STA
Solano Transportation Authority

Solano County

Comprehensive Transportation Plan

June

2005

SOLANO
Comprehensive Transportation Plan

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EXECUTIVE SUMMARY

The Comprehensive Transportation Plan (CTP) for Solano County identifies, plans, and prioritizes the transportation needs of Solano County through the year 2030. The Solano Transportation Authority, as the Transportation Planning and Congestion Management Agency for Solano County, developed the CTP 2030 in collaboration with its many transportation partners and the public.

The vision of the CTP 2030 involves developing a balanced transportation system that addresses the following needs:

- Preserve and enhance quality of life
- Serve all members of the community
- Maintain existing facilities and services
- Enhance regional and local mobility
- Expand travel choices
- Link transportation and land use planning and facilities
- Improve accessibility
- Enhance safety
- Support economic development

The CTP 2030 is an update of the CTP 2025 and earlier transportation plans. This plan identifies overall policies as well as specific policies and projects for three key plan elements:

1. Arterials, Highways, and Freeways
2. Transit
3. Alternative Modes

Arterials, Highways, and Freeways Element

The goal of this element is to develop a balanced transportation system that reduces congestion and improves access and travel choices through the enhancement of roads.

This element describes the existing and future needs for the major arterials, highways, and freeways in Solano. Identified through comprehensive outreach efforts and studies are specific local and regional improvement needs, costs, and available funding information for use by decision makers gauging potential funding shortfalls.

Transit Element

The goal of this element is to develop a Comprehensive Transit System for buses, rail and ferries to meet future demand.

If given adequate funding, the Transit Element proposes to double the number of daily transit trips in 25 years. It does this by expanding the coverage of service, increasing frequencies, improving the quality of service and enhancing access to various transit services such as intercity bus, commuter rail, baylink ferry, and paratransit.

These improvements are proposed to increase daily ridership of intercity transit services from 6,000 today to approximately 12,000 by year 2030.

Alternative Modes Element

The goal of this element is to emphasize that alternative transportation modes are an integral part of travel and commuting in Solano County by implementing and maintaining a transportation system that provides for transit integration *and* ensuring that alternative modes are convenient, safe, efficient, and cost effective.

This element focuses on a wide range of proposals from ridesharing to bike routes, pedestrian trails, downtown revitalization projects and related transportation for livable community/enhancement projects, and alternative fuels infrastructure. This element is intended to be innovative with regard to encouraging alternative modes of transportation and proactive by supporting a set of projects and programs, that when developed will meet the goals of this element and the CTP 2030. In recent years, STA member jurisdictions have made substantial progress in encouraging the use of alternative transportation modes.

Solano Comprehensive Transportation Plan 2030 Funding Needs Summary

(All costs in millions of 2005 dollars - Revised on 1-24-05)

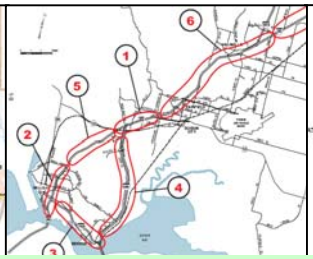
PROJECT/PROGRAM	Total Costs (remain.)	Committed Funding	New Committed Funds	CTP ShortFall	CTP Vision Funds	CTP Shortfall After Vision
TRANSIT ELEMENT						
Expanded Express Bus (cap. and op.)	158.8	82.0	5.0	71.8	71.8	0.0
Vallejo Transit Capital Replacement	572.9	519.1	43.4	10.4	0.0	10.4
Capitol Cor. Train Stations and Track Imp.	73.0	30.0	10.0	33.0	0.0	33.0
Sacto-Rich.-Oak. Commuter Rail (cap/op.)	113.0	0.0	0.0	113.0	113.0	0.0
Vallejo Baylink Ferry Service (cap/op)	180.1	130.1	0.0	50.0	50.0	0.0
Senior and Paratransit Expansion (cap/op)	129.1	0.0	0.0	129.1	105.0	24.1
Sub Total	**1226.9**	**761.2**	**58.4**	**407.3**	**339.8**	**67.5**
ARTERIALS, HIGHWAYS & FREEWAYS ELEMENT						
I-80/I-680/SR 12 Interchange	769.0	147.7	159.8	461.5	250.0	211.5
Jepson Parkway Project	97.9	22.2	43.0	32.7		32.7
SR 12 (Jameson Canyon²) (4-lanes)	51.1	2.0	49.1	0.0		0.0
SR 12 (Jameson Canyon²) safety projects	20.0	0.0	0.0	20.0	20.0	0.0
I-80/680/780 Corridor Improve. (Mid term)	357.3	0.0	94.4	262.9	262.9	0.0
I-80/680/780 Corridor Improve. (Long term)	709.0	8.0	0.0	701.0	87.1	613.9
Local Interchange Improvements	418.0	0.0	2.0	416.0	–	416.0
Widen SR 37 to 4 lanes with mitigation	154.5	0.0	0.0	154.5		154.5
SR 12 capacity Improve. (I-80 to Sac. River)	105.0	0.0	3.3	101.7	55.0	46.7
SR 113 (I-80 to SR12)	50.0	0.0	0.0	50.0		50.0
Road maintenance (regional roads - MTS)	43.6	43.6	0.0			0.0
Road Maintenance (local roads - non MTS)	919.0	324.2	41.0	553.8	210.0	343.8
SR 12 Safety Projects (I-80 to Sac. River)	42.7	36.0	6.7	–		0.0
Safety Projects	100.0	-	3.0	97.0	51.2	45.8
Local Arterial Improvements	339.4	29.6	–	309.9	–	309.9
Sub Total	**4176.5**	**613.2**	**402.3**	**3161.0**	**936.2**	**2224.8**
ALTERNATIVE MODES ELEMENT						
Bicycle Improvements	56.0	19.5	2.3	34.2	–	34.2
Pedestrian Improvements	25.0	3.0	2.0	20.0	–	20.0
Park-and-Ride Lots	13.0	-	3.0	10.0	–	10.0
Ridesharing Program	17.5	17.5	–	0.0	–	0.0
County TLC / Enhancements Program	68.0	40.0	7.5	20.5	–	20.5
Sub Total	**179.5**	**80.0**	**14.8**	**84.7**		**84.7**
Local Projects	**140.0**				**140.0**	
Total	**5722.9**	**1454.4**	**475.5**	**3793.0**	**1416.0**	**2377.0**

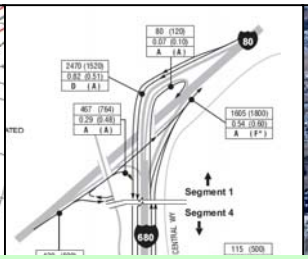
Rev. 1-24-05

Comprehensive Transportation Plan Linkages

Solano County

Arterials, Highways and Freeways Element





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SOLANO
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ARTERIALS, HIGHWAYS, & FREEWAYS ELEMENT

This report describes the existing and future needs for the major arterials, highways, and freeways in Solano County that were developed through the Solano Comprehensive Transportation Plan (CTP).

Identified through comprehensive outreach efforts and studies are specific local and regional improvement needs, costs, and available funding information for use by decision makers gauging potential funding shortfalls. Also included are travel demand projections that inform decision makers about the balance between roadway demand and committed & future funding for specific projects.

GOALS & OBJECTIVES

The goal of the Solano Comprehensive Transportation Plan for arterials, highways, and freeways is:

> *Develop a balanced transportation system that reduces congestion and improves access and travel choices through the enhancement of roads.*

Seven objectives are defined for this goal:

- **Objective A – Preserve the System**
- **Objective B – Serve Highway Needs**
- **Objective C – Add HOV Lanes**
- **Objective D – Enhance Regional and Local Interchanges**
- **Objective E – Develop a Traffic Management System**
- **Objective F – Enhance Travel Forecasting Tools**
- **Objective G – Preserve Right-of-Way**

Objective A – Preserve The System

Preserve the physical and operational condition of existing roadway facilities as a means of protecting past transportation investments and maintaining an effective system.

Objective A Policy Actions:

1. Encourage member jurisdictions and Caltrans to maintain level of service (LOS) E or better conditions during the a.m. and p.m. peak hours on roadways of countywide significance.
2. Prepare long-term corridor plans to upgrade and widen roadways of countywide significance to provide adequate peak hour and peak period traffic operations.
3. Develop a list of priority projects for arterials, highways and freeways for STIP, SHOPP, and federal reauthorization funds.
4. Focus countywide funds to enhance and improve roadways of countywide significance.
5. Update the roadways of countywide significance and the list of priority projects every two years.

Objective B - Serve Highway Needs

Develop a plan and implementation program for the highway system that serves current and future needs.

Objective B Policy Actions:

1. Implement the I-80/I-680/I-780 Major Investment & Corridor Study identifying needed capacity and safety improvements to the highway system in Solano County.
2. Implement the State Route 12 Major Investment Study and conduct major investment studies for SR 113 and SR 29.
3. Prepare long-term corridor plans for all roadways of countywide significance that are not on the state highway system.
4. Support improvements to roadways of regional significance based on the need to improve transportation system efficiency balanced with quality urban design and, where appropriate, design roadways with consideration for safety, transit, bikeway and pedestrian facilities.
5. Give priority to improvements of highways and roadways that also serve as major transit corridors.

Objective C - Add HOV Lanes

Develop a plan and implementation program for a High Occupancy Vehicle (HOV) system that serves future transit, carpool and vanpool users.

Objective C Policy Actions:

1. Develop measures to acquire rights-of-way to support long-range plans for HOV lanes.
2. Implement HOV lane projects on I-80 and I-680 identified in the I-80/I-680/I-780 Major Investment & Corridor Study.

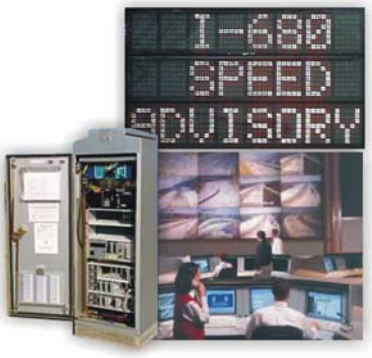
Objective D - Enhance Regional and Local Interchanges

Develop a plan and implementation program for regional and local interchanges that provide linkages to the roadways of countywide significance.

