innovative Growth Management Program (GMP) that required local jurisdictions to participate in a cooperative, multi-jurisdictional planning process to be eligible to receive local street and road maintenance monies, and required that the Authority, through the Regional Transportation Planning Committees (RTPCs), jointly establish service standards for Regional Routes. In November 2004, Measure J was passed by the voters of Contra Costa, extending the sales tax program and the GMP requirements for another 25 years. Under Measure J, local jurisdictions that demonstrate compliance with the GMP requirements receive local street maintenance funds (18% of total revenues), allocated based on road miles and population. In addition, GMP compliance enables jurisdictions to receive Transportation for Livable Communities (TLC) funding (5% of total revenues). To comply with the GMP, a jurisdiction must, among other actions, continue to participate in a cooperative, multi-jurisdictional planning process. As part of this process, each jurisdiction must participate in the development and implementation of Action Plans for Routes of Regional Significance developed by the RTPCs with input from local jurisdictions. TRANSPAC is the designated RTPC for Central County.

Each Action Plan must:

- Establish Goals;
- Identify Routes of Regional Significance;
- Set quantitative Multimodal Transportation Service Objective (MTSOs) with a target year for achieving those MTSOs;
- Establish a program of actions, measures and projects for meeting the MTSOs and assign local responsibilities for implementation; and
- Include a process for monitoring and review of the impacts of major developments and General Plan Amendments (GPAs) on the local and regional transportation system.

1.3 Designated Routes of Regional Significance

Routes of Regional Significance (described in detail in Chapter 4) are roadways that carry significant through-traffic, connect two or more jurisdictions, serve major transportation hubs, or cross county lines. TRANSPAC (and other RTPCs) designates these routes, and, as noted above, establishes quantifiable performance measures, called MTSOs, for these routes.

1.4 Action Plan Chapters

The Central County Action Plan comprises these additional chapters:

- **Chapter 2 - Land Use and Transportation Trends** considers the magnitude of long-range land use changes anticipated with local General Plans and market trends of Central County and surrounding regions, and the effect on commute patterns and traffic growth.
- **Chapter 3 - Region-wide Issues, Goals and Actions** describes specific actions and identifies the responsible jurisdictions for each action.
- **Chapter 4 - Routes of Regional Significance, Issues, Objectives and Actions** discusses each route and its specific actions and goals.
- **Chapter 5 - Financial Outlook** lists key anticipated funding strategies and priorities, based on revenues anticipated from various sources.
- **Chapter 6 - Procedures for Monitoring and Review of Impacts** presents the review procedures TRANSPAC jurisdictions use to achieve Growth Management Program compliance. Chapter 6 may be revised upon completion of the Contra Costa Transportation Authority's effort to streamline implementation procedures for Growth Management Programs.

2. LAND USE AND TRANSPORTATION TRENDS

The current and future demands on Central County's Regional Routes are a direct result of three key factors:

- The levels of development and the intensity and location of that development in Central County.
- The number of workers who live in Central County and work outside of the area, coupled with the number of workers who travel into the area from outlying regions for work or other purposes.
- People who drive through without an origin or a destination in Central County.

Forecasts for future population and employment levels in Central County were derived from the Contra Costa Transportation Authority (CCTA) Countywide Travel Model. Model forecasts are based on the Association of Bay Area Governments (ABAG) *Projections 2011* and the 2006 CCTA Land Use Information System (LUIS '06). Land use estimates or forecasts have been made for the years 2010, 2020, 2030, and 2040 through this process. The 2013 estimates were derived through straight-line interpolation between 2010 and 2020.

2.1 Population Forecasts

As shown in Table 2-1, by 2040, the total Central County population and households are forecasted to grow 16 and 17 percent respectively over 2013, adding approximately 62,000 more residents and 26,000 new households. The total number of jobs is expected to grow as well, but at a faster rate: 30 percent, or 53,000 new jobs. Compared to the other county subareas, Central County is expected to grow at a slower rate (see Table 2-2).

Table 2-1: Central County Forecast Demographic Changes

Characteristic	2010	2013	2020	2030	2040	2013-2040 Growth	2013-2040 % Growth
Total Population (1,000s)	377	385	402	420	447	62	16%
Total Households (1,000s)	150	153	159	167	178	26	17%
Total Employed Residents (1,000s)	171	176	187	196	209	33	19%
Total Jobs (1,000s)	173	178	191	210	232	53	30%
Employed Residents/HH	1.15	1.15	1.17	1.17	1.17		

Source: CCTA Countywide Travel Demand Model, 2013

Table 2-2: Expected Growth, 2013 to 2040

Subarea	Households		Employed Residents		Jobs	
	2013	2040	2013	2040	2013	2040
Central County	153,000	178,000	176,000	209,000	178,000	232,000
Growth	25,000		33,000		54,000	
% Change	16%		19%		30%	
East County	103,000	143,000	126,000	187,000	56,000	99,000
Growth	40,000		61,000		43,000	
% Change	39%		48%		77%	
West County	95,000	117,000	113,000	146,000	66,000	97,000
Growth	22,000		33,000		31,000	
% Change	17%		29%		47%	
Lamorinda	24,000	27,000	29,000	33,000	19,000	22,000
Growth	3,000		4,000		3,000	
% Change	13%		14%		16%	
Tri-Valley†	125,000	170,000	158,000	240,000	184,000	240,000
Growth	45,000		82,000		56,000	
% Change	36%		52%		30%	
Total	500,000	635,000	602,000	815,000	503,000	690,000
Growth	135,000		213,000		187,000	
% Change	27%		35%		37%	

† Includes Alameda County portion of Tri-Valley

Source: CCTA Countywide Travel Demand Model, 2013

Table 2-3 shows that Central County’s senior population (age 62 and over) is expected to grow significantly, increasing by 51 percent from 2013 to 2040, while the working-age and youth populations are both expected to grow by 8 and 10 percent, respectively.

Table 2-3: Central County Forecast Population Changes by Age Group

Characteristics	2013	2040	Growth	% Growth
Total Population	384,600	446,700	62,100	16%
Total Employed Residents	176,000	209,000	33,000	19%
Seniors (65 and older)	68,200	103,000	34,800	51%
Adults (18 to 64)	232,000	251,000	19,000	8%
Youth (under 18)	84,500	93,000	8,500	10%

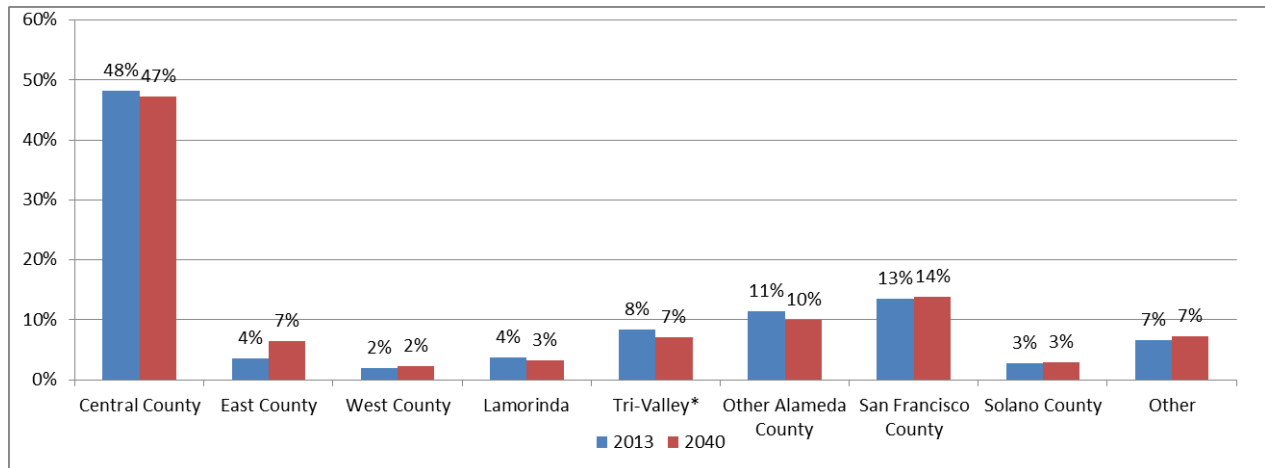
Source: CCTA Travel Demand Model, ABAG Projections 2013

2.2 Commute Patterns

As shown in Table 2-1, Central County currently has a good “jobs-housing balance” – i.e., the number of employed residents roughly equals the number of jobs. However, through 2040, growth of jobs will outpace that of employed residents. This will result in an increase in percentage of work trips to Central County from outside the subarea. As shown in Figure 2-2, these work trips will mainly come from East County, and small portions from San Francisco County and Solano County. Work trips from East County to Central County are expected to increase by 43% from 2013 to 2040. About half of employed residents within Central County also work there, as seen in Figure 2-1. Conversely, about the same proportion of those who work in Central County also live there, as indicated in Figure 2-2. However, many of those who live in Central County are employed in Oakland, San Francisco, and the Tri-Valley, while many Central County employees live in areas generally located to the north and to the east. Further, Central County is located at the “crossroads” of many larger commute patterns in the greater San Francisco Bay Area. As a result, traffic volumes are high in Central County. Overall traffic to the subarea is expected to increase by about 25%.

Figure 2-1 shows that the percentage of Central County employed residents who also work in Central County is projected to decrease slightly by 2040, while the percentage of residents who commute into Alameda County (not including the Tri-Valley portion of that county) and Solano County is expected to decrease and increase slightly, respectively. Figure 2-2 shows that the percentage of workers commuting from East County and San Francisco is expected to experience modest gains by 2040.

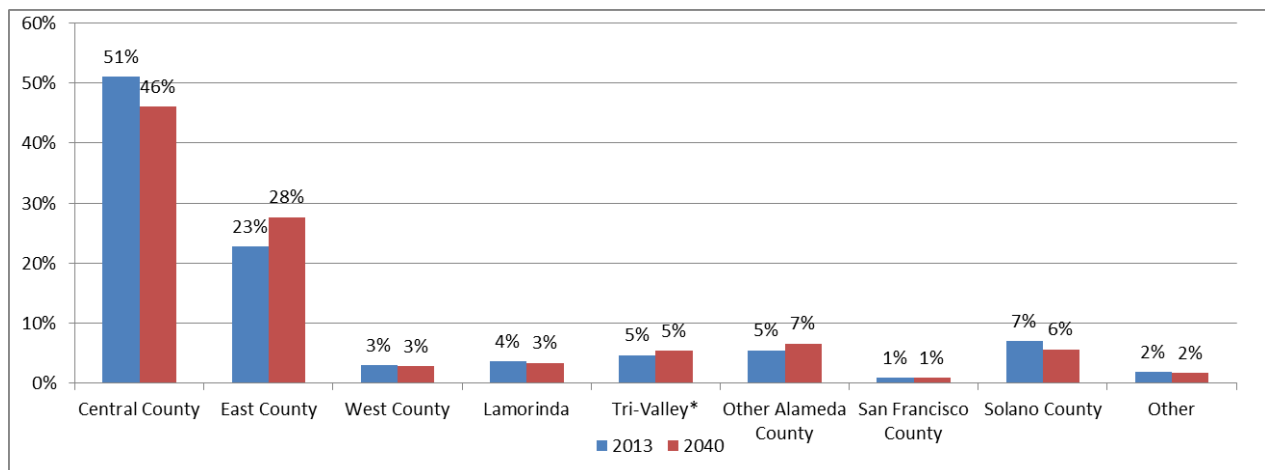
Figure 2-1: Where Central County Employed Residents Work, 2013 and 2040



*Tri-Valley includes both Danville and San Ramon in Contra Costa and Dublin, Livermore and Pleasanton in Alameda County

Source: CCTA Countywide Travel Demand Model, 2013

Figure 2-2: Where Central County Workers Live, 2013 and 2040



*Tri-Valley includes both Danville and San Ramon in Contra Costa and Dublin, Livermore and Pleasanton in Alameda County

Source: CCTA Countywide Travel Demand Model, 2013

2.3 Roadway Traffic Forecast

Although commute patterns improve by 2040, the combination of population growth and trends in working population will increase congestion. TRANSPAC has focused on projects and operations strategies to manage increasing congestion and optimize traffic flow, and provide alternatives to vehicle travel.

The map in Figure 2-3 shows how peak-hour traffic is forecasted to change on key roadways from 2013 to 2040. Growth was computed as an average of growth on various segments of the roadway, weighted by segment length.

Table 2-4: 2013-2040 Growth in Routes of Regional Significance Traffic

Route of Regional Significance	AM Peak Hour % Growth	PM Peak Hour % Growth
Freeway Routes		
I-680		
NB	26%	16%
SB	9%	25%
SR-242		
NB	58%	7%
SB	20%	30%
SR-4		
EB	26%	48%
WB	68%	41%
Arterial Roadways		
Alhambra Ave		
NB	64%	29%
SB	22%	18%
Bailey Rd (proposed)		
NB	93%	62%
SB	156%	74%
Clayton Rd		
EB	60%	33%
WB	19%	59%
Contra Costa Blvd		
NB	27%	8%
SB	25%	12%
Geary Rd		
EB	50%	101%
WB	34%	30%

Table 2-4: 2013-2040 Growth in Routes of Regional Significance Traffic

Route of Regional Significance	AM Peak Hour % Growth	PM Peak Hour % Growth
Kirker Pass Rd		
EB	69%	33%
WB	56%	70%
N Main St		
NB	86%	28%
SB	14%	159%
Pacheco Blvd		
NB	237%	56%
SB	29%	37%
Pleasant Hill Rd		
EB	35%	45%
WB	20%	18%
Taylor Blvd		
NB	57%	10%
SB	16%	29%
Treat Blvd		
EB	34%	17%
WB	25%	37%
Ygnacio Valley Rd		
EB	29%	9%
WB	14%	15%

PERCENTAGE INCREASES ON INTERSTATE AND STATE HIGHWAYS, 2013 TO 2040

Legend:

- Name:**
 - SR:** State Route
 - I:** Interstate
 - PM:** PM Increase
 - AM:** AM Increase
- Routes of Regional Significance:**
 - Existing Route:** Solid line
 - Future Route (upon completion):** Dashed line
- Sub Regional Boundaries:**
 - Central County:** Pink
 - East County:** Green
 - Lamorinda:** Blue
 - Trivalley:** Yellow
 - West:** Light Blue
 - City Limits:** Grey
 - Contra Costa County:** White

Map Data:

Route	PM Increase	AM Increase
I-680	23%	23%
SR-4	30%	29%
SR-242	39%	18%
SR-24	24%	24%
I-680	16%	19%
I-680	19%	16%

Scale: 0 0.75 1.5 3 Miles

Data Source: Contra Costa Transportation Authority (CCTA), 2012; Contra Costa Regional Transportation Commission, 2012; ERM, 2012 LOGS, 2012; Dyner & Blum, 2013.

3. REGION-WIDE ISSUES, GOALS AND ACTIONS

Over the next 20 years, peak-hour traffic system demand in Central Contra Costa is projected to increase by about 25 percent.

TRANSPAC has established six tenets to guide the development of region-wide objectives and actions for managing the efficiency of the transportation network. The tenets recognize that, because capacity expansion projects are limited, as Central County continues to grow, improvements to the transportation system will need to focus more on demand and efficiency, rather than solely on capacity improvements.

The tenets were developed under two key assumptions, based on the adopted general plans of Clayton, Concord, Martinez, Pleasant Hill, Walnut Creek, and Contra Costa County.

Central County is 85 to 90 percent “built out” and most development will be infill.

Although infill development that occurs near transit facilities and downtowns will generate fewer new vehicle trips, this development will add both ridership to public transit and traffic to already-congested roadways.

- TRANSPAC supports the planning for and management of the transportation system in coordination with other community interests.
- TRANSPAC supports the improvement and management of freeway corridors to facilitate regional travel and to encourage interregional travelers to use the freeways and transit network rather than local and arterial streets.
- TRANSPAC supports traffic management strategies for arterial Regional Routes, including use of signal timing to manage peak through-traffic volumes.
- TRANSPAC supports the enhancement and expansion of alternatives to single-occupant vehicles to improve mobility choices including transit, bicycle and pedestrian facilities.
- TRANSPAC supports 511 Contra Costa’s mission to reduce mobile source greenhouse gas emissions.
- TRANSPAC supports the development and coordination of transportation-oriented Emergency Management Plans among local jurisdictions, regional agencies, and state agencies.

3.1 Completed Transportation Improvements in Central County

Since adoption of the 2014 Action Plan, the following major improvements to the transportation system in Central County have been completed:

- **Opening of the Fourth Bore of the Caldecott Tunnel.** The fourth bore of the Caldecott Tunnel opened in November 2013. The fourth bore features 2 lanes in the westbound direction, shoulders, emergency access between the two westbound tunnels and advanced traveler information. The uncertainty of off-peak congestion is reduced by providing four lanes in each direction.
- **Modification of the Original Martinez-Benicia Bridge.** The original bridge was being modified to carry four lanes of southbound traffic and a bike-pedestrian facility.
- **I-680 SB HOV Lane Restriping.** The southbound HOV lane was extended in 2012 to the north from Livorna Road to Rudgear Road. This project allowed carpoolers to bypass congested mixed-flow lanes on I-680 in the southbound direction.
- **DVC Transit Center.** The Diablo Valley College (DVC) Transit Center was opened in September 2010. The project created a boarding area for passengers, larger bus shelters, improved lighting, and an area for buses to turn around that is separate from other vehicle traffic.
- **Iron Horse Trail Crossing at Treat Boulevard.** A bicycle/pedestrian bridge along the Iron Horse Trail was constructed in 2010 to cross Treat Boulevard, in the vicinity of Jones Road. The bridge provides a grade separation between traffic on Treat Boulevard and bicycle/pedestrian traffic on Iron Horse Trail.

The following improvements are in the planning or design stages:

- **Completion of High-Occupancy Vehicle (HOV) Lanes on Interstate 680.** A “gap” in the I-680 HOV system remains through Pleasant Hill and Walnut Creek. Closing the southbound gap is a major priority for which funding has been procured. Closing the northbound gap is more costly, and funding for this project is not available.
- **I-680/SR-4 Interchange.** This interchange is scheduled for a major upgrade designed to eliminate tight-weaving sections, expand the size of the loops, and improve capacity and efficiency. In addition, the “missing” third lane in each direction on SR-4 through Central County will be completed.

- **Fourth Bore of the Caldecott Tunnel.** Further work on the 4th Bore of the Caldecott Tunnel includes landscaping the approaches on both sides of the tunnel.
- **Other Freeway Capacity and Operational Improvements in Central County and Adjacent Regions.** Planned capacity improvements to SR-4 in Central County and continued improvements to SR-4 in East County will encourage traffic to stay on the freeway rather than use the arterials to enter and leave Central County.
- **Collaboration with Solano County.** TRANSPAC, via its representatives on the Contra Costa Transportation Authority, will continue to collaborate with the Solano Transportation Authority on a variety of transportation issues of mutual interest.
- **Ferry System Collaboration With Other Agencies.** TRANSPAC will continue to work with the Water Emergency Transportation Authority (WETA), MTC, and the cities of Richmond and Antioch and other shoreline stakeholders to pursue funding for the coordination and construction of ferry terminals and the purchase, operation, and maintenance of ferry service between Contra Costa County and San Francisco.

3.2 Region-Wide Issues

The 2014 Plan looks at region-wide issues in seven categories:

- Regional Freeway System
- Transit Availability
- Transportation Demand Management (TDM) and Mobility Management
- Land Use and Growth Management
- Traffic Management Strategies
- Bicycle and Pedestrian Facilities
- Complete Streets Consideration

3.2.1 Regional Freeway System

I-680 is the workhorse of the Central County transportation system. At its widest point, the freeway has 12 lanes and carries more than 250,000 vehicles per day. In 2012, the section at Geary Road carried an average 263,000 vehicles per day during the peak month.

I-680 is part of a freeway network that includes SR-24, which carries traffic to and from Lamorinda, Oakland and San Francisco, SR-4, which links East, Central and West Contra Costa Counties, and SR-242, which connects I-680 with SR-4 and East Contra Costa.

The SR-4 corridor is a critical east-west freeway, approximately 31 miles in length, which extends the width of Contra Costa County from I-80 to SR-160, and connects to I-680 and SR-242 in Central County. SR-4 serves interregional travel between the Central Valley and the San Francisco Bay Area for commute, recreational, and commercial traffic. It also serves a significant level of locally generated travel demand from the cities located along the corridor, including Hercules, Martinez, Concord, Pittsburg, Antioch, Brentwood, and unincorporated Contra Costa County. SR-4 carries 141,000 vehicles per day near Port Chicago Highway.

3.2.2 Transit Availability

TRANSPAC continues to study and develop strategies and support projects to improve service and convenience for transit users in collaboration with WETA, County Connection, BART, and the other transit agencies serving Central County.

These projects include the following:

- Diablo Valley College Transit Center (with County Connection)
- Pacheco Transit Hub (with County Connection)
- Express bus service in the I-680 corridor (with County Connection)
- Parking and access to BART stations (with BART)
- Martinez Intermodal Transit Facility (with Martinez)

3.2.3 Transportation Demand Management (TDM) and Mobility Management

In compliance with the Measure J Growth Management Program, TRANSPAC receives its Transportation Demand Management (TDM) programs for Central County jurisdictions by 511 Contra Costa.¹

The 511 Contra Costa programs include a variety of multimodal mobility management elements for employers, property managers, developers, residents, students, and commuters. Multimodal mobility management options promote and encourage

¹ The Transportation Demand Management Program was established in 1992. In 1997, the TRANSPAC and TRANSPLAN TDM programs were merged and branded as 511 Contra Costa. In 2016 the Contra Costa Transportation Authority subsumed the TRANSPAC/TRANSPLAN TDM Programs.

alternative transportation modes in order to decrease demand on the roadway system, reduce vehicle miles traveled, alleviate traffic congestion, and improve air quality.

Programs and services include the following:

- Individualized commuter trip planning
- Financial incentive programs for carpooling, transit, bicycling and vanpooling
- Guaranteed Ride Home Program
- Comprehensive, online multimodal transportation information (www.511contracosta.org)
- Bike lockers and racks
- Clean Fuel Vehicle programs
- School transit/carpool programs

These programs implement a variety of strategies that reduce Vehicle Miles Traveled (VMT), one of the major goals of SB 375. These nationally recognized programs, established in 1992, will continue to work on VMT reduction and increased use of commute alternatives.

3.2.4 Land Use and Growth Management

The cumulative effect of local land use decisions has a significant impact on the regional transportation system. The State's Congestion Management Program (CMP) requires local jurisdictions to evaluate the impact of land use decisions on the regional transportation system and estimate the costs of mitigation.

TRANSPAC works with its local jurisdictions, adjacent Regional Transportation Planning Committees and other agencies to encourage land use strategies that make efficient use of the transportation network, improve transit access, and manage traffic congestion (e.g., transit-oriented development).

3.2.5 Traffic Management Strategies

Smooth traffic operations on arterial routes are key to managing the movement of people and goods within Central County and across regional boundaries. Both physical capacity improvements and the development and implementation of effective traffic management systems are necessary to move traffic efficiently through the network and to discourage the use of some roadways as bypass routes.

Existing traffic conditions within Central County are influenced not only by travel demand characteristics within Central County but also by travel demand in eastern Contra Costa County and from Solano County to the north.

TRANSPAC adopted the Central Contra Costa Traffic Management Program (CCCTMP) in 1997. As part of the development of the 1995 TRANSPAC Action Plan for Routes of Regional Significance, analysis of travel data demonstrated that increased freeway congestion had resulted in increased traffic volumes and congestion on major arterials as commuters attempted to bypass travel delays on the freeways.

The CCCTMP was developed in response to those companion increases in traffic volumes and congestion on major arterials. The major advantage of the CCCTMP is that jurisdictions in and outside of Central County can act in concert through TRANSPAC and other RTPCs, to develop and implement coordinated traffic management plans and programs on Routes of Regional Significance and other arterials as determined.

In 2001, TRANSPAC and TRANSPLAN successfully completed the East-Central Traffic Management Plan, which identified actions to address commute traffic in the Ygnacio Valley Road/Kirker Pass Road/Buchanan Road corridor.

TRANSPAC has directed its Technical Advisory Committee (TAC) to continue to seek opportunities to implement of the CCCTMP, including ways in which TRANSPAC jurisdictions may coordinate traffic operations within and adjacent to the Central County area.

TRANSPAC remains committed to managing traffic and maintaining desirable operational levels in Central County by working in concert with surrounding jurisdictions on traffic management plans and in ongoing efforts to reduce travel demand through TRANSPAC's 511 Contra Costa Program.

3.2.6 Bicycle and Pedestrian Facilities

TRANSPAC and 511 Contra Costa continue to support implementation of the Countywide Bicycle and Pedestrian Plan and to support projects that construct and maintain bicycle lanes, paths, trails, sidewalks and bicycle parking to facilitate an alternative to vehicle trips, particularly near schools and transit facilities.

3.2.7 Complete Streets Consideration

Measure J requires that local jurisdictions “shall incorporate policies and standards into its development² approval process that supports transit, bicycle and pedestrian access in new development.” The growing concern for multimodal mobility is also evident in new federal, state and regional requirements that state that consideration be given to all modes when planning for Bay Area communities. The Complete Streets Act of 2007

² Contra Costa Transportation Authority, *Measure J - Contra Costa's Transportation Sales Tax Expenditure Plan*, as amended through November 7, 2011.

created by California Assembly Bill 1358 amended Government Code Sections related to General Plans and General Plan Guidelines. It required that commencing January 1, 2011, cities and counties modifying the Circulation Element of their General Plan must provide a “balanced, multimodal transportation network that meets the needs of all users of the streets, roads, and highways for safe and convenient travel in a manner that is suitable to the rural, suburban, or urban context of the General Plan” (GC 65302(b) (2) (A)). Each new update of the Circulation Element of a General Plan must document how this has been achieved in the plan update.