Objective D Policy Actions:

1. Develop criteria for identifying and prioritizing interchange projects of regional significance.
2. Develop a list of priority interchange projects of regional significance.
3. Conduct appropriate planning and environmental studies to allow for implementation of measures to protect rights-of-way.

Objective E – Develop a Traffic Management System



Develop a plan and implementation program for a traffic management system that serves future needs.

Objective E Policy Actions:

1. Develop a plan, working with member agencies and Caltrans, for a traffic management system on the roadways of countywide significance.
2. Develop a consistent set of access management guidelines for arterials contained in the roadways of countywide significance.

Objective F – Enhance Travel Forecasting Tools

Develop the travel forecasting tools to evaluate the effectiveness of future transportation improvement options.

Objective F Policy Actions:

1. Implement the new multi-modal travel demand model built on a GIS platform.
2. Identify performance measures (i.e., capacity, vehicle miles traveled, average commute time, total hours of congestion, etc.) and associated policies for application in defining and determining how future transportation mobility goals are being met.

Objective G – Preserve Right-of-Way

Identify right-of-way preservation measures necessary to meet long-term demand.

Objective G Policy Actions:

1. Identify long-term right-of-way preservation measures necessary to provide for future potential improvements needed along travel corridors and roadways of countywide significance.

ROUTES OF REGIONAL SIGNIFICANCE

The STA has developed Routes of Regional Significance in Solano County that include the State highway system plus local arterials that provide major points of access to the State highway system or provide regional connections between communities and key transportation facilities (See Figure 1.1).

Six different functional classifications describe how these regional routes are used now and in the future.

- Urban Interstate Freeway - limited access interregional roadway
- Urban Freeway - limited access regional roadway
- Urban Major Arterial - access controlled roadway emphasizing mobility between communities and connections to freeways
- Urban Minor Arterial - roadway emphasizing mobility within urbanized communities and connections to freeways
- Rural Major Arterial - roadway emphasizing mobility between urbanized and rural communities and connections to freeways
- Major Collector - roadway emphasizing access to major employment, shopping, or freeways

ROUTES OF REGIONAL SIGNIFICANCE INCLUDE

A. STATE HIGHWAY SYSTEM

B. LOCAL ARTERIALS
- Provide major points of access to the state highway system
- Provide regional connections between communities and key transportation facilities.

NEEDS BY JURISDICTION

An early step in the CTP 2030 process was the distribution of a Transportation Needs Survey to all STA member agencies (seven cities and County of Solano). The survey results identified the long-range transportation needs of each agency by identifying specific arterial, highway and freeway projects. Individual agencies also provided their respective priorities for the projects. Additionally, the I-80/I-680/I-780 Major Investment & Corridor Study identified a prioritized list of 50 projects on the I-80/I-680/I-780 corridor. A Technical Advisory Committee and the Arterials, Highways, and Freeways Committee determined the appropriateness of project inclusion in the CTP.

Transportation needs were identified for virtually all the major freeway corridors in Solano County including I-80, I-680, I-780, I-505, SR 12 East, SR 12 West, SR 29, SR 37, and SR 113 (See Table 1.1).

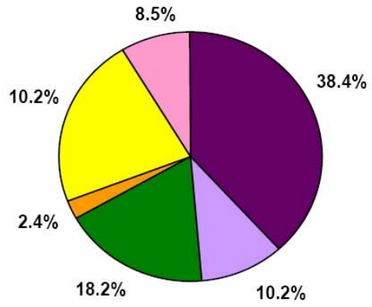
Travis Air Force Base has identified the need for transportation access and on-site circulation improvements to address the evolving mission of the base. The STA and its member agencies will work with Travis AFB to assist with the planning and implementation of needed future improvements.

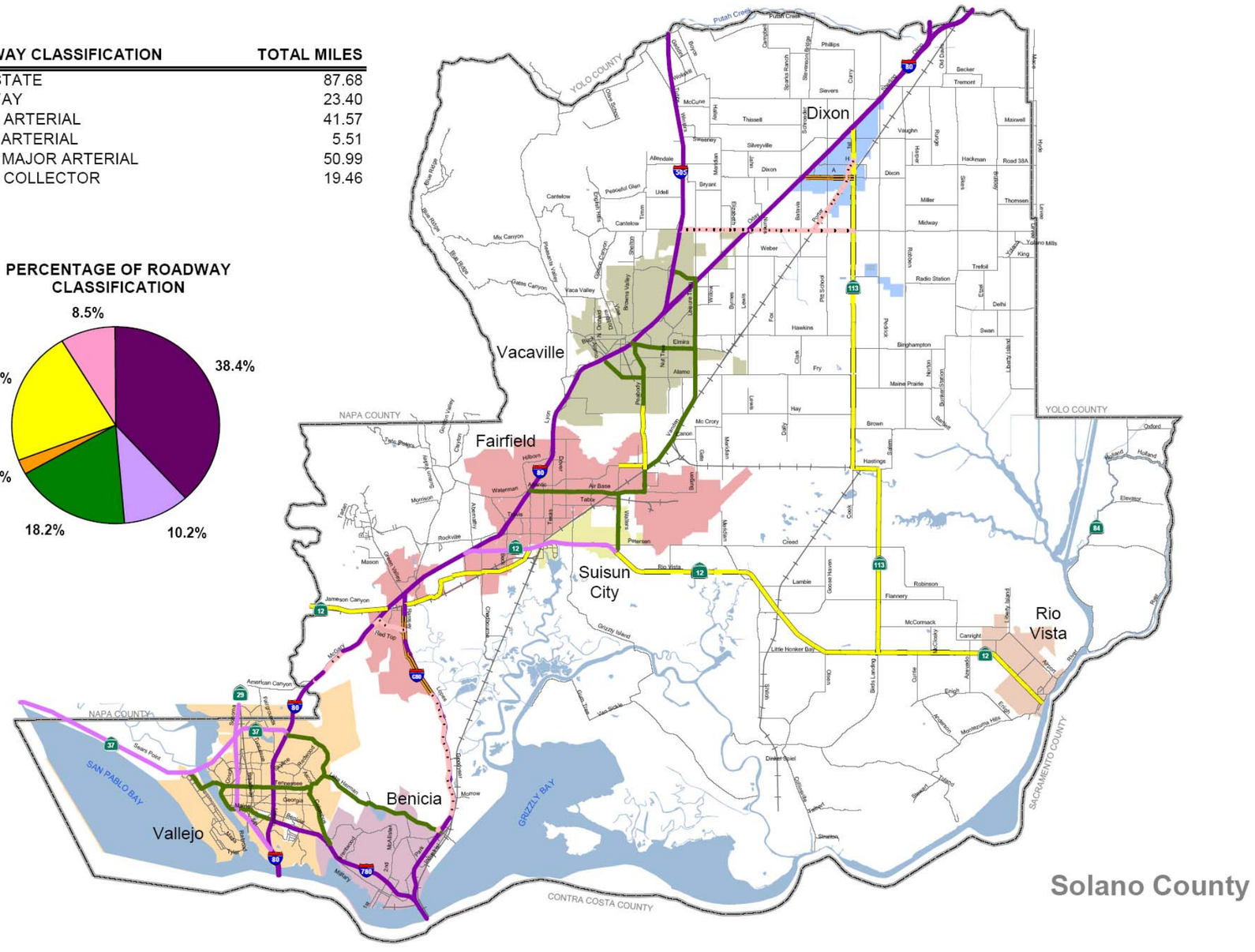
Major arterials needing improvement include the Jepson Parkway, Air Base Parkway in Fairfield, Peabody Road in the unincorporated area, Vaca Valley Parkway in Vacaville, and Columbus Parkway in Vallejo & Benicia.

Additional local needs were also identified and included in the Master List in the Comprehensive Transportation Plan (see Appendix A). The following lists include the major needs identified by each of the STA jurisdictions:

ROADWAY CLASSIFICATION	TOTAL MILES
INTERSTATE	87.68
FREEWAY	23.40
MAJOR ARTERIAL	41.57
MINOR ARTERIAL	5.51
RURAL MAJOR ARTERIAL	50.99
MAJOR COLLECTOR	19.46

PERCENTAGE OF ROADWAY CLASSIFICATION





LEGEND

- URBAN INTERSTATE FREEWAY
- URBAN FREEWAY OR EXPRESSWAY
- URBAN MAJOR ARTERIAL
- URBAN MINOR ARTERIAL
- RURAL MAJOR ARTERIAL
- MAJOR COLLECTOR

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Comprehensive Transportation Plan

Routes of Regional Significance

Figure 1.1

Table 1.1, Needs on Routes of Regional Significance by Jurisdiction

Benicia:

- Improve I-80/I-680/SR12 Interchange
- Improve I-680/Lake Herman Road Interchange
- Widen I-680 from Benicia Bridge to I-80
- Widen State Park Road Overcrossing at I-780 with bike/ped access
- Construct HOV System on I-80 and I-680
- Install I-780 (E 2nd to E 5th) Auxiliary Lanes
- Install I-780 (Columbus Pkwy to Military West) Aux Lanes
- Improve I-680/Bayshore/Industrial interchange connections
- Improve I-780/Southhampton/West 7th interchange ramps
- Improve I-780/East 2nd Street interchange ramps

Dixon:

- Widen I-80 from Leisure Town Rd. to Kidwell Rd.
- Improve I-80/Pedrick Rd. Interchange
- Improve I-80/SR 113 Interchange
- Improve I-80/Pitt School Rd. Interchange
- Improve I-80/West A St. Interchange
- Conduct MIS for SR 113 from I-80 to SR 12
- Overlay SR 113 from H St. South to City Limit
- Work toward the relocation of SR 113 to Kidwell Road

Fairfield:

- Improve I-80/I-680/SR 12 Interchange
- Improve I-80/Green Valley Rd. Interchange
- Improve I-80 from Red Top Rd. to I-505
- Construct auxiliary lanes on I-80 from Travis Blvd to Air Base Pkwy
- Improve I-80/N. Texas St. Interchange
- Construct I-80 HOV lanes between I-680 and Cherry Glen (Phase 1)
- Construct remaining portions of I-80 HOV lanes from I-680 to I-505 (Phase 2)
- Improve I-80/Suisun Valley Rd. Interchange
- Relocate truck scales on I-80 at SR 12
- Improve SR 12 West from I-80 to SR 29
- Improve SR 12 East from I-80 to Rio Vista
- Construct Jepson Parkway
- Construct North Connector
- Widen Air Base Pkwy at intersections
- Widen Cement Hill Rd. from Clay Bank Rd. to Peabody Rd.
- Construct Peabody Road Bridge overcrossing at Union Pacific Railroad
- Construct SR 12 and Red Top Road/Business Center Drive Interchange
- Construct I-80/Red Top Road Interchange
- Construct I-680 and Red Top Road Interchange
- Construct SR 12 and Pennsylvania Avenue Interchange