MTC has developed guidance designed to ensure that all Bay Area projects that get federal funds through MTC are giving adequate attention to the needs of bicyclists and pedestrians. The guidance was designed to ensure that projects are consistent with area-wide bicycle and pedestrian master plans and will not adversely impact mobility for bicyclists and pedestrians. The guidance provided pertains to any project that could affect bicycle or pedestrian use regardless of whether the project is intended to benefit either or both of the modes.

Caltrans has also developed requirements for “Complete Streets” consideration though Deputy Directive 64. This directive states the Department’s support for Complete Streets considerations as follows:

The Department views all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in California and recognizes bicycle, pedestrian, and transit modes as integral elements of the transportation system.

In response to the directive, Caltrans has developed an implementation plan that includes the development of tools and other resources that can be used in applying complete streets concepts in transportation planning and design. These tools and resources should aid local jurisdictions in updating General Plans in the future.

3.3 Goals and Actions

TRANSPAC has outlined the nine region-wide goals and actions that build on the tenets, focus the Action Plan's direction, and guide future decisions.

GOAL 1	Maintain existing transportation system and infrastructure
ACTIONS	1-A: Seek funding for the ongoing maintenance and operation of the existing transportation system and infrastructure. Includes all modes.
	1-B: Support development of pavement management systems and implementation of pavement rehabilitation improvements
RESPONSIBLE AGENCIES	TRANSPAC and its jurisdictions
TIMELINE	These actions are ongoing.

GOAL 2	Support the enhancement and expansion of an efficient transit system
ACTIONS	<p>2-A: Support the development of real-time information and better connectivity for regional transit and local and feeder bus service.</p> <p>2-B: Support the efforts of the Authority to evaluate congestion relief strategies along the I-680 corridor, including transit options and new technologies.</p> <p>2-C: Promote coordination of transfer times among Express bus, feeder bus, BART, and park-and-ride lots.</p> <p>2-D: Support the expansion of BART service and BART station and parking facilities.</p> <p>2-E: Support the construction and maintenance of accessible bus stops, park-and-ride lots, and transit hubs.</p> <p>2-F: Support improvements that increase the efficiency of local transit on Regional Routes.</p> <p>2-G: Support increased access to BART stations for buses and other alternative modes.</p> <p>2-H: Encourage and participate in access and development plans in the immediate vicinity of each BART Station to improve multimodal access and facilities for buses, bicycles and pedestrians.</p> <p>2-I: Support innovative approaches to improve the efficiency and effectiveness of transit services for seniors and disabled persons through the allocation of Central County's Measure J \$10 million for Additional Transportation for Seniors and People with Disabilities. These funds are in addition to Measure J Other Countywide Programs and total \$35 million in Central County.</p> <p>2-J: Support expansion and use of park-and-ride facilities using Express and local buses.</p> <p>2-K: Support the extension of ferry service to and from San Francisco and Contra Costa County.</p> <p>2-L: Implement the recommendations of the Contra Costa Mobility Management Plan, including the establishment of a mobility management center for the County.</p>
RESPONSIBLE AGENCIES	TRANSPAC, County Connection, and the TRANSPAC jurisdictions
TIMELINE	These actions are ongoing.

GOAL 3	Encourage land use decisions that address the increase in overall traffic demand
ACTIONS	3-A: Continue to support implementation of the Measure J Growth Management Program.
	3-B: Continue to support higher-density development around transit hubs and downtowns.
	3-C: Continue to require each jurisdiction to: <ul style="list-style-type: none"> a. Notice the initiation of the environmental review process for projects generating more than 100 net-new peak-hour vehicle trips. b. For projects that require a General Plan Amendment, identify any conflicts with Action Plan MTsOs and then, if requested, present the analysis results and possible mitigation strategies to TRANSPAC for review and comment.
	3-D: Include the needs of pedestrians and bicyclists in the design, construction, and maintenance of development projects.
	3-E: Continue to implement the TRANSPAC Subregional Transportation Mitigation Program.
RESPONSIBLE AGENCIES	TRANSPAC and its jurisdictions
TIMELINE	These actions are ongoing.
GOAL 4	Support the use, enhancement, and expansion of low emission technologies
ACTIONS	4-A: Support innovative approaches for the deployment of low emission technologies.
	4-B: Support the construction of infrastructure needed for the expansion of low emission technologies, such as vehicle charging stations.
RESPONSIBLE AGENCIES	TRANSPAC and its jurisdictions
TIMELINE	These actions are ongoing.

GOAL 5	Manage arterial traffic flow
ACTIONS	5-A: Seek funding for traffic and transit improvements along Regional Routes and other major streets.
	5-B: Continue to implement the Central Contra Costa Traffic Management Program.
	5-C: Where feasible and appropriate, address the needs of pedestrians and bicyclists along and connecting to Regional Routes.
RESPONSIBLE AGENCIES	TRANSPAC and its jurisdictions
TIMELINE	These actions are ongoing.

GOAL 6	Support the implementation of Complete Streets, including the improvement of bicycle and pedestrian facilities
ACTIONS	6-A: Support the inclusion of Complete Streets in General Plan updates.
	6-B: Support the improvement of bicycle and pedestrian facilities on and connecting to Routes of Regional Significance.
	6-C: Seek funding to provide bicycle parking infrastructure at employment sites and activity centers throughout Central County.
	6-D: Support development of pedestrian and bicycle plans and safe routes to transit improvements.
RESPONSIBLE AGENCIES	TRANSPAC and its jurisdictions
TIMELINE	These actions are ongoing.

GOAL 7	Increase participation in the 511 Contra Costa TDM Program
ACTIONS	7-A: Support the 511 Contra Costa TDM Program to educate and encourage Contra Costa residents, students and commuters to use multimodal alternatives by promoting transit, shuttles, carpooling, vanpooling, walking, bicycling, alternative work schedules, and telecommuting.
	7-B: Develop TDM programs at K-12 schools and colleges to encourage carpooling, transit ridership, walking, and bicycling.
	7-C: Promote alternative work opportunities including employer pre-tax benefit programs, compressed work-week schedules, flex schedules, and telework.
	7-D: Encourage commuters to make local trips or trips linked to transit by walking, bicycling, or carpooling instead of driving alone.
	7-E: Promote park-and-ride lot use to potential carpoolers, vanpoolers, and transit riders, including shuttle services, where applicable.
	7-F: In cooperation with Central County jurisdictions, develop TDM plans and provide consultations to improve mobility and decrease parking demand for new development and redevelopment.
	7-G: Explore innovative new technologies to improve mobility and reduce SOV trips.
	7-H: Seek funding to provide bicycle parking infrastructure at employment sites and activity centers throughout Central County.
	7-I: Encourage “green” commuting, including ZEV and NEV vehicles, clean fuel infrastructure, and car sharing.
RESPONSIBLE AGENCIES	511 Contra Costa, TRANSPAC, and TRANSPAC jurisdictions
TIMELINE	These actions are ongoing.

GOAL 8	Work to improve freeway flow
ACTIONS	8-A: Continue to monitor and evaluate operational improvements at freeway interchanges on I-680, SR-242, SR-24, and SR-4.
	8-B: Support development of operational improvements on mainline SR-4.
	8-C: Continue to support the completion of the fourth bore of the Caldecott Tunnel (SR-24).
	8-D: Support the study and implementation of potential regional freeway management strategies.
	8-E: Consider a multi-agency approach to freeway ramp metering.
RESPONSIBLE AGENCIES	TRANSPAC and its jurisdictions
TIMELINE	These actions are ongoing. The fourth bore of the Caldecott Tunnel was open to the public in 2013, with project completion estimated to be 2019.

GOAL 9	Support Use of HOV and Express Lanes
ACTIONS	9-A: Support the completion of a continuous HOV system on I-680.
	9-B: Support the connection of the SR-4 HOV system to I-680.
	9-C: Support consistent occupancy requirements for toll-free HOV lanes on the Benicia-Martinez Bridge and I-680.
	9-D: Support the implementation of Express Lanes on I-680, consistent with MTC's project.
	9-E: Support additional incentives for HOV users.
	9-F: Provide additional park-and-ride lots.
RESPONSIBLE AGENCIES	TRANSPAC will continue to advocate for funding and phasing to complete the HOV lane system and to encourage incentives.
TIMELINE	Depending on funding availability, Action 9-A in the southbound direction is intended to be completed by 2018. Other actions are ongoing.

4. ROUTES OF REGIONAL SIGNIFICANCE ISSUES, OBJECTIVES AND ACTIONS

The cornerstones of the transportation network in Central Contra Costa County are the Routes of Regional Significance (Regional Routes). The routes, which include freeway and arterial segments and cross-jurisdictional boundaries, carry the bulk of the traffic and are the focus of the work of TRANSPAC.

In 1995, TRANSPAC established the first set of measurable objectives and related actions for these routes. Through its action plans, TRANSPAC has continued to assess the impacts of future growth on the transportation network, update quantifiable objectives for the systems, and develop actions for each route.

For the 2014 Action Plan, TRANSPAC reviewed the issues, objectives and actions for each of the routes.

4.1 Multimodal Transportation Service Objectives (MTSOs)

Under Measure J, each Regional Transportation Planning Committee (RTPC) must establish Multimodal Transportation Service Objectives (MTSOs) for its Regional Routes – quantifiable measures of performance that include a target date for attainment. The MTSOs must reflect the RTPC’s tenets and region-wide objectives (see Chapter 3) and also be consistent with the overall goals of the Contra Costa Transportation Authority. For Regional Routes that connect two or more regions of the County, MTSOs must be consistent with the MTSOs of the adjacent RTPC.

TRANSPAC first established MTSOs in its 1995 Action Plan. These objectives were slightly modified in the 2000 Update. For the 2009 Update, CCTA included all of the adopted General Plans of TRANSPAC jurisdictions in the 2030 traffic model. Based on the analysis, TRANSPAC determined that the 2000 Action Plan MTSOs would be exceeded well before 2030. TRANSPAC established revised MTSOs for the 2009 Action Plan based on this analysis. For the 2014 Action Plan, only a few MTSOs were modified to allow consistency between jurisdictions and to reflect new Routes of Regional Significance. The observed and forecasted MTSO values are provided in Appendix A of this Action Plan.

TRANSPAC will continue to work closely with neighboring RTPCs to coordinate TDM programs and operational improvements on shared Regional Routes. TRANSPAC also will continue to implement as many of its actions as financially and institutionally feasible and will use MTSOs for analysis purposes.

For this Action Plan, the assumptions of all currently adopted General Plans have been included in the CCTA 2040 model and do not require any additional MTSO analysis. As a result, the CEQA document for a given project only needs to reference the Action Plan/CCTA model to establish that the MTSO analysis has been performed. To the extent possible, MTSOs analyses should be completed in one CEQA traffic study to eliminate duplicative analysis requirements.

Based on CCTA policy, TRANSPAC has established its GPA review requirement at 500 net-new peak-hour vehicle trips. This review must include an analysis of impacts on established MTSOs and a determination of whether the GPA will adversely affect the ability of local jurisdictions to meet MTSOs or implement Action Plan actions. The GPA and/or this Action Plan may be modified to mitigate any adverse impacts and the lead jurisdiction is encouraged to work with affected RTPCs and jurisdictions to address those adverse impacts.

4.2. Actions and Responsibilities

TRANSPAC and its jurisdictions have identified specific actions for the Regional Routes. In many cases, these actions and improvements span jurisdictional boundaries. TRANSPAC and its jurisdictions are responsible for the implementation of the actions.

The pages that follow provide a description, a statement of issues, and actions for each Regional Route.

4.3 Freeway Routes of Regional Significance

In the TRANSPAC area, all freeway Routes of Regional Significance have been designated with a Delay Index MTSO. The Delay Index is an expression of the amount of time required to travel between two points during the peak hour as compared to non-peak hours. The measure is calculated by dividing peak travel time by non-peak travel time.

$$\text{Delay Index} = \text{Peak Travel Time} / \text{Non-Peak Travel Time}$$

A Delay Index of 1.0 indicates that during the peak hour, the traffic moves at free-flow speed, unconstrained by congestion and not exceeding the posted speed limit. As congestion increases and average speed decreases, the Delay Index rises. A Delay Index of 2.0 indicates that the trip takes twice as long during the peak hour as during non-peak hours.

Interstate 680

DESCRIPTION I-680 is a north-south, eight- to twelve-lane divided freeway. It begins north of the TRANSPAC area at the I-80/Cordelia interchange and travels south through Solano County, entering TRANSPAC's region after it crosses the Benicia-Martinez Bridge. From the bridge, it extends south through the SR-4 and SR-242 interchanges. The I-680/SR-24 interchange is near TRANSPAC's southern boundary in Walnut Creek. I-680 continues south through the Southwest Regional Transportation Planning Committee (SWAT) area.

I-680 is a major commute route for Solano County and for Central and East Contra Costa County travelers. I-680 provides access to the Walnut Creek, Pleasant Hill, and Concord BART stations, the Martinez Intermodal Facility, and the soon-to-be-built Pacheco Transit Hub.

ISSUE STATEMENT Between years 2013 and 2040, traffic volumes on I-680 are projected to increase by approximately 25 percent, reaching 350,000 vehicles per day.

TRANSPAC's tenets support completion of an HOV-lane system in Central County for carpoolers and buses to bypass peak-period congestion.

MTSO, ACTIONS, & RESPONSIBILITIES

MTSO: 4.0 Delay Index

- Continue to support investment in and implementation of HOV lanes on I-680.
 - Continue to support planned improvements to the I-680/SR-4 interchange and to SR-4.
 - Continue to work with Solano County to manage traffic in the I-680 corridor.
-

PROPOSED IMPROVEMENTS

- Southbound HOV Lane Gap Closure from North Main Street to Livorna Road
 - Northbound HOV Lane Extension from N. Main Street to SR 242
 - Interchange modifications to I-680/Marina Vista interchange
 - Improvements to I-680/SR-4 freeway interchange
 - Improvements to SR-4 (see subsequent section on SR-4)
-

State Route 242

DESCRIPTION	State Route 242 is a four-mile north-south freeway that connects SR-4 west of Port Chicago Highway to I-680 just south of Willow Pass Road. It contains three lanes in each direction.
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ISSUE STATEMENT	As a connector between I-680 and SR-4, SR-242 is a link between East and Central County. SR-242 is anticipated to experience a 30 percent increase in traffic volume during the peak hours by 2040. Today, traffic on southbound SR-242 in the AM peak period backs up from the I-680 Interchange to north of Clayton Road.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO: 3.0 Delay Index

- Support the study and design of Clayton Road interchange improvements.
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PROPOSED IMPROVEMENTS

- Construction and modification of southbound ramps at the Clayton Road interchange
 - Construction of northbound Clayton Road on-ramp
-

State Route 4

DESCRIPTION	State Route 4 is an east-west freeway that runs from East Contra Costa and San Joaquin County to I-80 in West Contra Costa through Central Contra Costa. West of the SR-242 Interchange in Concord, it has four to six lanes; east of the interchange, it has eight to ten lanes, including an HOV lane in each direction. SR-4 provides access to the North Concord/Martinez BART Station, the Martinez Intermodal Facility, and the Pacheco Transit Hub.
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ISSUE STATEMENT	<p>By 2040, traffic volumes are projected to increase between 40 to 100 percent in the peak direction, which is westbound in the AM period, and eastbound in the PM direction. In addition, congestion at the westbound SR-4/SR-242 Interchange will increase because carpools and buses must transition from the westbound HOV lane to the mixed-flow lanes on both SR-4 and SR-242.</p> <p>The highest volume segment of SR-4 is on the Willow Pass grade. Traffic at this location is projected to increase by 40 percent. The SR-4 Integrated Corridor Analysis (ICA) study completed in 2012 identified widening improvements on mainline SR-4 between I-680 and Bailey Road, including widening improvements identified in the 2010 SR-4 CSMP/FPI study. Additionally, SR-4 experiences delay at the I-680/SR-4 Interchange because of short weaving sections.</p> <p>The cost of the phased reconstruction of the I-680/SR-4 interchange is estimated at more than \$320 million in 2007 dollars. To accelerate the reconstruction, TRANSPAC is working with CCTA to re-phase the project, including the completion of the third travel lanes on SR-4 from Solano Way/Port Chicago Highway on the east to Morello Avenue on the west.</p>
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO: 5.0 Delay Index.

- Support project development of SR-4 operational improvements based on the ICA study.
 - Support improvements to the I-680/SR-4 interchange.
-

PROPOSED IMPROVEMENTS

- Improvements to the I-680/SR-4 interchange, including construction of a third lane between Solano Way/Port Chicago Highway to Morello Avenue and direct connectors
 - SR-4 mainline capacity improvements between I-680 and Bailey Road, including extension of eastbound HOV lane upstream to I-680
 - Construction of the Pacheco Transit Hub (project completed in 2014)
-

4.4 Arterial Routes of Regional Significance

The following 11 arterial roadways within Central County are designated as Routes of Regional Significance:

- Alhambra Avenue
- Bailey Road
- Clayton Road
- Contra Costa Boulevard
- Geary Road
- North Main Street
- Pacheco Boulevard
- Pleasant Hill Road
- Taylor Boulevard
- Treat Boulevard
- Ygnacio Valley Road/Kirker Pass Road

All arterial Routes of Regional Significance are projected to carry significantly more trips, especially along Geary Road and Pacheco Boulevard, both of which are expected to more than double in 2040.

Each jurisdiction has established an MTSO for its section of arterial Routes of Regional Significance. This approach allows each jurisdiction to establish MTSOs that best reflect local and regional traffic conditions as well as realistic local operating characteristics and conditions. MTSOs are applicable to Routes of Regional Significance in the peak direction.

The MTSOs for the TRANSPAC arterials comprise four indices including:

- **Average Speed:** Maintenance of a minimum average vehicle speed in miles per hour (MPH) during morning and evening peak-hour travel times.
- **Average Stopped Delay:** Average Stopped Delay (expressed in signal cycles to clear the intersection) in the peak direction of AM/PM commute travel at select intersections (see Chapter 6 for analysis details).
- **Level of Service (LOS):** A measure of traffic operating conditions based on volume and capacity as calculated using the Highway Capacity Manual (HCM)

(LOS may be affected by pedestrian crossings, frequent bus stops, and similar transportation improvements.).

- **Volume-to-Capacity Ratio (V/C):** The ratio of hourly traffic volume to capacity of a given roadway, which is a measure of the level of congestion on a given roadway.

Alhambra Avenue

DESCRIPTION	Alhambra Avenue is a north-south roadway that extends from southern downtown Martinez, under SR-4, to Taylor Boulevard in Pleasant Hill, where its name changes to Pleasant Hill Road. It is generally a four-lane roadway. Only the portion south of Arch Street is designated as a Regional Route. It serves as a parallel route to I-680 and a shortcut around the I-680/SR-24 Interchange.
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ISSUE STATEMENT	By 2040, traffic volumes are projected to increase approximately 43 percent during the AM peak hour and 24 percent during the PM peak hour. Proposed improvements along the I-680 corridor are necessary to manage the traffic on this roadway.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Martinez and Pleasant Hill: 15 MPH Average Speed for both directions during AM and PM peak hours

ACTIONS & RESPONSIBILITIES:

- Pursue planning and funding for Alhambra Avenue improvements and widening.

PROPOSED IMPROVEMENTS

- Construction of a second southbound lane on Alhambra Avenue from Walnut Avenue to Franklin Canyon Road with other necessary signal, ramp, and median modifications
 - Completion of the Alhambra Avenue Widening Phase III project
-

Bailey Road

DESCRIPTION	Bailey Road is a north-south roadway that connects the cities of Concord and Pittsburg, extending from Clayton Road in Concord to Willow Pass Road in Pittsburg. Within Central County, it is generally a two-lane roadway. The segment from Clayton Road to the boundary between Central and East County is designated as a Regional Route in Central County. It serves as an alternate route for those traveling along SR-4 and SR-242 between Concord and Pittsburg.
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ISSUE STATEMENT	By 2040, traffic volumes are projected to increase approximately 125 percent during the AM peak hour and 68 percent during the PM peak hour. Proposed improvements along the I-680 corridor are necessary to manage the traffic on this roadway.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Concord: Average Stopped Delays (signal cycles to clear) at following intersections:
 - Concord Boulevard: 3 cycles
 - Clayton Road: 3 cycles

ACTIONS & RESPONSIBILITIES:

- Partner with TRANPLAN to identify needed improvements on Bailey Road.
-

PROPOSED IMPROVEMENTS

- Widening improvements between Myrtle Drive and Concord Boulevard, and signalization of the Bailey Road/Myrtle Drive intersection.
-

Clayton Road

DESCRIPTION	Clayton Road is a four- to six-lane, east-west roadway that connects Marsh Creek Road east of Clayton to SR-242 in Concord. Between Ygnacio Valley Road/Kirker Pass Road and Treat Boulevard, it is a Regional Route. It is the east-west traffic spine for Central Contra Costa and provides direct access to the Concord BART station and connection to the Pleasant Hill and Walnut Creek BART stations.
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ISSUE STATEMENT	By 2040, AM peak-hour traffic volume is projected to increase 40 percent. For the PM peak hour, total traffic volume is projected to increase 46 percent.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Clayton: 15 MPH Average Speed for both directions during AM and PM peak hours
- Concord: Average Stopped Delays (signal cycles to clear) at following intersections:
 - Kirker Pass Road/Ygnacio Valley Road: 3 cycles
 - Treat Boulevard/Denkinger Road: 3 cycles

ACTIONS & RESPONSIBILITIES:

- Complete Clayton Road/Treat Boulevard/Denkinger Road intersection capacity improvements.
 - Work with TRANSPLAN on Clayton Road/Marsh Creek Road corridor operation and management.
 - Implement vehicle, bus, bicycle, and pedestrian access improvements at the Concord BART Station.
 - TRANSPAC and TRANSPLAN to continue to work together on the East-Central Traffic Management Program.
-

PROPOSED IMPROVEMENTS

- Clayton Road /Treat Boulevard/Denkinger Road intersection capacity improvements
 - Implementation of various vehicle, bus, bicycle, and pedestrian access improvements at the Concord BART Station
-

Contra Costa Boulevard

DESCRIPTION	Contra Costa Boulevard is a north-south roadway that begins at 2nd Avenue in Pleasant Hill as an extension of Pacheco Boulevard. It runs south through Pleasant Hill to become North Main Street at Oak Park in Walnut Creek. West of and parallel to I-680, Contra Costa Boulevard varies in width from four to six lanes and serves as a bypass to I-680.
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ISSUE STATEMENT	By 2040, traffic volumes on Contra Costa Boulevard are projected to increase by 26 percent during the AM peak hour and by 10 percent during the PM peak hour. System-efficiency improvements are underway.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- All Jurisdictions: 15 MPH Average Speed for both directions, AM and PM peak hours

ACTIONS & RESPONSIBILITIES:

- Complete Contra Costa Boulevard improvement project.
-

PROPOSED IMPROVEMENTS

- Between 2nd Avenue and Monument Boulevard, construction of additional right and left turn lanes, modification of intersection lane alignments, and addition of a new class II bike lane
 - Improvement of traffic operations throughout corridor
-

Geary Road

DESCRIPTION	Geary Road runs east-west, connecting North Main Street at I-680 to Pleasant Hill Road to the west. East of I-680, Geary Road becomes Treat Boulevard. Over half its length, Geary Road is two lanes with center turn lanes. It serves as an access route to the Pleasant Hill BART station.
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ISSUE STATEMENT	As an alternate route to SR-24 in Lafayette, Geary Road is projected to experience significant traffic growth between 2013 and 2040. Traffic volumes during the AM and PM peak hours are expected to increase by 42% and 65%, respectively.
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Completion of the Phase III widening project and bus, bike and pedestrian improvements will improve access to the Pleasant Hill BART Station.

MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- LOS F at North Main Street intersection

ACTIONS & RESPONSIBILITIES:

- Roadway widening completed in 2016 to incorporate sidewalk, bike lanes, and parking lane.
 - Seek funding to improve vehicle, bus, bicycle, and pedestrian access at the Pleasant Hill BART Station.
-

PROPOSED IMPROVEMENTS

- Geary Road Widening Phase III (Completed in 2016). Shoulder widening, new sidewalks, Class II bike lanes, traffic signal replacement, and street lighting installation. No changes to roadway capacity.
 - Implementation of various vehicle, bus, bicycle, and pedestrian access improvements at the North Main Street/Geary Road/Treat Boulevard intersection.
-

North Main Street

DESCRIPTION	North Main Street is a north-south roadway in Walnut Creek that is the continuation of Contra Costa Boulevard. It is a four-lane roadway designated a Regional Route from Oak Park to San Luis Road. It runs parallel to I-680 and provides access to the interstate at both Treat Boulevard/Geary Road and San Luis Road. It provides a connection to two BART stations (Pleasant Hill and Walnut Creek stations) and serves local traffic.
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ISSUE STATEMENT	By 2040, peak-hour traffic volumes are projected to increase by 50 percent during the AM peak hour and 93% during the PM peak hour.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- LOS F at Treat Boulevard/Geary Road intersection

ACTIONS & RESPONSIBILITIES:

- Assess possible application of the Central Contra Costa Traffic Management Program.
-

PROPOSED IMPROVEMENTS

- None.
-

Pacheco Boulevard

DESCRIPTION	Pacheco Boulevard is a two- to four-lane north-south roadway connecting Pine Street south of downtown Martinez, under SR-4 and alongside I-680, to 2nd Street in Pleasant Hill, where it becomes Contra Costa Boulevard.
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ISSUE STATEMENT	Peak-hour traffic volumes on Pacheco Boulevard are projected to increase by 133 percent in the AM and 46 percent in the PM by 2040. Widening for a portion of Pacheco Boulevard is currently programmed, which will improve traffic flow and vehicle, bus and bicycle access to the Pacheco Transit Hub at the I-680/SR-4 interchange.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Contra Costa County and Martinez: 1.5 V/C ratio for all intersections

ACTIONS & RESPONSIBILITIES:

- Assess possible applications of the Central Contra Costa Traffic Management Program.
 - Complete Pacheco Transit Hub (project completed in 2014).
 - Seek funding to widen Pacheco Boulevard up to four lanes and make related improvements.
 - Coordinate proposed improvements to the I-680/SR-4 interchange with surrounding arterials and local streets.
 - Assess the need for improvements at the Pacheco Boulevard/Arnold Drive intersection.
 - Work with Contra Costa County staff on coordination of the implementation of the Buchanan Airport Master Plan.
-

PROPOSED IMPROVEMENTS

- Construction of Pacheco Transit Hub (project completed in 2014)
 - Widening of road segments up to four lanes and construction of a new railroad overcrossing for Burlington Northern Santa Fe Railway (likely to occur in phases)
-

Pleasant Hill Road

DESCRIPTION	Within TRANSPAC's region, Pleasant Hill Road is a north-south, two- to four-lane roadway that connects Geary Road and Taylor Boulevard into Lafayette and through SWAT's region to SR-24.
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ISSUE STATEMENT	Pleasant Hill Road and Taylor Boulevard currently serve as a parallel route for drivers traveling through Central County to SR-24. The CCTA model indicates that there will be an increase of 27% and 31% in AM and PM peak hour traffic, respectively, on Pleasant Hill Road.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Pleasant Hill: 15 MPH Average Speed in both directions in the AM and PM peak hours
- Contra Costa County: 1.5 V/C ratio for all intersections

ACTIONS & RESPONSIBILITIES:

- Work with SWAT/City of Lafayette on corridor issues and, if feasible, consider development of a traffic management plan and other operational strategies for Pleasant Hill Road.
-

PROPOSED IMPROVEMENTS

- Pleasant Hill Road Improvement Project, Phases iii, iv and v. Bicycle, pedestrian and shoulder widening work. No change in roadway capacity.
-

Taylor Boulevard

DESCRIPTION	Taylor Boulevard is a four-lane, north-south roadway that connects Contra Costa Boulevard to Pleasant Hill Road and effectively, SR-4 to SR-24.
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ISSUE STATEMENT	By 2040, peak-hour traffic volumes are projected to increase by 36% in the AM peak hour and 19% in the PM peak hour.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Pleasant Hill: 15 MPH Average Speed in both directions in the AM and PM peak hours
- Contra Costa County: 1.5 V/C ratio for all intersections

ACTIONS & RESPONSIBILITIES:

- Assess potential traffic operational improvements in the corridor.
-

PROPOSED IMPROVEMENTS

- Improvement of traffic operations through the corridor
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Treat Boulevard

DESCRIPTION	Treat Boulevard is a divided four- to eight-lane arterial that serves as a main commuter route from Clayton Road in Concord to I-680 and the Pleasant Hill Bart Station. It runs parallel to Ygnacio Valley Road.
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ISSUE STATEMENT	By 2040, traffic volumes are projected to increase by approximately 28% in during both AM and PM peak hours. Improving vehicle, bus, bike and pedestrian access to the Pleasant Hill BART Station will be necessary.
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MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Concord: Average Stopped Delays (signal cycles to clear) at the following intersections:
 - Clayton Road/Denkinger Road: 3 cycles
 - Cowell Road: 5 cycles
 - Oak Grove Road: 5 cycles
- Walnut Creek: LOS F at Bancroft Road intersection
- Contra Costa County: 1.5 V/C ratio for all intersections

ACTIONS & RESPONSIBILITIES:

- Seek funding to improve vehicle, bus, bicycle, and pedestrian access at the Pleasant Hill BART Station.
-

PROPOSED IMPROVEMENTS

- I-680 Treat Boulevard Intersection Control Evaluation
 - Treat Boulevard Adaptive Timing
 - Implementation of various vehicle, bus, bicycle, and pedestrian access improvements at the Pleasant Hill BART Station
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Ygnacio Valley Road/Kirker Pass Road

DESCRIPTION	Ygnacio Valley Road is a four- to six-lane divided roadway that extends from I-680 in Walnut Creek to Clayton Road. Beyond Clayton Road, Ygnacio Valley Road becomes Kirker Pass Road, a four- to six-lane roadway that then becomes Railroad Avenue in Pittsburg and connects to SR-4. It is a primary alternate route for SR-4 commute traffic to and from East County.
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Ygnacio Valley Road/Kirker Pass Road (Cont.)

ISSUE STATEMENT

Commute traffic flow is bi-directional but primarily westbound in the morning and eastbound in the evening. Peak-hour traffic volumes on the route generally have been stable over the last decade, in part because TRANSPAC and TRANSPLAN adopted the East-Central Traffic Management Plan.

In the future, Ygnacio Valley Road AM and PM peak hour volumes are expected to increase 21 percent and 12 percent, respectively. The existing 4-lane configuration between Michigan Boulevard and Cowell Road does not provide sufficient capacity to accommodate current or future peak period traffic demand. In contrast, peak-hour peak-direction traffic volumes on Kirker Pass Road are projected to increase by 62 percent during the AM peak hour and 51 percent during the PM peak hour.

The Walnut Creek BART station is adjacent to I-680 in the downtown area. The station parking area will be reconfigured as part of the Walnut Creek BART Station Transit Village project.

MTSO, ACTIONS, & RESPONSIBILITIES

MTSO:

- Concord: Average Stopped Delays (signal cycles to clear) at following intersections:
 - Clayton Road/Kirker Pass Road: 3 cycles
 - Alberta Way/Pine Hollow Drive: 4 cycles
 - Cowell Road: 4 cycles
- Walnut Creek: LOS F at both Bancroft Road and Civic Drive intersections
- Contra Costa County: 1.5 V/C ratio for all intersections

ACTIONS & RESPONSIBILITIES:

- Continue to support implementation of the East-Central Traffic Management Plan.
- Seek funding from Measure J/STIP for a truck-climbing lane on Kirker Pass Road toward East County.
- Seek funding to improve vehicle, bus, bicycle, and pedestrian access at the Walnut Creek BART Station.
- Seek funding for widening improvements to six lanes between Michigan Boulevard and Cowell Road.

PROPOSED IMPROVEMENTS

- Addition and extension of turn lanes on Ygnacio Valley Road in various locations
 - Continued implementation of the East-Central Traffic Management Plan
 - Construction of a truck-climbing lane on Kirker Pass Road from Concord toward Pittsburg
 - Implementation of various vehicle, bus, bicycle, and pedestrian access improvements at the Walnut Creek BART Station
 - Widening to six lanes between Michigan Boulevard and Cowell Road
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5. FINANCIAL OUTLOOK

On an ongoing basis, TRANSPAC makes every possible effort to identify its major capital investment priorities for inclusion in local, regional, state, and federal funding plans. TRANSPAC provides input to the Authority on the development of financial strategies that, if successful, result in the allocation of funds toward projects in Central County. In addition, TRANSPAC has implemented a Subregional Transportation Mitigation Program (STMP) to generate funding for project mitigations from private developers whose projects are found to increase traffic on Routes of Regional Significance (Regional Routes).

This Action Plan is not financially constrained; it includes both funded and unfunded projects. The Central County projects listed in Table 5-1 (pages 45-50) have a lead agency, a projected cost estimate and secured funding as well as possible funding sources. This list comprises more than just projects for Routes of Regional Significance. These projects qualify for inclusion in the Authority's Comprehensive Transportation Project List, part of the 2014 CTP Update.

5.1 TRANSPAC Subregional Transportation Mitigation Program (STMP)

TRANSPAC has adopted a Subregional Transportation Mitigation Program (STMP) to ensure that new development pays to mitigate its impacts, as required by Measure J. The TRANSPAC STMP was included in the 2009 Central County Action Plan based on the TRANSPAC Regional Transportation Mitigation Program (RTMP), which was adopted by TRANSPAC and its member jurisdictions in 1996.

The STMP is modeled after the approach used for Oakhurst development in Clayton in the early 1990s. The Oakhurst project, with 1,480 units, generated \$1.1 million in transportation fee revenues. An origin-and-destination study determined the percentage of westbound peak-hour Ygnacio Valley Road through-trips at Civic Drive attributable to Clayton, and this percentage formed the basis cost of the transportation mitigations.

Under the TRANSPAC STMP, the impacts of any new development are determined through the CEQA environmental assessment process, and project-specific mitigations are developed based on the environmental assessment. While the STMP is predicated on a project basis and, as a result, calculated differently from the per-unit and per-commercial-square-foot fee programs used by other Contra Costa RTPCs, the combination of regional and local fees generally aligns in the aggregate with the fee programs in the other RTPC areas, especially fee charges in the Tri-Valley area, which has slightly lower commercial fees than the TRANSPAC area.

Agreements negotiated by TRANSPAC jurisdictions with jurisdictions in other RTPCs have also required similar traffic mitigation. For example, in March 2006, the cities of Concord and Pittsburg negotiated fee agreements for the Vista Del Mar (formally known as Alves Ranch) and Bailey Road Estates projects. In addition to paying the standard East County local and regional fees, the Vista Del Mar and Bailey Estates developer will also pay additional fair-share traffic mitigation to the City of Concord.

5.2 Local Fees

Prior to the passage of Measure C in 1988, each of the six Central County jurisdictions had established fees for local transportation improvements; some local fee programs preceded Measure C by as much as eight years.

Since the passage of Measure C and the adoption of the TRANSPAC RTMP, the six Central County jurisdictions have used both the RTMP/STMP and their local fee programs to address regional and local transportation needs. Examples of local fee programs are provided below.

Table 5-1: TRANSPAC - Example Traffic Impact Fees

Single Family Dwelling	Concord	Walnut Creek
Regional	\$268	\$0*
Local		\$2,639
Off-Site Street Improvement Program Fee (OSIP)****	\$3,251	n/a
TVTD2	n/a	n/a
Total Traffic Impact Fee Per Dwelling	\$3,519	\$2,639
Retail Building 50k SF		
Regional	\$0*	\$0*
Local		\$275,000
Off-Site Street Improvement Program Fee (OSIP)****	\$440,500	n/a
TVTD2	n/a	n/a
Total Traffic Impact Fee	\$440,500	\$275,000
Per Commercial Square Foot	\$8.81/sq ft	\$5.50/sq ft

Information compiled from local jurisdictions

* No examples exist

5.2.1 TRANSPAC Subregional Transportation Mitigation Program (STMP)

This Program is intended to fulfill the requirement for a Subregional Transportation Mitigation Program (STMP) established by the Contra Costa Transportation Authority as part of each jurisdiction's compliance with the Measure J Growth Management Program. STMP requirements are applicable to jurisdictions with statutory land use authority in the Central Contra Costa TRANSPAC area.

This program creates a requirement for an interjurisdictional agreement(s) to mitigate traffic impacts of net new peak hour vehicle trips should a proposed development meet or exceed the established interregional net new peak hour vehicle trip threshold for Routes of Regional Significance and that result in significant cumulative traffic impacts on such Routes. As provided under CEQA, an impacted jurisdiction may request an analysis of and mitigation from a proposed development outside that jurisdiction even if the established thresholds in the STMP may not have been met.

1. While the standard for project notifications to TRANSPAC and other RTPCs remains at 100 net new peak hour vehicle trips, the STMP is geared to an assessment of the cumulative impacts of net new peak hour vehicle trips and net new peak hour interregional vehicle trips on Routes of Regional Significance. Nexus and rough proportionality requirements are to be individually addressed as part of the proposed development's environmental assessment under the California Environmental Quality Act, (CEQA) as amended. For the purposes of the STMP, "interregional trip" is defined as any trip with origin or destination outside of the "home" jurisdiction in which the development is located.
2. The STMP requires the execution of an interjurisdictional agreement(s) to mitigate the cumulative impacts of development generating peak hour and interregional vehicle trips at or above the thresholds established in paragraph 3 for the development and for Routes of Regional Significance (Note: a jurisdiction may voluntarily choose to address impacts of interregional trips on roads other than Routes of Regional Significance).
3. STMP requirements are to be followed if it is first determined that a development project generates 500 or more net new peak hour vehicle trips and subsequently is determined to generate 100 or more interregional net new vehicle trips in any peak hour on a Route of Regional Significance as defined in the Central County Action Plan and/or the Comprehensive Countywide Transportation Plan. Jurisdictions are to execute a mitigation agreement(s) with all impacted TRANSPAC jurisdictions.