Rio Vista:

- Improve SR 12 East from I-80 to Rio Vista @ SR 12
- Implement SR 12 Major Investment Study
- Improve SR12 Corridor through Rio Vista
- Improve Church and Amerada Intersections
- Complete SR12 Bridge Study across Sacramento River
- Increase SR 12 bridge capacity across Sacramento River

Solano County:

- Widen I-80 from Leisure Town Rd. to Kidwell Rd.
- Widen I-80 from Vallejo to SR 37
- Improve I-80/I-680/SR 12 Interchange
- Improve SR 12 West from I-80 to SR 29
- Improve SR 12 East from I-80 to Rio Vista
- Construct Jepson Parkway
- Construct the North Connector
- Widen Peabody Rd. from Markley Ln. to Vacaville city limit

Suisun City:

- Improve I-80/I-680/SR12 Interchange
- Improve SR 12 West from I-80 to SR 29
- Improve SR 12 East from I-80 to Rio Vista
- Widen SR 12 from I-80 to Walters Rd.
- Improve median on SR 12 from Marina Blvd to Walters Rd.
- Construct Jepson Parkway
- Improve Cordelia Rd. from I-680 to SR 12

Vacaville:

- Construct HOV lanes on I-80 from Fairfield to Vacaville
- Widen I-80
- Improve I-80/Leisure Town Rd. interchange
- Improve I-80/Cherry Glen Rd. interchange
- Weave correction at I-80/I-505 interchange
- Improve I-505/Vaca Valley Pkwy interchange
- Widen and extend Vaca Valley Pkwy from Leisure Town Rd. to Browns Valley Rd.
- Widen Elmira Rd. from Allison Dr. to Peabody Rd.
- Construct Jepson Parkway

Vallejo:

- Construct HOV lanes and improve interchanges on I-80 from Carquinez Bridge to SR 37
- Improve I-80/American Canyon Rd. interchange
- Widen SR 37 from Napa River Bridge to SR 121
- Improve SR 37/Mare Island Interchange and On-Island Roadways
- Improve SR 29 through Vallejo
- Widen Columbus Pkwy from Benicia Rd. to SR 37
- I-80 Auxiliary Lanes Project

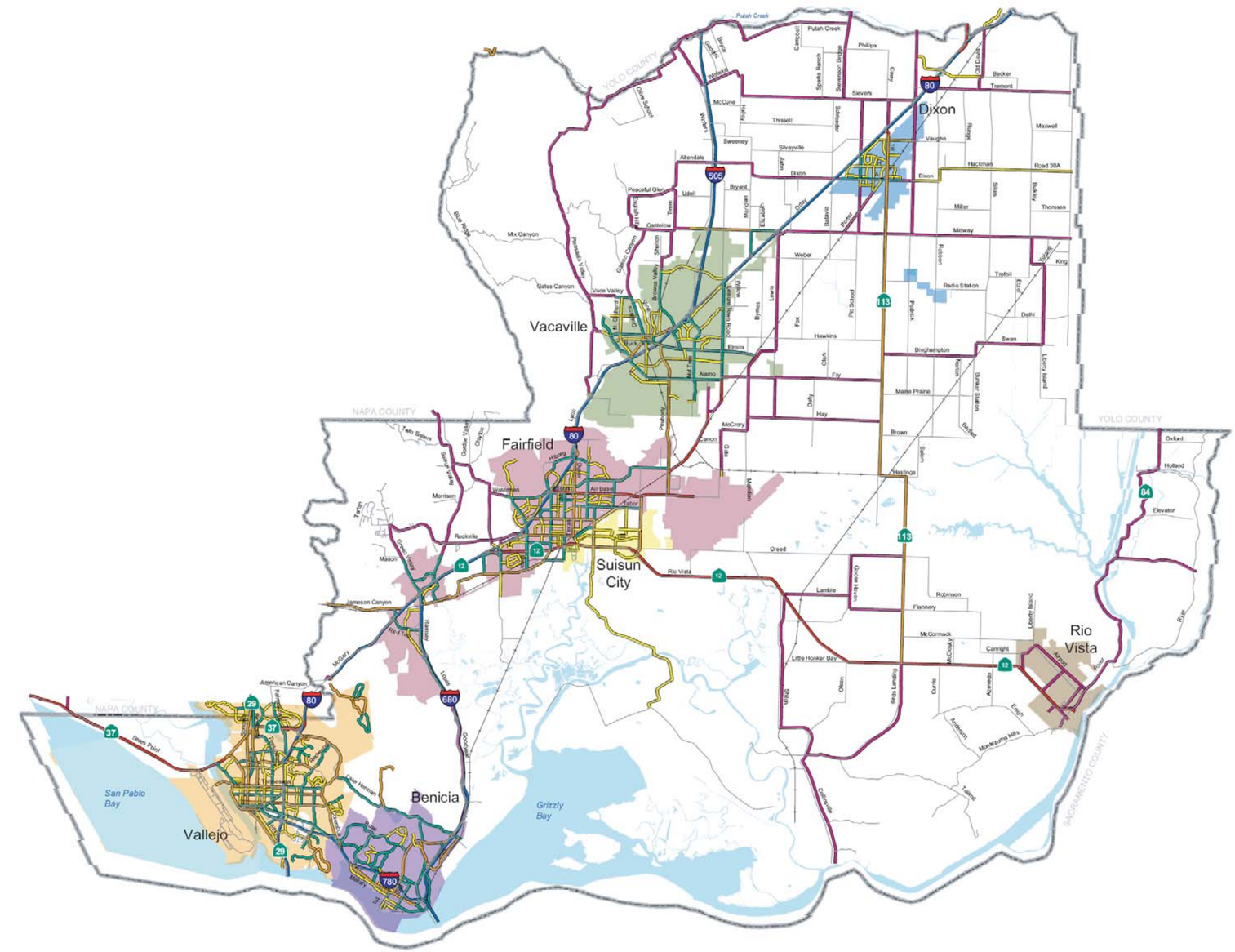
THE FEDERAL FUNCTIONAL CLASSIFICATION SYSTEM

The Federal Functional Classification System (FFCS) is a system used by the Federal Highway Administration (FHWA) and Caltrans to classify roadways based upon an objective set of criteria. The Federal Government requires roadways to be on the FFCS to be eligible to use federal funding. The FFCS is defined as the system of roadways inclusive of all streets and roads classified as urban collectors and above or rural major collector and above. Attached is the current FFCS of roadways for Solano County.

In 1991, the Metropolitan Transportation Commission (MTC) established the Metropolitan Transportation System (MTS), which included all interstate highways, state routes, and a portion of the street and road system operated and maintained by Cities and Counties. The stated purpose at the time was to set up a system of roadways recognized as "regionally significant" to be subsequently analyzed and potentially "managed" to help relieve congestion through the application of system management techniques like signal coordination, special lane designation, etc. In the STA's CTP 2025 Plan, approved in May 2002, a map depicting "Routes of Regional Significance", which primarily designates major roadways critical to maintaining intercity mobility and potentially obtaining Interregional Transportation Improvement Program (ITIP) funds from the California Transportation Commission (CTC). However, those regionally designated routes were never intended to be used to determining the conditions of the roads or qualify roads for federal funding eligibility, which is the primary purpose of the FFCS.

On January 12, 2005, based on a recommendation by the STA Technical Advisory Committee and the Local Streets and Roads Committee of the Bay Area Partnership Board, the STA Board supported replacing the MTS with the FFCS, which will provide objective and rational funding eligibility and needs determinations for local streets and roads.

However, the STA believes there is merit in identifying both the routes of eligible under the FFCS as well as identifying "Routes of Regional Significance" for intercity mobility purposes. See Figure 1.2 and 1.3 for a map of roadways in Solano County in the FFCS.



LEGEND

1999 FUNCTIONAL CLASSIFICATION SYSTEM

URBAN	RURAL
INTERSTATE	INTERSTATE
OTHER FWY OR EXPWY	
OTHER PRINCIPAL ARTERIAL	OTHER PRINCIPAL ARTERIAL
MINOR ARTERIAL	MINOR ARTERIAL
COLLECTOR	MAJOR COLLECTOR
	MINOR COLLECTOR
	LOCAL ROADS

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Comprehensive Transportation Plan

Caltrans Functional Roadway Classifications - County

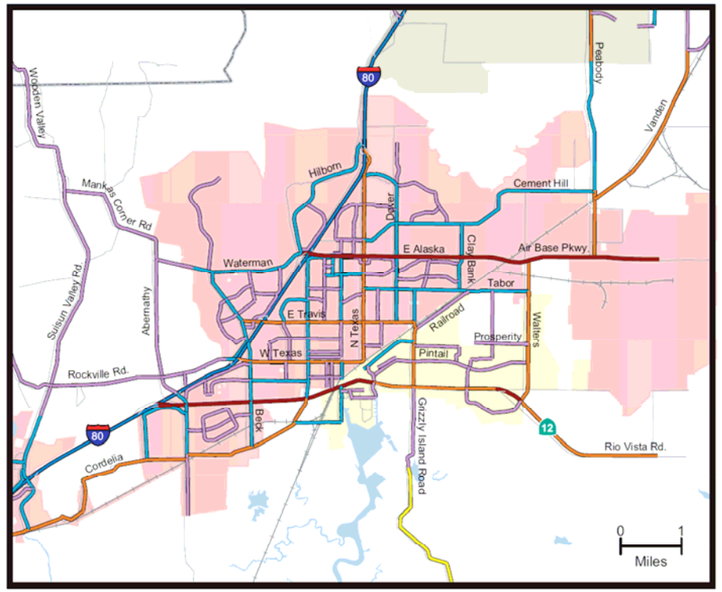
Figure 1.2

LEGEND

1999 FUNCTIONAL CLASSIFICATION SYSTEM

URBAN	RURAL
INTERSTATE	INTERSTATE
OTHER FWY OR EXPWY	
OTHER PRINCIPAL ARTERIAL	OTHER PRINCIPAL ARTERIAL
MINOR ARTERIAL	MINOR ARTERIAL
COLLECTOR	MAJOR COLLECTOR
	MINOR COLLECTOR
	LOCAL ROADS

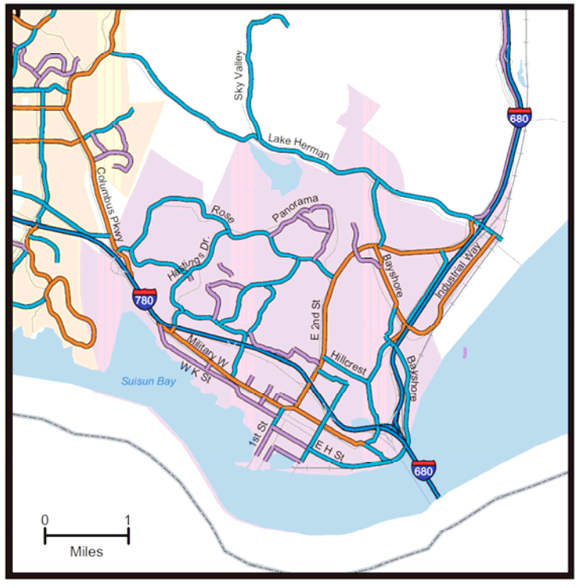
Streets and roads are eligible for federal STP funding if their functional classification is of a higher system than urban local (19), rural local (09) or rural minor collector (08). If a street is not found in this database, then it is either an urban local or rural local route and so it is not a federal aid route.



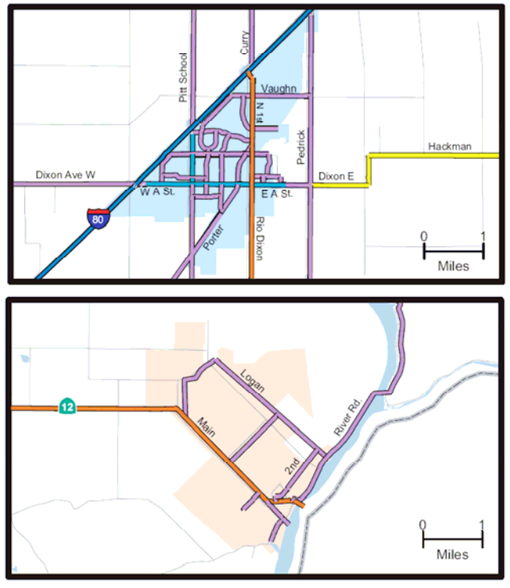
FAIRFIELD / SUISUN CITY

VACAVILLE

VALLEJO



BENICIA



DIXON / RIO VISTA

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Caltrans Functional Roadway Classifications - Cities

Figure 1.3

CORRIDOR PLANNING

In response to the needs identified above, a significant level of corridor planning is either complete, in process, or scheduled to begin in the near future. The following is a summary of those activities.

I-80/I-680/SR 12 INTERCHANGE

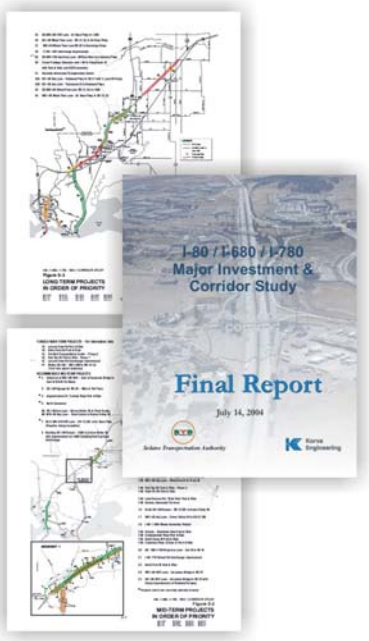
The I-80/I-680/SR 12 interchange is the top transportation priority for Solano County. The STA is preparing the project approval and environmental documents (PA/ED) that will evaluate several alternative long-range improvements for the interchange. The following alternatives and project elements will be evaluated in the EIS/EIR.

- No Project Alternative
- Widen I-80 (7 lanes each direction plus 2- 3 lane frontage roads on I-80)
- Widen I-80 (5-6 lanes in each direction) with South Parkway (4 lanes parkway from I-680 to SR 12 at Pennsylvania Ave)
- I-80 Viaduct (2 lane viaduct in each direction from I-680 to SR 12 East) with South Parkway (4 lanes parkway from I-680 to SR 12 at Pennsylvania Ave)
- North Connector (SR 12 west to SR 12 east)
- Cordelia Truck Scales Relocation.

Each of the three build alternatives includes reconstruction of the existing truck scales, widening of I-680 to six lanes between Red Top Road and I-80, and construction of improvements to the local roadway system. The North Connector and South Parkway are local roadway improvements that would provide improved local circulation and access. The businesses, schools, and residential neighborhoods adjacent to the interchange now have no alternative but to use the freeway system for many of their trips.

The estimated cost of the three build alternatives ranges from $740 million to $1.15 billion. The cost estimates include the reconstruction of the existing truck scales. Several near-term improvements are under construction or in the project development stages. The "Auxiliary Lanes" project was completed in 2004 adding a 5th eastbound and westbound lane on I-80 from I-680 to SR 12

East. The project also widened the existing ramps from I-680 to I-80 from one lane to two lanes. The SR 12 West Truck Climbing Lane project will add a second lane on westbound SR 12 immediately west of I-80. Currently, traffic exiting westbound I-80 onto westbound SR 12 must ascend a long and steep 6.7 percent uphill grade. Trucks have a particularly difficult time climbing the grade, frequently resulting in a slowing of traffic that backs from SR 12 onto I-80. Caltrans has programmed $8.8 million in State Highway Operations & Protection Program (SHOPP) funds for the acquisition of right-of-way and construction of this project. The project is scheduled for completion by 2007.



I-80, I-680, I-780 CORRIDORS

In July 2004, the STA and Caltrans completed the I-80/I-680/I-780 Major Investment & Corridor Study that addressed all of I-80, I-680 and I-780 in Solano County (seven segments). This study identified a prioritized list of 50 projects needed to meet current and future travel demands on these corridors (see Appendix B).

SR 12 (I-80 TO RIO VISTA BRIDGE)

A Major Investment Study (MIS) was completed by the STA for SR 12 in October 2001. The MIS was prepared to identify the physical improvements and management practices necessary to appropriately serve future travel demand in the corridor. The MIS included the following near-term and long-term recommendations:

Near-term Recommendations

Transportation Demand Management

- Carpooling program with park-and-ride construction
- Local shuttle program
- Transit service

Safety Improvements

- Advance overhead flashers at Beck/Pennsylvania
- Left turn lanes and acceleration/deceleration lanes at Lambie/Shiloh with realignment
- Traffic signal at SR 113/SR 12
- Left turn lanes and acceleration / deceleration lanes at Church Road with realignment
- Advance flashers at Summerset Road

- Acceleration and deceleration lanes at Railroad Museum
- Acceleration and deceleration lanes at Beck Avenue

Traffic Improvements

- Geometric improvements at Pennsylvania Avenue
- Traffic signal and improvements at Lambie/Shiloh
- Traffic signal at SR 113/SR 12

Long-term Recommendations

All near-term recommendations described above plus

Long-term Traffic Improvements

- Widen SR 12 to four lanes from Rio Vista City Limit to River Road
- Widen SR 12 to six lanes from I-80 to Webster/Jackson
- Install median barrier and shoulders from Walters Road to Rio Vista City Limit
- Interchange at SR 12/Pennsylvania Avenue
- Left turn lanes at Lambie/Shiloh
- Traffic signal at SR 12/Church Road
- Widen Rio Vista Bridge or realign SR 12 and build new Rio Vista Bridge

As a follow-up to the SR 12 MIS, the SR 12 Operational Strategy is being conducted to prioritize the projects identified in the MIS.

The capital cost of the near-term and long-term improvements identified for SR 12 from I-80 to the Rio Vista Bridge is $109 million. Caltrans has programmed $36 million in State Highway Operations & Protection Program (SHOPP) funds for safety improvements to this portion of SR 12.

A similar MIS conducted for SR 12 in San Joaquin County concluded that the section immediately to the east of the study corridor in Rio Vista should be widened to four lanes. San Joaquin County has designated the widening of SR 12 a "Priority B" project to be pursued in the "beyond 2010" time frame. These recommendations are consistent with the findings of the SR 12 MIS in Solano County.

SR 12 REALIGNMENT AND RIO VISTA BRIDGE

The SR 12 MIS identified and the City of Rio Vista has requested the preparation of a study to address the feasibility of constructing a second Rio Vista Bridge. The purpose of the study will be to evaluate alternative locations for a second crossing. The STA will use federal planning funds to initiate the study in 2005-06.

JAMESON CANYON / SR 12 (I-80 TO SR 29)

Caltrans is preparing the environmental studies that will evaluate several alternative alignments. The corridor spans both Solano and Napa counties. The project involves the widening of SR 12 from two to four lanes and the provision of a median to separate eastbound and westbound traffic. Access to properties along the corridor will be maintained.

JEPSON PARKWAY

The STA Board adopted the Jepson Parkway Concept Plan in April 2000. The Concept Plan was developed to identify an option to improve traffic in Central Solano County and to encourage the linkage between transportation and land use. The Plan provides a comprehensive, innovative and coordinated strategy for developing a multimodal corridor, linking land use and transportation decisions to support the use of alternative travel modes, and protecting existing and future residential neighborhoods.

The Jepson Parkway will be a four-lane parkway designed to provide intra-county mobility for Solano residents. The project upgrades and links a series of narrow local roads to provide a north-south travel route for residents who face increasing congestion when traveling between jurisdictions in central Solano County.

The Parkway connects the I-80/Leisure Town Road interchange in Vacaville with SR 12 in Suisun City. The Concept Plan proposes to link the existing road segments of Leisure Town, Vanden, Cement Hill and Walters Roads including three new bridges, railroad separations, traffic signals and improved intersections.

The STA is preparing environmental studies that are evaluating several alternative routes for the parkway. The following alternatives are being evaluated in the EIS/EIR.