Interjurisdictional agreements are strongly encouraged to be executed to address impacts on TRANSPAC jurisdictions by outside jurisdictions.

TRANSPAC jurisdictions also expect to execute such agreements with jurisdictions impacted by TRANSPAC area projects as well.

For the purpose of determining if the above thresholds are met (i.e. 500 net new peak hour project vehicle trips and 100 net new interregional peak hour vehicle trips) and assessing cumulative traffic impacts on Routes of Regional Significance, a cumulative trip analysis must be completed as part of the CEQA assessment. This cumulative analysis is to review incremental trips (net new peak hour vehicle trips) not only generated by the proposed development, but also trips from "related past, present, and reasonably probable future projects" as defined by CEQA. If such cumulative analysis meets the trip thresholds and results in significant cumulative traffic impacts, the proposed development is responsible for mitigating its proportionate share of the impacts via an interjurisdictional agreement(s). Cumulative impacts are generally defined as a) existing traffic counts plus b) approved projects which have not yet been constructed or operated plus c) pending projects under review and consideration for approval by the proper agency(ies) plus d) any anticipated projects for which environmental review (e.g. Negative Declaration, Mitigated Negative Declaration or Environmental Impact Report/Study) has been completed.

4. The required CEQA environmental assessment for a development project is to be used to determine if cumulative impacts on Routes of Regional Significance need to be mitigated.
 - A. If a development project meets or exceeds the thresholds established in Section 3 above and the environmental assessment can be accomplished by a Negative or Mitigated Negative Declaration, the jurisdiction will undertake a focused traffic study to determine if the requirements of the STMP apply. The traffic study will assess cumulative traffic impacts on Routes of Regional Significance beyond the home jurisdiction.
 - B. Should the requirements apply, the interjurisdictional agreement(s) on mitigation measures, actions and/or fees would require the voluntary consent and sponsorship of the project applicant. (Note: if such voluntary consent is not achieved, CEQA requires that an EIR be prepared, see Section 4B.) The agreement(s) will be developed in cooperation with affected jurisdictions and are to include the identification, implementation and monitoring mechanism(s) for mitigation of impacts (e.g. Central County Action Plan and Countywide Comprehensive Transportation Plan mitigation measures, actions, payment of fees, etc.)
 - C. If a development project meets or exceeds the thresholds and the environmental assessment requires the preparation of an Environmental Impact Report (EIR), the EIR will include an analysis of cumulative traffic

impacts outside the home jurisdiction to determine if the requirements of the STMP apply. Should the requirements apply, an interjurisdictional agreement(s) establishing the developer responsibility to mitigate project impacts (e. g. Central County Action Plan and Countywide Comprehensive Transportation Plan mitigation measures, actions, payment of fees, etc.) is required. The agreement(s) will be developed in cooperation with the affected jurisdictions and include the identification, implementation and monitoring mechanism(s) for mitigation requirements. Early consultation with affected jurisdictions is suggested.

- D. If a development project does not exceed the thresholds as determined under the cumulative analysis) and the required CEQA assessment is accomplished through a Categorical Exemption, Negative or Mitigated Negative Declaration, the jurisdiction is not required to develop an interjurisdictional agreement(s). Such development projects are likely to be small infill projects which are to be encouraged to promote jobs/housing balance, increased services and sustainability.
 - E. It is also possible that after a traffic analysis has been completed under 4A or 4B above, the participating jurisdictions may determine that no significant cumulative traffic impacts are expected to occur on Routes of Regional Significance. Similarly, it may be determined that the development does not create or increase congestion on a Route of Regional Significance and/or that the traffic increase is insignificant relative to the existing traffic volumes and/or capacity of the Route, and, as a result, does not warrant the development/execution of an interjurisdictional agreement. Under such circumstances, the parties may determine, and should document, that an interjurisdictional agreement is not necessary.
5. TRANSPAC may amend the STMP with the approval of its member jurisdictions at any time.

TABLE 5-2 2014 ACTION PLAN PROJECT LIST – CENTRAL COUNTY PROJECTS

Agency	Project Name	Preliminary Cost (2013\$)	Secured Funding	Prospective STIP Requests (estimate)
FREEWAY PROJECTS				
CCTA/CALTRANS	Caldecott Replacement Planting and Environmental Mitigation Project	\$5,200,00	TRANSPAC Measure J:\$3.2M; STIP: \$2M	
CCTA/TRANSPAC	I-680 SB HOV Lane Gap Closure: Close the HOV gap between N. Main and Livorna.	\$44,000,000	Measure J: \$29M RM2: \$15M	
CCTA/TRANSPAC	I-680 NB HOV Lane Extension: N. Main to SR242	\$44,000,000	Measure J: \$4M	
CCTA/TRANSPAC	I-680/SR4 Phase 3: Complete SR 4 missing lane	\$57,700,000	STIP: \$9.6M, Measure J: \$30.8M; Measure C: \$11.5M; TVTD payback: \$5.8M	
CCTA/TRANSPAC	I-680/SR 4 NB to WB Direct Connector	\$76,200,000		\$5M
CCTA/TRANSPAC	I-680/SR4 EB to SB Ramp Connector	\$44,000,000		\$2.5M
CCTA/TRANSPAC	I-680/SR4 SB to EB Direct Connector	\$40,500,000		
CCTA/TRANSPAC	I-680/SR4 WB to NB Ramp Connector	\$26,000,000		
CCTA/TRANSPAC	I-680/SR4 WB to SB HOV Flyover Direct Connector	\$82,000,000		
Martinez	I-680/Marina Vista Interchange Modifications	\$6,000,000	Measure J: \$1.3M	\$4.7M
Concord	SR242/Clayton Road On- and Off-ramps	\$45,000,000	Measure J: \$4.5M	\$26.5M
Concord	SR4 Operational Improvements	\$259,000,000	Measure J: 4.8M:	\$33.1M
Concord	SR4/Port Chicago Highway Interchange Improvements	\$35,000,000		
ROAD PROJECTS				
Clayton	Marsh Creek Road Upgrade	\$1,000,000		
Clayton	Pine Hollow Road Upgrade	\$300,000		
Concord	Waterworld Pkwy Bridge, to connect to Meridian Park Blvd.	\$12,500,000	Measure J: \$3.5M; Local: \$9M	
Concord	Clayton Rd. /Treat Blvd./Denkinger Rd. Intersection Capacity Improvements	\$2,700,000	Measure J: \$2M; Local: \$0.7M	
Concord	Commerce Avenue Roadway Extension and Bridge at Pine Creek	\$10,600,000	Measure C I-680: \$6.19M; TE Bill:\$1.36M; Local:\$2.2M; Measure J: \$0.85M	
Concord	Ygnacio Valley Road Lane Ext. (Cowell to Michigan Widening)	\$12,000,000		
Concord	Bailey Road Traffic Improvements	\$4,790,000	Developer Fees: \$.123M; Local ROW:\$.039M	
County/Martinez	Pacheco Blvd: Realignment and Widening: Blum Road to Morello Avenue	\$35,200,000	Measure J: \$5.9M; Measure C: \$3.2M; City Fees: \$1.5 M; TOSCO/Solano Fund \$5.2M	\$19.7M
County	Pacheco Boulevard / Muir Road: Add second eastbound right-turn lane			
County	Pacheco Boulevard/ Center Avenue: Add second eastbound right-turn lane			
County	Alhambra Valley Road realignment and safety projects to straighten curves and improve operational and safety characteristics	\$5,080,000	Martinez AOB: \$0.7M, Local \$1.5M	\$3M

TABLE 5-2 2014 ACTION PLAN PROJECT LIST– CENTRAL COUNTY PROJECTS (cont.)

Agency	Project Name	Preliminary Cost (2013\$)	Secured Funding	Prospective STIP Requests (estimate)
County	Kirker Pass Rd Northbound Truck Climbing Lanes from Concord to Pittsburg. Note southbound truck lanes (\$20M Project) are planned, but will proceed after the northbound project	\$13,000,000	Measure J: \$6.15M; STIP: \$2.65M	
Martinez	Alhambra Avenue Safety Improvements, Walnut Avenue to Franklin Canyon Rd; Construct a second southbound lane on Alhambra Ave from Walnut Ave to Franklin Canyon Rd with other necessary signal, ramp, and median modifications.	\$1,750,000	Local: \$.25M	\$1.5M
Martinez	Alhambra Creek Bridge	\$9,800,000	Measure J: \$9.8M	
Martinez	Alhambra Avenue Widening (Phase 3)	\$6,000,000	Other: \$1M	
Pleasant Hill	Contra Costa Blvd Improvement; Between 2nd Ave and Monument Blvd, construct additional right and left turn lanes at various intersections, modify intersection lane alignments, add new class II bike lane, improve traffic operations throughout corridor.	\$12,700,000	Measure J: \$1M, HSTIP: \$1.1M	\$12.8M
Pleasant Hill	Buskirk Avenue Realignment, Phase 2	\$10,000,00	Measure J: \$8M; City: \$1M	\$1M
Pleasant Hill	Pleasant Hill Road Improvement project - phases iii,iv,v. Bicycle, pedestrian and shoulder widening. No roadway capacity changes.	\$1,800,000		
Pleasant Hill	Monument Boulevard Widening	\$12,000,000		
Pleasant Hill	Contra Costa Boulevard Widening at Gregory Gardens , Doris to Doray	\$2,000,000		
Pleasant Hill	Gregory lane right turn lane at I-680 off-ramp	\$275,000		
Pleasant Hill	Golf Club Rd Bridge Replacement – New bridge, sidewalk, bike lane, pavement, lighting, and landscaping	\$4,800,000	HBR: \$3.7M; CC-TLC: \$0.5M; Local: \$0.6M	
Pleasant Hill	Golf Club Rd/ Old Quarry Rd Improvement– New sidewalk, signals, bike lane, crosswalk beacon, roundabout, pavement, lighting, and landscaping	\$5,400,000	Federal: \$4.8M	
Pleasant Hill	Paso Nogal Improvements	\$1,000,000		
Pleasant Hill	Cleaveland Road widening and sidewalk improvements	\$2,000,000		\$1M
Pleasant Hill	Pleasant Hill Road installation of new pedestrian and bicycle facilities, drainage improvements, traffic calming measures , and intersection improvements			
Pleasant Hill	Taylor Boulevard extend signal interconnect Pleasant Hill Road to Grayson Road	\$1,000,000		
Pleasant Hill	Taylor Boulevard eliminate free right turn lanes at Taylor Boulevard/Pleasant Hill Road intersection			
Walnut Creek	Ygnacio Valley Road (YVR) Rehabilitation - Phase 1; Overlay YVR from California Blvd to Civic Drive, including ADA upgrades, safety, intersection and traffic operations improvements.	\$2,849,000	Local: \$0.4M	
Walnut Creek	Ygnacio Valley Road (YVR) Rehabilitation - Phase 2: I-680-California; Phase 3: Civic to Bancroft; Phase 4: Bancroft to Oak Grove; Phase 5: Oak Grove to City Limits	\$20,500,00		
Walnut Creek	Ygnacio Valley Road @ Walnut Blvd. Left Turn Extension	\$400,000		
Walnut Creek	Bancroft/Ygnacio Valley Road New Eastbound Right Turn Lane	\$4,500,000		
Walnut Creek	Ygnacio Valley Road @ Homestead Ave. Left Turn Extension (350 feet)	\$350,000		
Walnut Creek	Ygnacio Valley Road @ Oak Grove Road Southbound Left Turn Lane	\$2,500,000		
Walnut Creek	Ygnacio Valley Road @ Marchbanks/Tampico Left Turn Extension	\$300,000		

TABLE 5-2 2014 ACTION PLAN PROJECT LIST– CENTRAL COUNTY PROJECTS (cont.)

Agency	Project Name	Preliminary Cost (2013\$)	Secured Funding	Prospective STIP Requests (estimate)
Walnut Creek	Ygnacio Valley Road @ San Carlos Left Turn Extension	\$500,000		
Walnut Creek	Treat Boulevard Adaptive Timing	\$1,250,000		
Walnut Creek	Treat Boulevard, California Blvd, Broadway Blvd, Mt. Diablo Blvd Incident and Travel Monitoring	\$750,000		
Walnut Creek	I-680 Treat Boulevard Intersection Control Evaluation – Three Intersections	\$25,000,000		
Walnut Creek	Olympic Boulevard Bike striping and lighting improvements	\$2,000,000		
Walnut Creek	Pedestrian and Bike Connections to Iron Horse Trail	\$6,000,000		
TRANSIT PROJECTS				
BART	BART Station modernization new paid area, platform expansion; new vertical circulation; additional fare gates and fare collection equipment; upgrade systems; improve customer amenities including bathrooms, signage, lighting, safety and security. For all 3 Central County BART Stations.	\$160,000,000		
BART	BART Station parking and access improvement. Upgrade station areas to improve access including bicycle and pedestrian amenities; and improve carpool, garage and electric vehicle parking. For all 3 Central County BART Stations.	\$24,000,000		
County Connection	Pacheco Transit Hub	\$2,031,922	PTMISEA:\$800k; Measure C: \$550k;RM2: \$1.089M; TFCA:\$92,922	
County Connection	Trunkline Transit service capital improvements from Pacheco Boulevard (Martinez) to Main Street (Walnut Creek) - Buses:	\$2,100,000		
County Connection	Infrastructure Improvements (bulb outs, queue jump lanes, passenger shelters, signage)	\$6,000,000		
County Connection	IT: (real time information, signal priority)	\$3,900,000		\$3.9M
County Connection/ County	Contra Costa Mobility Management Plan to establish a mobility management center			
Martinez	Martinez Intermodal Station (Phase 3)	\$16,400,000	Measure J: \$10.6M; Measure C: \$0.3M; STIP-RIP: \$5.5M	
Martinez	Martinez Ferry Terminal	\$5,000,000		
511 CC/TRANSPAC	Clean Fuel Vehicle infrastructure	\$10,000,000		

TABLE 5-2 2014 ACTION PLAN PROJECT LIST– CENTRAL COUNTY PROJECTS (cont.)				
Agency	Project Name	Preliminary Cost (2013\$)	Secured Funding	Prospective STIP Requests (estimate)
BICYCLE, PEDESTRIAN AND TRAIL PROJECTS				
Clayton	Concord-Clayton Bikeway Clayton Town Center to Treat Boulevard in Concord	\$362,000		
Clayton	Mitchell Canyon Road, Pine Hollow to Clayton Road & South of Pine Hollow Road -Sidewalk Gap Closure	\$100,000		
Clayton	Oak Street , south of High Street, Sidewalk Gap Closure	\$50,000		
Clayton	Pine Hollow Road, West of Pine Hollow Estates Sidewalk Gap Closure	\$300,000		
Concord	Central Concord Pedestrian Improvements & Streetscape Project	\$3,540,700	TLC: \$2.55M; Local: \$0.99M	
Concord	Citywide Bicycle Master Plan	\$120,000	TDA: \$0.1M; Local: \$0.02M	
Concord	Detroit Avenue Complete Streets Project	\$2,569,315	CMAQ: \$2.15M; Local: \$0.42M	
Concord	Farm Bureau Road Safe Route to School Improvements	\$584,400	SR2S: \$0.43M; Local: \$0.15M	
Concord	Franquette Pedestrian & Bicycle Trail Connection Project	\$520,000	PBTF: \$0.47M; \$0.05M	
Concord	Last-Mile Bike and Pedestrian Access to BART	\$1,424,959	CMAQ: \$1.19M; Local: \$0.23M	
County	Pleasant Hill BART Shortcut Pedestrian Path	\$2,169,000	CCCO: \$600K; SRTS: \$300K; TLC: \$25K	
County	Pleasant Hill BART Station Bicycle and Pedestrian Access	\$1,000,000		
County	Alhambra Valley Road Shoulder Widening. East of Castro Ranch	\$2,000,000	Prop1B: \$1.05M; HRS: \$900K; Briones AOB: \$25K	
County	Delta-De Anza Class I Trail from Evora Road to Port Chicago Hwy	\$500,000		
County	Delta-De Anza Class I Trail from Port Chicago Hwy to Iron Horse Trail			
County	Clyde Union Pacific Right of Way Trail	\$1,500,000	Navy Mit. Funds \$1.5M	
County	Reliez Valley Road Pedestrian Path	\$1,400,000	STIP: \$342K Reliez Valley SP Fund: \$1.06M	
County	Alhambra Valley Road Realignment and Shoulder widening Bear Creek Road to 2,200 feet east	\$1,512,000	HR3: \$810K; Briones AOB	Unfunded: \$702k
County	Marsh Creek Road Curve Realignment between Aspara Drive and Deer Valley Road	\$8,200,000	Marsh Creek AOB: \$350K	
County	Marsh Creek Road Widening - 1 mi. East of Russelmann Park Road	\$2,210,000	HR3: \$810K; Prop1BL \$1.4M	
County	Rudgear Road/San Miguel Drive/Walnut Boulevard/Mountain View Boulevard Safety Improvements	\$350,000	Central Co. AOB	
County	Willow Pass Road Widening to 4 lanes / Gap Closure from Bailey Road to Pittsburg City limits	\$2,500,000		

TABLE 5-2 2014 ACTION PLAN PROJECT LIST– CENTRAL COUNTY PROJECTS (cont.)

Agency	Project Name	Preliminary Cost (2013\$)	Secured Funding	Prospective STIP Requests (estimate)
County	Marsh Drive Widening	\$2,471,000	West Concord Fees:\$2,472,000	
County	Center Avenue Widening: Pacheco Boulevard to Blackwood Drive	\$5,300,000	West Concord Fees:\$588,000	
County	Evora Road/Willow Pass Road Intersection - West	\$1,700,000	Navy Mit Funds: \$1.3M	Unfunded: \$400k
County	Boulevard Way Sidewalk Gap Closure	\$62,000		
County	Mayhew Way Sidewalk Gap Closure	\$80,000		
County	Pacheco Boulevard from Arnold Drive to Muir Road: bicycle improvements			
County	Pacheco Boulevard (from 3785 to 3795) Sidewalk Gap Closure	\$335,000		
County	Pacheco Boulevard Sidewalk Gap Closure - Camino Del Sol to Windhover Way	\$589,000	SRTS: \$311k; TDA \$70k	
County	Pacheco Boulevard Sidewalk Gap Closure - Windhover way to Goree Court	\$621,500		
County	Arnold Industrial Way Sidewalk Gap Closure	\$80,000		
County	Springbrook Road Sidewalk Gap Closure			
County	Pacheco Blvd. (from 4101 to 4285) Sidewalk Gap Closure			
County	Alhambra Valley Road Pedestrian Bridge	\$500,000	Prop 1B: \$400K; Alhambra Valley Fees: \$60K	
County/Walnut Creek (Lafayette)	Olympic Boulevard Trail Connector Project			
County	Contra Costa Center Access: Treat Boulevard (I-680 Overcrossing) Bicycle and Pedestrian Improvements	\$2,500,000		
EBRPD	Delta De Anza Trail from Willow Pass Road to N. Concord BART Station	\$2,000,000		
Martinez	Bay Trail (all unconstructed Phases)	\$1,000,000		
Martinez	Contra Costa Canal Trail: Extend, Muir Rd. to Martinez Reservoir			
Martinez	Howe Street Bicycle Lanes			
Martinez	Marina Vista Bike Lanes: Extend	\$500,000		
Martinez	Morello Avenue Bicycle Lanes Gap Closure	\$322,000		
Martinez	Vine Hill Walkway (2 phases)	\$702,000		
Martinez	North Court Street Bicycle Lanes	\$195,000		
Pleasant Hill	Pleasant Hill Road Improvement project - phases iii,iv,v	\$1,800,000		
Pleasant Hill	Monument Boulevard Widening	\$12,000,000		
Pleasant Hill	Contra Costa Boulevard Widening at Gregory Gardens , Doris to Doray	\$2,000,000		
Pleasant Hill	Gregory Lane right turn lane at I-680 off-ramp	\$275,000		
Pleasant Hill	Paso Nogal Improvements	\$1,000,000		
Pleasant Hill	Cleaveland Road widening and sidewalk improvements	\$2,000,000		
Pleasant Hill	Contra Costa Canal Trail realignment at Taylor Blvd.	\$1,000,000		
Pleasant Hill	Morello Avenue Bike Lanes	\$500,000		

TABLE 5-2 2014 ACTION PLAN PROJECT LIST– CENTRAL COUNTY PROJECTS (cont.)

Agency	Project Name	Preliminary Cost (2013\$)	Secured Funding	Prospective STIP Requests (estimate)
Pleasant Hill	Pleasant Hill Road Pedestrian Improvements, Boyd Road to Geary Road	\$1,100,000		
Pleasant Hill	Taylor/Morello Pedestrian Improvements	\$500,000		
Pleasant Hill	Grayson Road/Gregory Lane Bike Route	\$3,000,000		
Pleasant Hill	Maureen Lane to Strandwood School (1900 Rose Lane) Sidewalk Gap Closure	\$350,000		
Pleasant Hill	Lucille Drive, Maureen to Taylor Boulevard Sidewalk Gap Closure	\$100,000		
Pleasant Hill	Pleasant Valley Drive Neighborhood Sidewalk Installation	\$104,000		
Pleasant Hill	Morello at Paso Nogal Park Sidewalk Gap Closure	\$100,000		
Walnut Creek/ County	Olympic Boulevard Pedestrian Improvements, Bridgefield Road to Boulevard Way			
Walnut Creek	Pedestrian Safety Improvements Along Routes to School	\$600,000		
Walnut Creek	Parkside Drive between Hillside and Overlook Sidewalk Gap Closure and Lighting	\$400,000		
Walnut Creek	Bike Sharing Stations	\$1,000,000		
Walnut Creek	Walker Pedestrian and Bike Improvements – San Miguel to Homestead	\$1,500,000		
Walnut Creek	Homestead Pedestrian and Bike Improvements – Marshall to Walker	\$500,000		
Walnut Creek	Ped/Bike Overcrossing of Ygnacio Valley Road at Walnut Creek BART	\$10,000,000		
Walnut Creek	Walnut Blvd./Pedestrian Pathway	\$7,200,000		
Walnut Creek	Buena Vista/First Street Trail Routing and Pedestrian/Bike Improvements	\$800,000		

6. PROCEDURES FOR NOTIFICATION, REVIEW AND MONITORING

6.1 Compliance with the Measure J Growth Management Program (GMP)

The CCTA's Growth Management Implementation Guide describes the requirements for compliance with the Growth Management Program (GMP) that relate specifically to Routes of Regional Significance and the Action Plans. Jurisdictions are to:

- Participate in the preparation and adoption of Action Plans;
- Work to implement Action Plan actions to attain MTSOs;
- If necessary, place conditions on project approvals to support MTSO achievement and implementation of Action Plan actions;
- Circulate environmental documents pursuant to Action Plan requirements;
- Participate in the General Plan Amendment review procedure.

6.2 Procedures

Action Plans must include procedures for the notification of environmental documents and the review of General Plan Amendments. These procedures are described below.

6.2.1 Notification of Environmental Documents

This Action Plan establishes the following threshold level at which notification of environmental documents is to be circulated to RTPCs and neighboring jurisdictions: 100 net-new peak-hour vehicle trips for development projects that do not require General Plan Amendments. TRANSPAC will continue to forward environmental notifications to the City of Lafayette.

Notification of an environmental assessment of a development project is to be accomplished through the CEQA process at the following two milestones: the issuance of a Notice of Preparation (NOP) and at the completion of a draft EIR through a Notice of Completion or a Notice of Availability.

6.2.2 Review of General Plan Amendments

For General Plan Amendments (GPAs), notification requirements are the same as for development projects described above. TRANSPAC has established its GPA review requirement pursuant to Authority policy at 500 net new peak hour vehicle trips. This review is to include an analysis of impacts on established MTSOs, and a determination is to be made as to whether the GPA adversely affects the ability of local jurisdictions to meet MTSOs or implement Action Plan actions. The GPA and/or this Action Plan may be modified to mitigate any adverse impacts, and the lead jurisdiction is encouraged to work with affected RTPCs and jurisdictions to address those adverse impacts.

GPAs that are administrative in nature, such as a height limit change, are to be noticed as described for development projects. While review of MTSO impact of such a GPA is not required, the administrative nature of the GPA should be clearly noted in the notification to TRANSPAC, other RTPCs, and jurisdictions.

6.3 MTSO Calculation

6.3.1 Average Stopped Delay Analysis

Average stopped delay is expressed in signal cycles to clear the intersection in the peak direction of AM/PM commute travel at select intersections along the Routes of Regional Significance. In addition:

- The Highway Capacity Manual (HCM) 2010 operational methodology for signalized intersections is used to quantify the MTSO.
- The MTSO is quantified for the appropriate lane group traveling through the intersection along the Route of Regional Significance using Synchro software.
- It is not necessary to use/run the CCTA travel demand forecasting model to quantify the MTSO; project trips can be assigned manually through the study intersections for the MTSO analysis.
- The select intersections for MTSO analysis are identified for City of Concord Routes of Regional Significance with the upper thresholds for signal cycles to clear the intersection.
- MTSO analysis will be performed at the select intersections to which at least 50 project trips would be added per current CCTA Technical Procedures or the trip threshold established in CCTA Technical Procedures as revised.

6.3.2 MTSO Exceedances

From time to time, the MTSOs are monitored to determine MTSO achievement. In addition, the MTSOs are evaluated to determine if future achievement is possible. For

this Action Plan, MTSOs were monitored in 2013, and the traffic forecasts were prepared and evaluated for 2040. It is difficult to predict an unknown future. As a result, it is possible that MTSO exceedances will occur during the life span of this Action Plan. Under adopted CCTA policy, exceedance of an MTSO does not constitute a compliance issue with the Growth Management Program. TRANSPAC and its jurisdictions remain committed to implementation of the actions established in this Action Plan regardless of ability to achieve established MTSOs. The use of the TRANSPAC Subregional Transportation Mitigation Program is available to address the mitigation of impacts documented in the CEQA required traffic analysis.