- Alternative A – No Project
- Alternative B – Leisure Town Road/Vanden Road/Cement Hill Road/Walters Road Extension/Walters Road
- Alternative C – Leisure Town Road/Vanden Road/Peabody Road/Air Base Parkway/Walters Road
- Alternative D – Leisure Town Road/Vanden Road/Peabody Road/Huntington Drive/Walters Road
- Alternative E – Peabody Road/Air Base Parkway/Walters Road

The total cost of the Jepson Parkway improvements is estimated to be $143 million. A total of $70 million in federal, state and local funds have been programmed to date. The project will ultimately be constructed in 10 segments. Four of the segments are fully funded and two are partially funded to date.

SR 29 THROUGH VALLEJO

The STA will assist the City of Vallejo with a Major Investment Study to evaluate the SR 29 Corridor (Sonoma Boulevard) through the city. The purpose of this study is to address various transportation and land use concerns on a comprehensive basis with the development of a Specific Plan and an EIR.

SR 113 (I-80 TO SR 12)

The STA proposes a Major Investment Study (MIS) for SR 113 between I-80 and SR 12. The study will identify the physical improvements and management practices necessary to appropriately serve future travel demand in the corridor. The STA proposes to use federal funds to initiate this study in 2006.

TRAVEL PATTERNS

According to travel forecasts prepared for the CTP, approximately 71 percent of existing daily vehicle trips in Solano County have origins and destinations within the county, while the remaining 29 percent have at least one origin or destination outside the county. This traffic mix is not projected to change greatly; although, overall travel demand will increase substantially.

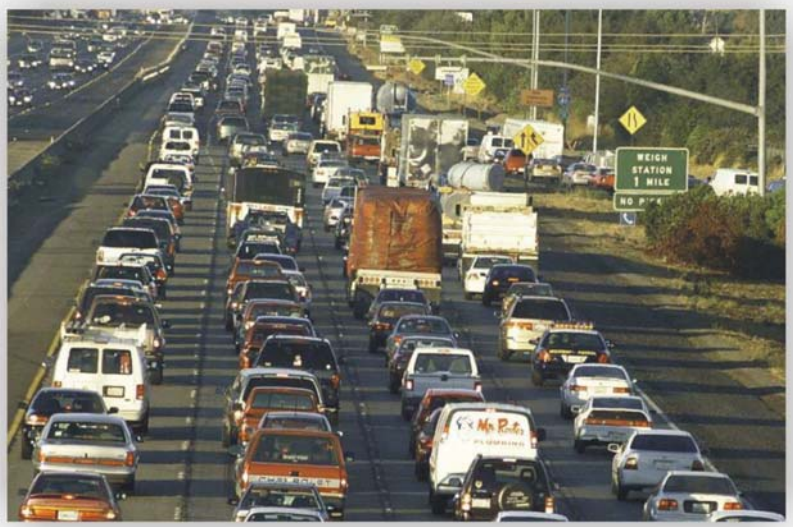
The overall daily vehicle travel demand is forecast to increase by approximately 43 percent between 2000 and 2030. The number of roadway lane-miles, an indication of the capacity of the roadway system, will increase by three percent based on roadway improvements that have committed funding. This mismatch in demand versus capacity will result in substantial increases in travel delays and a corresponding degradation in traffic conditions.

The projected increases in travel demand and delay reflect only one set of performance measures for the arterials, highways, and freeways system.

Other potential performance measures include measures such as level of service (LOS), vehicle hours delay (VHD) per 1,000 people, and cost effectiveness. More detailed evaluation of the performance measures needs to be conducted so that STA can determine which measures and thresholds are most appropriate given the agency's stated goals and objectives. For example, VHD per 1,000 people is a useful indicator for gauging people's perception of acceptable levels of delay. If decision makers consider today's congestion levels to be unacceptable, then realizing that daily VHD per 1,000 people is projected to increase from 0.35 to 1.20 between 2000 and 2030 would send a strong signal that projected travel demand needs to be curbed or additional roadway capacity needs to be provided.

According to surveys conducted by RIDES for Bay Area Commuters, commuters in Solano County travel an average of 23 miles one-way to reach their jobs. This is the longest average commute length for any county in the Bay Area. In 2003, the average one-way travel distance for the Bay Area commuters was 16 miles for 2003.

HIGHWAY SYSTEM



Interstate 80 is the major freeway facility in Solano County, carrying both a significant amount of locally-generated traffic as well as through traffic between the Bay Area and the Sacramento Valley. This six- to eight-lane facility is heavily congested during peak travel periods at the I-80/I-680/SR 12 Interchange.

Other interstate or state highways that connect to I-80 include I-505, I-680, I-780, SR 12 East, SR 12 West, SR 29, SR 37, and SR 113. I-80, I-505, I-680, and I-780 are entirely grade-separated within Solano County. The remaining state highways have segments that function as grade-separated highways and/or as local at-grade arterials.

Phase I improvements to the I-80/I-680/SR 12 Interchange (Auxiliary Lanes Project) was completed in 2004. Construction is currently underway for converting State Route 37 to a full freeway from the Napa River Bridge to I-80. The I-80/Leisure Town Interchange (Vacaville) is under construction. Funds have been programmed for safety improvements to SR 12 between Suisun City and Rio Vista. A Major Investment Study for SR 12, between I-80 and Rio Vista, was completed in 2001. The I-80/I-680/I-780 MIS & Corridor Study was completed in July 2004 and studies are scheduled for SR 113 and SR 29 over the next few years.

CARPOOL (HOV) LANE SYSTEM

While there are currently no carpool lanes in Solano County, the toll plaza facilities at both the Carquinez Bridge on I-80 and the Benicia-Martinez Bridge on I-680 have booths designated specifically for high occupancy vehicles (HOV). Solano County has the highest carpooling and vanpooling rates of any county in the Bay Area. HOV traffic counts collected by Fehr and Peers study in Spring 2001 confirm high levels of carpooling and vanpooling (see table 1.2). The counts indicate that HOV levels exceed the Caltrans HOV

volume thresholds necessary for establishing a carpool lane on several segments of I-80. Currently, I-680 does not meet this threshold, but traffic projections indicate it may after 2020.

The Transportation Plan 2030 (T-2030) calls for construction of a HOV lane on I-80 between I-680 in Fairfield and I-505 in Vacaville at some time over the next twenty-five years. The I-80/680/780 Major Investment & Corridor Study also proposes HOV lanes be constructed on I-80 in Vallejo between the Al Zampa (Carquinez) Bridge to SR 37. About $100 million is programmed under Regional Measure 2 to fund HOV lanes along I-80 from SR12 West to Air Base Parkway. A key policy issue needs to be resolved prior to implementation of any HOV lanes in Solano County. The issue is whether the facility will match the 3+ occupancy requirement on I-80 in Contra Costa County or the 2+ occupancy requirement on I-680 in Contra Costa County.

Table 1.2 – COMPARISON OF EXISTING CARPOOL (HOV) COUNTS AND THE CALTRANS MINIMUM HOV VOLUME THRESHOLD

Location	Caltrans HOV Threshold (veh./hr.)	Existing County (HOVs/hr.) March 27, 2001			
		AM Peak Hour		PM Peak Hour	
		WB/SB	EB/NB	WB/SB	EB/NB
I-80 (at the Meridian Road/Weber Road overpass)	800	432	547	899	959
I-80 (at the Suisun Valley/Pittman Road overpass)	800	1,083	832	1,329	1,743
I-80 (at the Magazine Street overpass)	800	998	580	869	1,680
I-680 (at the Lake Herman Road overpass)	800	330	223	485	427
I-780 (at the Rollingwood Drive overpass)	800	517	320	410	451
SR 12 (at the Beck Avenue)	800	298	196	211	471

Note: Shading denotes that existing HOV volume exceeds the Caltrans HOV threshold. Field counts conducted by Fehr and Peers.

LOCAL ROAD MAINTENANCE

The STA member agencies currently maintain a total of 3,265 lane-miles of local roadway countywide. Ongoing work on the county's roadway system includes routine maintenance (i.e., to fill potholes, slurry seal, and chip seals) as well as more intensive rehabilitation work that includes overlays and street reconstruction.

The current road maintenance backlog for all STA member agencies is approximately $112 million. This backlog is determined based on surveys of pavement condition that are collected on a regular basis by each jurisdiction.

Given the current levels of funding, the road maintenance backlog will continue to grow, as all of the eight STA member agencies will experience an ongoing annual shortfall in maintenance funds. Over the next 25 years, the deferred maintenance backlog is projected to grow from $112 to about $600 million.

Most road maintenance work is funded through Transportation Development Act funds, the state gas tax subvention program, federal transportation funds, and/or Proposition 42, passed by California voters in March 2002. Solano County's share of Proposition 42 funds is estimated to provide $133 million for local road maintenance over 20 years beginning in the 2008/09 fiscal year, if these funds are diverted to the State's General Fund. The state also grants 6.46 cents of the 18-cent per gallon state fuel tax directly to local agencies for construction, improvement, and/or maintenance of public roads. Local agencies in Solano County have also used federal funds for road maintenance, through grants that are allocated by the STA Board as these funds are made available by MTC.

The revenue from these programs is not sufficient to meet ongoing road maintenance needs. Other counties have addressed their backlogs through the adoption of special transportation sales tax programs that dedicate funds to road maintenance.

TRAFFIC MANAGEMENT PROGRAM

Traffic management programs are designed to provide for the efficient and appropriate use of the existing transportation system. The programs may include the application of traditional traffic engineering devices, traffic calming measures, and/or advanced systems.

Advanced Traffic Management Systems (ATMS) are designed to use modern technology to provide drivers with real-time information about congestion and incidents. This information can be used to facilitate the choice of a less congested route, to use an alternative mode, or to travel during a different time period. Information is typically gathered through the use of closed circuit television cameras on major routes, vehicle detectors, and global positioning technology on transit vehicles. Information is then distributed through such media as variable message signs, broadcast stations, the Internet, and information monitors at transit stops.

The Metropolitan Transportation Commission has implemented the 511 and 511.org system to provide motorists with real-time traffic information for most on major highways in the Bay Area.

The City of Fairfield, in partnership with the STA, the City of Suisun City and the City of Vacaville, has initiated planning efforts to develop a Suisun City-Fairfield-Vacaville Smart Corridor Intelligent Transportation Systems Concept of Operations Plan. The Plan will focus on the I-80 corridor in Solano County and on various alternative routes. The Plan will explore various traffic management elements including coordinated traffic signals across jurisdictions, changeable message signs, highway advisory radio, traffic monitoring cameras, and inter-jurisdictional communication systems.