6.4 Schedule for Action Plan Review

This Action Plan will be reviewed and revised as necessary concurrent with updates to the Countywide Comprehensive Transportation Plan (CTP) or as determined to be necessary by TRANSPAC.

6.5 Regional Traffic Management

The analyses conducted in preparing the 2014 Action Plan have revealed that traffic conditions in Central County are influenced by many factors beyond of the control of TRANSPAC and its jurisdictions. TRANSPAC and its jurisdictions remain committed to work individually and collectively to pursue cooperative planning studies and projects with other Contra Costa RTPCs and Bay Area counties to address regional transportation issues.

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APPENDIX A. MTSO VALUES FOR OBSERVED AND FORECASTED CONDITIONS

**Table A-1: Central Contra Costa County Freeway MTSO Values
Freeway Segment Analysis - Delay Index**

Facility	Direction	MTSO Delay Index	2013 Observations				P2011 - 2040 No Project				P2011 - 2040 With Actions			
			Speed (mph)		Delay Index		Speed (mph)		Delay Index		Speed (mph)		Delay Index	
			AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
I-680	NB	4.0	46.0	44.0	1.4	1.5	33.4	33.9	1.9	1.9	39.0	43.0	1.7	1.5
	SB	4.0	40.0	56.0	1.6	1.2	32.7	40.2	2.0	1.6	34.0	44.4	1.9	1.5
SR 242	NB	3.0	50.0	53.0	1.3	1.3	45.9	33.9	1.4	1.9	46.6	46.7	1.4	1.4
	SB	3.0	48.0	49.0	1.4	1.3	28.1	40.3	2.3	1.6	35.3	41.3	1.8	1.6
SR 4	EB	5.0	62.0	46.0	1.0	1.4	57.6	23.1	1.1	2.8	63.9	38.0	1.0	1.7
	WB	5.0	52.0	65.0	1.2	1.0	22.0	62.0	2.9	1.0	33.7	65.6	1.9	1.0

Source: CCTA MTSO Monitoring Report, 2013 and CCTA Travel Model, 2014.

**Table A-2: Central Contra Costa County Arterial MTSO Values
Arterial Segment Analysis - Speed**

Facility	Direction	MTSO Speed (mph)	2013 Observations		P2011 - 2040 No Project		P2011 - 2040 With Actions	
			Speed (mph)		Speed (mph)		Speed (mph)	
			AM	PM	AM	PM	AM	PM
Alhambra Ave	NB	15.0	28.6	28.9	26.4	24.5	28.0	26.7
	SB	15.0	27.7	29.5	25.1	27.3	26.3	28.7
Clayton Road	NB/EB	15.0	33.2	27.2	26.8	26.8	30.1	27.0
	SB/WB	15.0	28.1	27.6	28.1	26.4	28.1	27.1
Contra Costa Boulevard	NB	15.0	23.0	20.0	18.1	14.7	19.0	16.8
	SB	15.0	20.0	18.0	16.6	13.4	17.5	14.4
Pacheco Boulevard	NB	15.0	32.0	21.0	28.6	20.9	31.9	20.9
	SB	15.0	25.0	25.0	24.9	24.6	25.1	25.1
Pleasant Hill Road	NB	15.0	30.4	26.0	25.7	20.7	28.7	24.7
	SB	15.0	30.6	27.3	27.2	19.7	31.7	20.8
Taylor Boulevard	NB	15.0	33.1	25.6	29.1	23.1	30.6	23.7
	SB	15.0	28.6	27.4	25.4	22.3	25.8	22.9

Notes: Values in red font are below the established MTSO.

Source: CCTA MTSO Monitoring Report, 2013 and CCTA Travel Model, 2014.

Table A-3: Central Contra Costa County Intersection LOS

No	Primary Street	Secondary Street	MTSO LOS	2013 Observations		P2011 - 2040 No Project		P2011 - 2040 With Actions	
				AM Peak LOS	PM Peak LOS	AM Peak LOS	PM Peak LOS	AM Peak LOS	PM Peak LOS
18	Geary Rd	North Main St	F	D	E	D	F	D	F
23	Treat Blvd	Bancroft Rd	F	F	F	F	F	F	F
38	Ygnacio Valley Rd	Civic Dr	F	D	E	D	F	D	F
44	Ygnacio Valley Rd	Bancroft Rd	F	F	F	F	F	E	E

Source: CCTA MTSO Monitoring Report, 2013 and CCTA Travel Model, 2014.

Table A-4: Central Contra Costa County Intersection Average Stopped Delay

No	Primary Street	Secondary Street	MTSO # of Cycles	2013 Observations		P2011 - 2040 No Project		P2011 - 2040 With Actions	
				AM Peak # of Cycles	PM Peak # of Cycles	AM Peak # of Cycles	PM Peak # of Cycles	AM Peak # of Cycles	PM Peak # of Cycles
33	Treat Blvd	Clayton Rd	3	2	2	3	2	3	2
30	Treat Blvd	Cowell Rd	5	2	3	2	5	2	4
27	Treat Blvd	Oak Grove Rd	5	2	3	2	3	2	3
54	Ygnacio Valley Rd	Clayton Rd	3	2	2	2	2	2	2
51	Ygnacio Valley Rd	Alberta Way	4	3	3	4	3	3	3
48	Ygnacio Valley Rd	Cowell Rd	4	2	2	2	3	2	2

Source: CCTA MTSO Monitoring Report, 2013 and CCTA Travel Model, 2014.

Table A-5: Central Contra Costa County Intersection v/c Ratio

No	Primary Street	Secondary Street	MTSO v/c	2013 Observations		P2011 - 2040 No Project		P2011 - 2040 With Actions	
				AM Peak v/c	PM Peak v/c	AM Peak v/c	PM Peak v/c	AM Peak v/c	PM Peak v/c
1	Pacheco Blvd	Shell Ave	1.5	0.71	0.48	0.71	0.71	0.74	0.73
2	Pacheco Blvd	Howe Rd	1.5	0.43	0.50	0.55	0.53	0.55	0.58
3	Pacheco Blvd	Morello Ave	1.5	0.75	0.80	0.88	0.78	0.88	0.77
4	Pacheco Blvd	Arthur Rd	1.5	0.59	0.65	0.93	0.72	0.76	0.68
5	Pacheco Blvd	Blum Rd/SR-4 WB ramps	1.5	0.65	0.85	0.86	0.97	0.69	0.85
6	Pacheco Blvd	John Muir Rd	1.5	0.34	0.50	0.50	0.58	0.48	0.70
7	Pacheco Blvd	Center Ave	1.5	0.55	0.73	0.78	0.79	0.71	0.71
8	Taylor Blvd	Ruth Dr	1.5	0.56	0.46	0.66	0.61	0.66	0.61
9	Taylor Blvd	Norse Dr	1.5	0.91	0.54	0.81	0.77	0.76	0.71
10	Taylor Blvd	Morello Ave	1.5	0.57	0.48	0.80	0.66	0.77	0.59
11	Taylor Blvd	Apollo Wy	1.5	0.40	0.59	0.59	0.53	0.58	0.53
12	Taylor Blvd	Pleasant Hill Rd	1.5	0.85	0.68	0.96	0.87	0.90	0.81
13	Taylor Blvd	Grayson Rd	1.5	0.83	0.63	0.84	0.78	0.80	0.78
14	Pleasant Hill Rd	Paso Nogal Rd	1.5	0.77	0.63	0.76	0.78	0.70	0.74
15	Pleasant Hill Rd	Devon Ave	1.5	0.73	0.62	0.69	0.70	0.68	0.69
16	Pleasant Hill Rd	Westover Dr	1.5	0.48	0.33	0.53	0.47	0.53	0.49
17	Pleasant Hill Rd	Grayson Rd	1.5	0.86	0.82	0.93	0.92	0.92	0.90
18	Treat Blvd	North Main Rd	1.5	0.85	1.00	0.97	1.29	1.00	1.18
19	Treat Blvd	Buskirk Ave	1.5	0.79	0.91	0.89	0.97	0.91	0.97
20	Treat Blvd	Oak Rd	1.5	1.00	0.86	0.94	1.04	0.95	0.96
21	Treat Blvd	Jones Rd	1.5	0.78	0.99	0.87	1.18	0.96	1.10
22	Treat Blvd	Cherry Ln	1.5	1.04	0.73	1.12	0.93	0.98	0.83
23	Treat Blvd	Bancroft Rd	1.5	1.13	1.17	1.30	1.36	1.17	1.26
24	Treat Blvd	Carriage Dr	1.5	1.07	0.62	1.08	0.77	1.02	0.75
25	Treat Blvd	Winton Dr	1.5	0.91	0.77	0.95	0.88	0.94	0.84
26	Treat Blvd	Oak Grove Plaza	1.5	0.60	0.67	0.70	0.80	0.64	0.72
27	Treat Blvd	Oak Grove Rd	1.5	0.93	0.98	1.11	1.15	1.03	1.06
28	Treat Blvd	San Simeon Dr	1.5	0.83	0.56	0.99	0.80	0.92	0.73
29	Treat Blvd	Navarone Wy	1.5	0.96	0.72	1.11	0.93	0.96	0.85
30	Treat Blvd	Cowell Rd	1.5	1.08	0.89	1.26	1.11	1.11	1.19
31	Treat Blvd	Turtle Creek Rd	1.5	0.59	0.54	0.85	0.77	0.81	0.74
32	Treat Blvd	Bel Air Dr	1.5	0.70	0.67	0.86	0.89	0.87	0.85
33	Treat Blvd	Clayton Rd	1.5	0.82	0.89	1.05	1.16	1.05	1.14
34	Ygnacio Valley Rd	Oakland Blvd	1.5	0.78	1.15	1.01	1.36	1.16	1.27

Table A-5: Central Contra Costa County Intersection v/c Ratio

No	Primary Street	Secondary Street	MTSO v/c	2013 Observations		P2011 - 2040 No Project		P2011 - 2040 With Actions	
				AM Peak v/c	PM Peak v/c	AM Peak v/c	PM Peak v/c	AM Peak v/c	PM Peak v/c
35	Ygnacio Valley Rd	N.California Blvd	1.5	0.85	0.87	0.97	1.11	1.01	1.02
36	Ygnacio Valley Rd	N. Main St	1.5	0.72	0.95	0.91	0.92	0.93	0.95
37	Ygnacio Valley Rd	N.Broadway	1.5	0.72	0.83	0.87	1.00	0.82	0.97
38	Ygnacio Valley Rd	Civic Dr	1.5	0.93	1.16	0.98	1.12	0.98	1.12
39	Ygnacio Valley Rd	Walnut Blvd	1.5	1.12	0.90	1.10	1.09	1.07	1.00
40	Ygnacio Valley Rd	Homestead Ave	1.5	0.94	1.07	0.97	1.07	0.94	1.07
41	Ygnacio Valley Rd	Tampico Dr	1.5	0.78	0.90	0.84	0.99	0.81	1.01
42	Ygnacio Valley Rd	La Casa Via	1.5	0.79	0.86	0.81	1.00	0.78	0.94
43	Ygnacio Valley Rd	San Carlos Dr	1.5	0.96	0.92	1.00	1.02	0.96	0.97
44	Ygnacio Valley Rd	Bancroft Rd	1.5	1.02	1.14	1.09	1.12	1.07	1.09
45	Ygnacio Valley Rd	Wiget Ln	1.5	0.85	0.96	0.94	1.03	0.88	1.03
46	Ygnacio Valley Rd	Via Monte	1.5	0.54	0.73	0.62	0.83	0.62	0.87
47	Ygnacio Valley Rd	Oak Grove Rd	1.5	0.96	0.95	1.06	1.14	1.09	1.04
48	Ygnacio Valley Rd	Montecito Dr	1.5	1.02	1.05	1.25	1.28	1.01	1.10
49	Ygnacio Valley Rd	Crystyl Ranch Rd	1.5	1.01	0.92	1.18	1.12	0.96	0.93
50	Ygnacio Valley Rd	Ayers Rd	1.5	1.01	0.90	1.28	1.00	1.03	0.87
51	Ygnacio Valley Rd	Alberta Wy	1.5	0.98	0.88	1.24	1.09	1.01	0.93
52	Ygnacio Valley Rd	Michingan Blvd	1.5	0.57	0.72	0.90	0.90	0.64	0.77
53	Ygnacio Valley Rd	Park Highland Blvd	1.5	0.66	0.53	0.80	0.77	0.73	0.69
54	Ygnacio Valley Rd	Clayton Rd	1.5	0.81	0.77	1.04	1.12	0.79	0.84

Source: CCTA MTSO Monitoring Report, 2013 and CCTA Travel Model, 2014.

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