The goals and objectives of this Plan recommend the development of a Countywide Traffic Management Plan for the roadways of countywide significance. Solano ATMS plans should parallel the goals of the "San Francisco Bay Area Regional Intelligent Transportation Systems (ITS) Plan" that covers a broad spectrum of Intelligent Transportation Systems, including Traffic Management, Transit Management, Traveler Information, Emergency Management, and Emergency/Incident Management over the next ten years

TRAVEL SAFETY PROGRAM

The STA prepared a Travel Safety Plan in 1998 to address roadway safety issues on a countywide basis. The Plan identified the 40 local intersections with the highest accident rates. Accident data on 13 freeway segments in the County were also identified. Working with its member agencies, the STA identified candidate improvements to address safety issues at these locations.

To date, safety improvements have been funded and/or completed for 29 of the 40 intersections and for 9 of the 13 freeway segments. A total of $4.5 million has been programmed for the intersection projects identified in the Plan. The Travel Safety Plan is currently being updated and the STA Board will evaluate a continuation of the policy of prioritizing funding for safety improvements after the update is completed.

FUNDING

The following funding information identifies long-term arterial, highway, and freeway need, long-term revenue, funding shortfalls, and potential new revenue options for Solano County.

LONG-TERM TRANSPORTATION NEEDS

The long-term transportation needs of Solano County include those identified in the CTP, including those identified by jurisdictions in the STA Transportation Needs Survey conducted for the CTP.

The total funding need for arterials, highways, and freeways for Solano County through the year 2030 is approximately $4.176 billion. Additional transportation needs through the year 2030 from the Transit and Alternative Modes elements and local projects add $1.54 billion to total $5.72 billion in CTP transportation needs.

Long-Term Revenues

MTC forecasts that Solano County will receive approximately $1,015.5 billion in transportation revenues for arterial, highway & freeway projects over the next 25 years from currently available funding programs. An additional $30 million in local traffic impact fees is currently programmed for the $480 million in local transportation needs identified by member agencies.

Each of the jurisdictions in Solano County levies a local development fee for transportation purposes. An example of the range of fees by jurisdiction for residential (single family and multifamily uses) is provided below.

City of Benicia:	$550-1,029 per unit
City of Dixon:	$394-493 per unit
City of Fairfield:	$1,194-2,610 per unit
City of Rio Vista:	$6,445 per unit
City of Suisun City:	$5,014 per unit
City of Vacaville:	$3,994-6,443 per unit
City of Vallejo:	$1,711-3,043 per unit
Solano County:	$5,613-5,714 per unit

The total program cost for all transportation projects included in the traffic impact fee programs in Solano County is $255 million. Revenues generated by traffic impact fees are projected to fund $121 million of those costs, with the remaining $134 million to come from other funding sources.

The revenues generated by local traffic impact fee programs are dedicated primarily to local roadway projects within each jurisdiction. A total of $41 million in local fee revenues is dedicated for interchange improvements in six jurisdictions. This represents 10% of the estimated $$418 million cost for the 22 interchanges needing improvement in Solano County. None of the jurisdictions have dedicated any local fee revenues to freeway mainline improvements.

FUNDING SHORTFALL

Solano County has an estimated funding shortfall of approximately $3.161 billion for arterial, highway, and freeway projects over the next 25 years, based on currently available information on transportation needs.

Several planning efforts are underway to determine the scope and budget of additional improvements that may be required on the roadway system in Solano County.

RTP Financially Constrained Element

The Transportation 2030 Plan (T-2030), prepared by the Metropolitan Transportation Commission, is a long-range transportation plan for the nine-county San Francisco Bay Area. The T-2030 includes a funding element for each of the nine counties, including Solano County. The funding element identifies projects that are planned for funding through the year 2030.

Federal law requires that the T-2030 be financially constrained. The MTC has interpreted this as meaning that only those Federal, State and local revenues that are currently available are identified as revenues. No new revenue sources are assumed to be available.

The T-2030 projects a total of $113 billion in transportation revenues (2004 dollars) will be available over the next 25 years. About 92 percent, or nearly $100 billion of this revenue is already committed by previous actions. This committed funding is used to maintain and expand Bay Area transit systems (64 percent), maintain local roads (23 percent), and expand highways (13 percent).

The MTC defines uncommitted, discretionary funding that is available for new projects and programs as "Financially Constrained Element" funds. The Financially Constrained Element funds consist of federal discretionary and flexible funds, certain state funds allocated through the State Transportation Improvement Program (STIP) and a small amount in regional toll funds for transit expansion projects. Approximately $9 billion in funds are available to all of the Bay Area counties in the T-2030. Solano County's share of these new Financially Constrained Element funds is estimated at about $422 million The T-2030 assumes that the following projects will receive the highest level of new Financially Constrained Element funds for arterial, highway & freeway projects in Solano County over the next 25 years.

1. I-80/I-680/SR12 Interchange - $159.8 M
2. Jepson Parkway - $43.0 M
3. SR 12 Widening from I-80 to SR29/ Jameson Canyon - $45 M
4. SR 12 Safety Projects (I-80 to Sacramento River) - $6.6 M
5. I-80/680/780 Corridor Improvements (Mid-term) – $88.4 M
6. Road Maintenance (all local roads – non MTS) - $41.0 M
7. Local Interchange improvements - $2.0 M
8. SR 12 Capacity Improvements (I-80 to Sac. River) - $3.4 M
9. Transportation Safety Improvements - $3.0 M

RTP Vision Element and New Revenue Options

MTC has established a Vision Element that identifies programs and projects that would be funded if new revenue sources become available in the future. Potential new revenue sources for Solano County include a local sales tax program, increased regional bridge tolls, regional gas tax and state gas tax, and regional impact fees.

MTC estimates that Solano County could receive $1.9 billion with these new revenue mechanisms over 25 years. Key arterial, highway, and freeway projects that would be funded with these new revenue sources are summarized as follows:

- I-80/I-680/SR 12 Interchange
- SR 12 (Jameson Canyon)
- I-80/680/780 Corridor Improvements (Mid & Long Term)
- SR 12 Capacity Improvements (I-80 to Sac. River)
- Road Maintenance (All local roads – non MTS)
- Safety Projects

Local Sales Tax

A half-cent transportation sales tax measure in Solano County would generate approximately $1.4 billion over 30 years. A local sales tax program, which is the most widespread mechanism for generating local transportation revenue, currently requires a 2/3-voter threshold for passage. In 2002, Solano County voters considered Measure E, a local transportation sales tax measure that achieved 60% voter approval, but not enough to achieve the required voter threshold of 66.67%. In 2004, Solano County voters considered a more focused local transportation sales tax measure with greater emphasis on priority projects in Solano County and achieved 63.88% voter approval, not enough to meet the voter threshold.

Countywide Traffic Impact Fee

Local traffic impact fees are levied on new development by each of the STA member agencies for use in constructing new local interchanges and roadways. To date, with the exception of contributions for widening SR 12 in Suisun City, local traffic impact fees have not been used in Solano County to make mainline improvements on the State highway system.

The need for increased funding for transportation improvements has seen many jurisdictions in other counties pursue multi-

jurisdictional fee programs for regional transportation improvements such as HOV lanes, freeway improvements, and major regional interchanges.

Orange County established a regional fee program in 1984 that has been collected by the Transportation Corridor Agencies (TCA) to provide funding for the Route 91 project. The Orange County fee program is projected to generate approximately $950 million through 2020. The East Contra Costa Regional Fee & Financing Authority was established in 1994 to collect regional transportation fees from four jurisdictions to supplement State and Federal funding for improvements to SR 4, the SR 4 Bypass, and the Buchanan Road Bypass. The regional fee is projected to generate approximately $189 million in revenues through the year 2020. These two regional fee programs, which are distinct from local traffic fee programs, have fees that range from $2,000 to $4,500 per equivalent dwelling unit.

Regional Gas Tax

The Metropolitan Transportation Commission has the authority to place a regional gas tax on the ballot in the nine-county Bay Area. As with the transportation sales tax measure, a regional gas tax would require a 2/3-voter threshold be reached for passage. According to the MTC, Solano County would receive an additional $125 million over 20 years if Bay Area voters approved a four-cent per gallon regional gas tax measure. MTC states in the T-2030 that a five-cent tax could potentially be implemented in the near to mid-term horizon.

Future Bridge Tolls

Another new revenue source for Solano County is future Bridge Toll revenues. Recently, the MTC programmed up to $100 million in projected future toll revenues for the I-80/I-680/SR 12 interchange project from Regional Measure 2, a $1 toll increase on seven state-owned toll bridges in the Bay Area. The level of revenue that will be provided depends on whether additional toll revenues are needed to complete the Bay Bridge Project. Additional future bridge toll increases could provide additional revenues to Solano County.

IMPLEMENTATION

The STA will need to update their planning data, tools, and processes to advance specific projects from planning to design and construction. Specific needs include the following items:

Systems Performance Measures

Systems Performance Measures are a set of practices to systematically look at and gauge transportation system performance, and then guide and influence policy decisions, decision makers, and system users. The STA uses Level of Service (LOS) as a performance measure as part of the Congestion Management Program. Other performance measures, such as Vehicle Hours of Delay (VHD), Vehicle Miles of Travel (VMT), or average commute times can gauge effectiveness of programs, projects and policies in ways that may be more appropriate and in step with the STA's goals and objectives. In June 2004, he California Business, Transportation and Housing Agency initiated a collaborative effort to define and implement a variety of transportation performance measures. Although, consensus has not been reached, the STA will continue to monitor their efforts and evaluate potential performance measures, in addition to those already in use, such as LOS by the Congestion Management Program.

Enhanced Travel Forecasting Tools

The current travel demand model used by the Solano Transportation Authority to forecast future travel demand in Solano County provides valuable information on the highway, freeway and major arterial system, but is not capable of addressing alternative modes (e.g., rail, bus, ferry, carpool, etc.). The travel model used by the Metropolitan Transportation Commission is multi-modal, but it covers nine counties and is most effective at providing forecasts on regional facilities. The MTC model is also more accurate at forecasting the use of facilities in the core of the nine-county Bay Area. The accuracy and applications of the MTC model are more limited in counties at the periphery of the region, such as Solano County. As a result, the STA is in the process of developing an updated countywide model that will provide forecasts of both highway and transit use. To accomplish this, the model will incorporate an expanded transportation system and land use forecasts from adjacent counties in the Bay Area, Sacramento and Central Valley regions.

Project Development Program

In its 2000 Annual Report to the California Legislature, the California Transportation Commission identified project delivery as one of the top two transportation issues. The CTC noted that, "the system and resources for readying transportation projects for construction are as great an impediment to transportation investment as sufficient funding." The principle project delivery activities include project planning, environmental studies, project design and right-of-way acquisition. For major transportation projects, these activities typically take at least seven years, and often take more than 10 years, to complete. The largest block of time is typically needed to complete environmental studies and permitting activities by various regional, state and federal resource agencies. Given these issues with project development and delivery, STA should expand its project delivery program for its highest priority projects. Additional effort is required to create an expanded project delivery program that will move projects through the specific project development components up to and through construction.

Timing of Implementation

The programs and projects identified in the Arterials, Highways, and Freeways Element will be implemented over the 25-year horizon of the CTP and beyond. Projects that are already funded and have either completed environmental review or require minimal study are likely to be completed in the first five years of the CTP. Partially funded projects and ones that require lengthy environmental review will be implemented over the remainder of the CTP. Unless significant new funding is provided for several major projects such as the I-80/I-680/SR 12 interchange, these projects will not be completed until beyond the current horizon of the CTP (i.e., 2030). Many large projects will be implemented in stages, with individual segments or phases being completed within each of the three implementation time frames (i.e., within five years, between five and 25 years, or beyond 25 years) to provide interim congestion relief prior to completion of the project.

Table 1.3 – COMPREHENSIVE TRANSPORTATION PLAN PROJECT IMPLEMENTATION

(ALL COSTS IN MILLIONS OF 2004 DOLLARS)

Project/Program	Total Costs	2005 - 2010	2010 - 2030	Beyond 2030
I-80/I-680/SR 12 Interchange	$769.0	✓	✓	✓
Jepson Parkway Project	97.9	✓	✓	
Route 12 (Jameson Canyon)	51.1		✓	✓
Jameson Canyon Safety Projects	20.0	✓		
I-80/680/780 Corridor Improvements (Mid-Term)	357.3	✓	✓	✓
I-80/680/780 Corridor Improvements (Long-Term)	709.0	✓	✓	✓
Local Interchange Improvements	418.0	✓	✓	✓
Widen SR 37 to 4 Lanes with Mitigation (Napa River to Solano County line)	154.5			✓
SR 12 Improvements (I-80 to Sacramento River)	105.0		✓	✓
SR 113 Improvements (I-80 to SR 12)	50.0	✓	✓	✓
Road Maintenance (Regional Roads – MTS)	43.6	✓	✓	✓
Road Maintenance (all local roads – non MTS)	919.0	✓	✓	✓
SR 12 Safety Improvements (I-80 to Sacramento River)	42.7	✓		
Safety Projects	100.0	✓	✓	✓
Local Arterial Improvements	339.41	✓	✓	✓
TOTAL	**$4,176.5**			

TABLE 1.4 - COUNTYWIDE PLANNING EFFORTS

The following Countywide planning efforts will be completed by the STA after adoption of this CTP:

- ❑ Countywide Travel Forecasting Model – Phase 2 (Transit)
- ❑ Jepson Parkway EIS/EIR
- ❑ SR 12 (Jameson Canyon) EIS/EIR
- ❑ I-80/I-680/SR 12 EIS/EIR
- ❑ North Connector EA/EIR
- ❑ Travel Safety Plan Update
- ❑ SR 113 Major Investment Study
- ❑ SR 29 Major Investment Study
- ❑ SR 12 Realignment and Rio Vista Bridge Study
- ❑ Project Development Program
- ❑ Cost estimates for future projects that may be recommended in these plans would be determined at later time.

APPENDIX A

ALL LOCAL NEEDS SUBMITTED FROM MEMBER JURISDICTIONS

Benicia

- Improve I-80/I-680/SR12 Interchange
- Improve I-680/Lake Herman Road Interchange
- Widen I-680 from Benicia Bridge to I-80
- Construct HOV System on I-80 and I-680
- Install Citywide Traffic Calming Improvements
- Install I-780 (E 2nd to E 5th) Auxiliary Lanes
- Install I-780 (Columbus Pkwy to Military West) Aux Lanes
- Improve I-680/Bayshore/Industrial interchange connections
- Improve I-780/Southhampton/West 7th interchange ramps
- Improve I-780/East 2nd Street interchange ramps
- Widen and extend Industrial Way (680 to Lake Herman Rd) to 4 lanes w/median
- Widen East 2nd Street (Industrial Way to Lake Herman Rd) to 4 lanes w/median
- Construct connector road between East 2nd Street and Park Road
- Enhance First Street Corridor
- New traffic signal at Benicia High School
- Install citywide traffic signal and intersection improvements per CIP
- Widen East 5th Street (780 to Military) w/median
- Widen East 2nd Street (780 to Military) w/median
- Widen State Park Road overcrossing at I-780 with bike/ped access
- Extend Bayshore Road between Park Road and Industrial Way
- Widen Park Road (Industrial Way to Sulphur Creek) to four lanes/median
- Widen Park Road (Adams Street to new Connector Road) with median
- Widen Columbus Parkway to 4 lanes w/ median

Dixon

- Widen I-80 from Leisure Town Rd. to Kidwell Rd.
- Improve I-80/Pedrick Rd. Interchange
- Improve I-80/SR 113 Interchange
- Improve I-80/Pitt School Rd. Interchange
- Improve I-80/West A St. Interchange
- Conduct MIS for SR 113 from I-80 to SR 12
- Overlay SR 113 from H St. South to City Limit
- Construct Parkway Boulevard Overcrossing
- Pitt School Road Safety Improvements from Stratford to H Street
- Local Road Maintenance

Fairfield

- Construct I-80/I-680/SR 12 Interchange
- Construct I-80/Green Valley Rd. Interchange/overcrossing?
- Construct I-80/Suisun Valley Rd. Interchange/overcrossing?
- Improve I-80 from Red Top Rd. to I-505
- Construct auxiliary lanes on I-80 from Travis Blvd to Air Base Pkwy
- Improve I-80/N. Texas St. Interchange
- Improve Manual Campos from I-80 to Peabody Road
- Construct HOV lanes between I-680 and Cherry Glen (Phase 1)
- Construct remaining portions of HOV lanes from I-680 to I-505 (Phase 2)
- Relocate truck scales on I-80 at SR 12
- Improve SR 12 West from I-80 to SR 29
- Improve SR 12 East from I-80 to Rio Vista
- Construct Jepson Parkway
- Construct North Connector
- Widen Air Base Parkway at the intersections
- Widen Cement Hill Rd. from Clay Bank Rd. to Walters Rd.
- Widen Suisun Valley Road

- Construct Peabody Road Bridge overcrossing at Union Pacific Railroad
- Construct SR 12 and Red Top Road/Business Center Drive Interchange
- Construct I-80/Red Top Road Interchange
- Construct I-680 and Red Top Road Interchange
- Construct SR 12 and Pennsylvania Avenue Interchange
- Construct SR 12 and Beck Road Interchange
- Widen Dover Avenue at Air Base Parkway
- Extend Walters Road to Cement Hill Road
- Widen East Tabor from Dover Avenue to Walters Road
- Acquire Jameson Canyon Railroad Right of Way for North Bay Highway Corridor
- Improve and reopen McGary Road
- Widen Union Avenue
- Improve North Texas Street and Travis Boulevard Intersection
- Widen Peabody Road from Air Base Parkway to City Limit and relocate Markeley Lane intersection
- Provide regional funding for maintenance
- Interconnect traffic signals

Rio Vista

- Improve SR 12 East from I-80 to Rio Vista
- Implement SR 12 Major Investment Study, short and long term improvement projects
- Improve SR12 Corridor through Rio Vista
- Improve Church and Amerada Intersections
- Improve Drouin Drive
- Improve Airport Road
- Main Street Overlay from SR 12 to Riverfront
- Complete SR12 Bridge Study across Sacramento River
- Increase SR 12 bridge capacity across Sacramento River
- Provide traffic signalization through the City

Solano County

- Widen I-80 from Leisure Town Rd. to Kidwell Rd.
- Widen I-80 from Vallejo to SR 37
- Improve I-80/I-680/SR 12 Interchange
- Improve SR 12 West from I-80 to SR 29
- Improve SR 12 East from I-80 to Rio Vista
- Improve County roads to meet standards for width, alignment and structural strength
- Increase funding for maintenance of the County road system
- Construct Jepson Parkway
- Construct the North Connector
- Widen Peabody Rd to four lanes from Markley Lane to Vacaville City Limit
- Replace or rehabilitate existing deficient County bridges
- Enhance access to the north and south gates of Travis Air Force Base
- Construct safety improvements to Pleasants Valley Road and Suisun Valley Road

Suisun City

- Improve I-80/I-680/SR12 Interchange
- Improve SR 12 West from I-80 to SR 29
- Improve SR 12 East from I-80 to Rio Vista
- Widen SR 12 from I-80 to Walters Rd.
- Improve median on SR 12 from Marina Blvd to Walters Rd.
- Construct Jepson Parkway
- Improve Cordelia Rd. from I-680 to SR 12

Vacaville

- Construct California Drive Extension and I-80 Overcrossing
- Construct I-505 Weave Correction
- Construct Nut Tree Overcrossing
- Construct I-80/Cherry Glen Rd. interchange

- Construct Pena Adobe Overcrossing
- Construct Leisure Town Road Overcrossing
- Construct I-505/Vaca Valley Parkway Interchange
- Construct HOV lanes on I-80 from Fairfield to Vacaville
- Widen I-80
- Improve I-80/Leisure Town Rd. interchange
- Weave correction at I-80/I-505 interchange
- Widen and extend Vaca Valley Pkwy from Leisure Town Rd. to Browns Valley Rd.
- Widen Elmira Rd. from Allison Dr. to Peabody Rd.
- Construct Jepson Parkway
- Provide Regional Highway Network

Vallejo

- Construct HOV lanes and improve interchanges on I-80 from Carquinez Bridge to SR 37
- Improve I-80/American Canyon Rd. interchange
- Widen I-80/Humboldt Street EB off-ramp including right turn lane to Humboldt Street
- Construct I-80/Turner Parkway Overcrossing
- Widen SR 37 from Napa River Bridge to SR 121
- Improve SR 37/Mare Island Interchange and On-Island Roadways
- Improve SR 29 through Vallejo
- Widen Columbus Pkwy from Benicia Rd. to SR 37
- American Canyon Overpass
- Sacramento Street between Redwood Street and SR 37
- Construct Traffic Signal on Sonoma Boulevard at Maritime Academy

Admiral Callaghan Lane:

  - Frontage Road Improvements from Redwood Street to Fleming
  - Road widening from Turner Parkway to Rotary Way with new signalization
  - Road widening between Columbus Parkway and Auto Club Way

- I-80 EB on and off ramps: improve intersection and add signal; I-80 EB on and off ramps at WB Redwood Street

Broadway:

- Add Left Turn lane on Broadway at Sereno Drive and Right Turn Lane on Sereno for both Approaches and Modify Signal
- Widen from Highway 37 to Mini Drive
- Right Turn Lanes on Nebraska at Broadway; extend existing turn lanes on Broadway; Modify Traffic Signal

Columbus Parkway:

- Widen between I-80 and Admiral Callaghan
- Widen between Ascot Parkway and St. Johns Mine Road with Traffic Signal at Ascot
- Widen between St. Johns Mine Road and Blue Rock Springs Road
- Columbus Parkway Widening from Springs Road to Benicia Road
- Widen between Ascot Parkway and Springs Road
- Traffic Signal Improvements at Benicia Road
- Traffic Signal at Springs Road and Columbus Parkway
- Traffic Signal Improvements at Tennessee Street
- Traffic Signal at Golf Course Entrance

Fairgrounds Drive at Marine World:

- Widen between Marine World Entrances and Redwood Street including I-80 on and off ramps at Valle Vista

Railroad Crossing Improvements:

- Georgia and Tennessee Streets
- Citywide Railroad Crossing Improvements

Solano Avenue:

- Widening between Georgia Street and Curtola Parkway
- Intersection Improvements at Curtola Parkway

Tennessee Street:

- Construct Right Turn Lane on Admiral Callaghan at Humboldt Street; extend Left Turn Lane on Tennessee Street for EB intersection approach
- Add left turn lanes and modify traffic signal at Mariposa

Wilson Avenue:

- Expansion Project – Phase 2
- Construct Traffic Signals and EB ramps at SR 37

Mare Island:

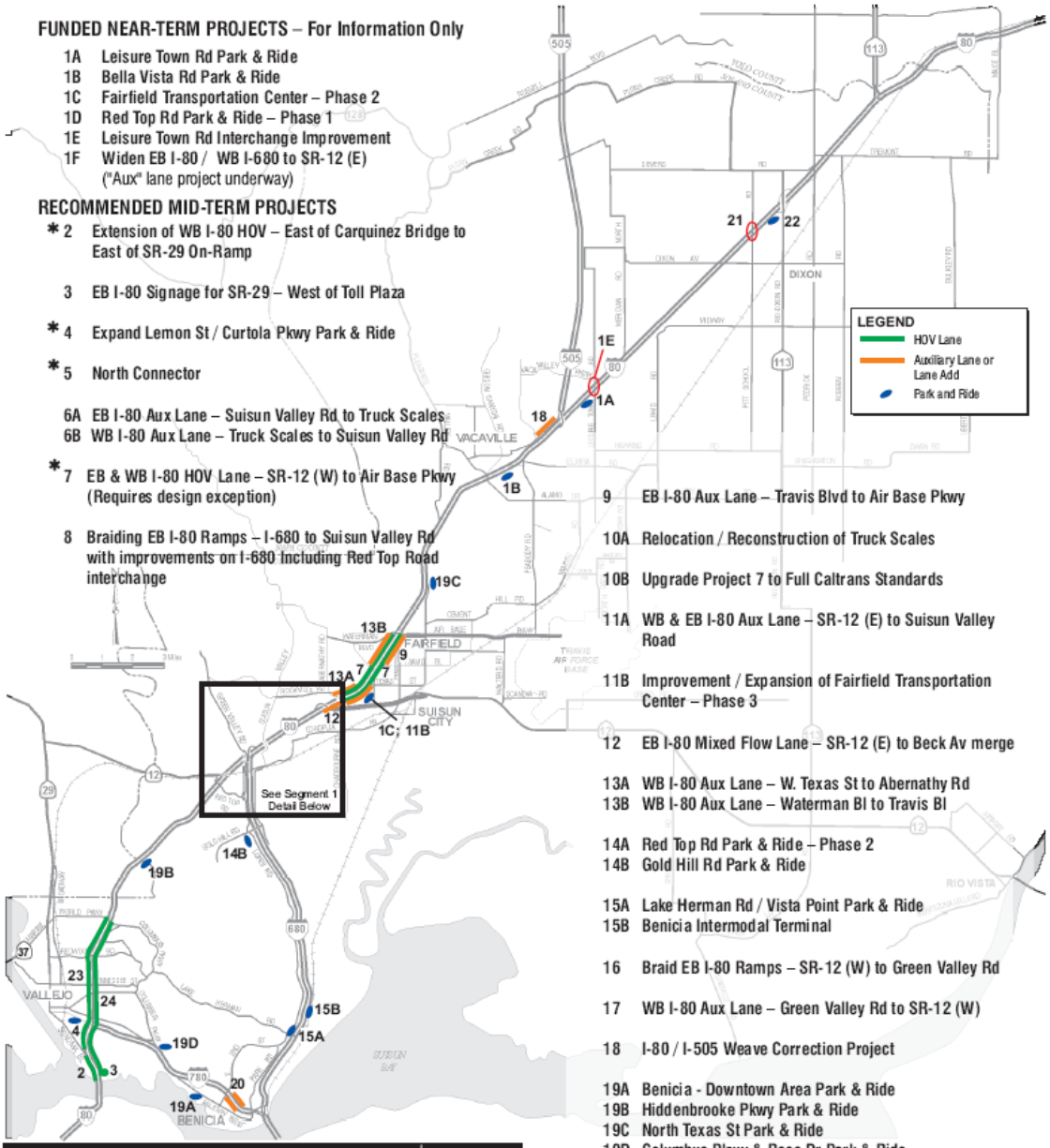
- "G" Street and Railroad Avenue Improvements
- Causeway Bridge and Roadway Approach
- Arterials – Phase 1
- Arterials – Phase 2
- SR 37 Interchange
- Mare Island Causeway ("G" Street) Railroad Crossing Improvements

Traffic Signals:

- Nebraska Street and Amador Street
- Corcoran Street and Mini Drive
- Valle Vista Avenue and Tuolumne Street
- Benicia Street and Maple Street
- Solano Avenue and Tuolumne Street
- Tennessee Street and Rollingwood
- Rollingwood and Vista Middle School

APPENDIX B

MIDTERM AND LONG TERM I-80/I-680/I-780 MAJOR IMPROVEMENT & CORRIDOR STUDY PROJECTS


FUNDED NEAR-TERM PROJECTS – For Information Only
1A Leisure Town Rd Park & Ride
1B Bella Vista Rd Park & Ride
1C Fairfield Transportation Center – Phase 2
1D Red Top Rd Park & Ride – Phase 1
1E Leisure Town Rd Interchange Improvement
1F Widen EB I-80 / WB I-680 to SR-12 (E) ("Aux" lane project underway)
RECOMMENDED MID-TERM PROJECTS
*2 Extension of WB I-80 HOV – East of Carquinez Bridge to East of SR-29 On-Ramp
3 EB I-80 Signage for SR-29 – West of Toll Plaza
*4 Expand Lemon St / Curtola Pkwy Park & Ride
*5 North Connector
6A EB I-80 Aux Lane – Suisun Valley Rd to Truck Scales
6B WB I-80 Aux Lane – Truck Scales to Suisun Valley Rd
*7 EB & WB I-80 HOV Lane – SR-12 (W) to Air Base Pkwy (Requires design exception)
8 Braiding EB I-80 Ramps – I-680 to Suisun Valley Rd with improvements on I-680 including Red Top Road interchange
9 EB I-80 Aux Lane – Travis Blvd to Air Base Pkwy
10A Relocation / Reconstruction of Truck Scales
10B Upgrade Project 7 to Full Caltrans Standards
11A WB & EB I-80 Aux Lane – SR-12 (E) to Suisun Valley Road
11B Improvement / Expansion of Fairfield Transportation Center – Phase 3
12 EB I-80 Mixed Flow Lane – SR-12 (E) to Beck Av merge
13A WB I-80 Aux Lane – W. Texas St to Abernathy Rd
13B WB I-80 Aux Lane – Waterman Bl to Travis Bl
14A Red Top Rd Park & Ride – Phase 2
14B Gold Hill Rd Park & Ride
15A Lake Herman Rd / Vista Point Park & Ride
15B Benicia Intermodal Terminal
16 Braid EB I-80 Ramps – SR-12 (W) to Green Valley Rd
17 WB I-80 Aux Lane – Green Valley Rd to SR-12 (W)
18 I-80 / I-505 Weave Correction Project
19A Benicia - Downtown Area Park & Ride
19B Hiddenbrooke Pkwy Park & Ride
19C North Texas St Park & Ride
19D Columbus Pkwy & Rose Dr Park & Ride
20 EB / WB I-780 Stripe Aux Lane – 2nd St to 5th St
21 I-80 / Pitt School Rd Interchange Improvement
22 North First St Park & Ride
23 WB I-80 HOV Lane – Carquinez Bridge to SR-37
24 EB I-80 HOV Lane – Carquinez Bridge to SR-37 with Ramp Improvements at Redwood Parkway
*Projects which are currently partially funded.
LEGEND
HOV Lane
Auxiliary Lane or Lane Add
Park and Ride
See Segment 1 Detail Below
SEGMENT 1
VACAVILLE
FAIRFIELD
SUISUN CITY
DIXON
VALLEJO
BENICIA
RIO VISTA
I-80 / I-680 / I-780 MIS / CORRIDOR STUDY
Figure 0-2
MID-TERM PROJECTS IN ORDER OF PRIORITY
June 5, 2003
Rev 7-7-03
Rev 7-7-03
Rev 8-7-03
Rev 8-11-03
Rev 8-28-03
Rev 9-3-03
Rev 11-25-03
Rev 2-24-04
Rev 3-04-04
Rev 5-06-04
Rev 5-07-04
Rev 5-18-04
Rev 6-1-04
Rev 6-17-04
Rev 8-4-04

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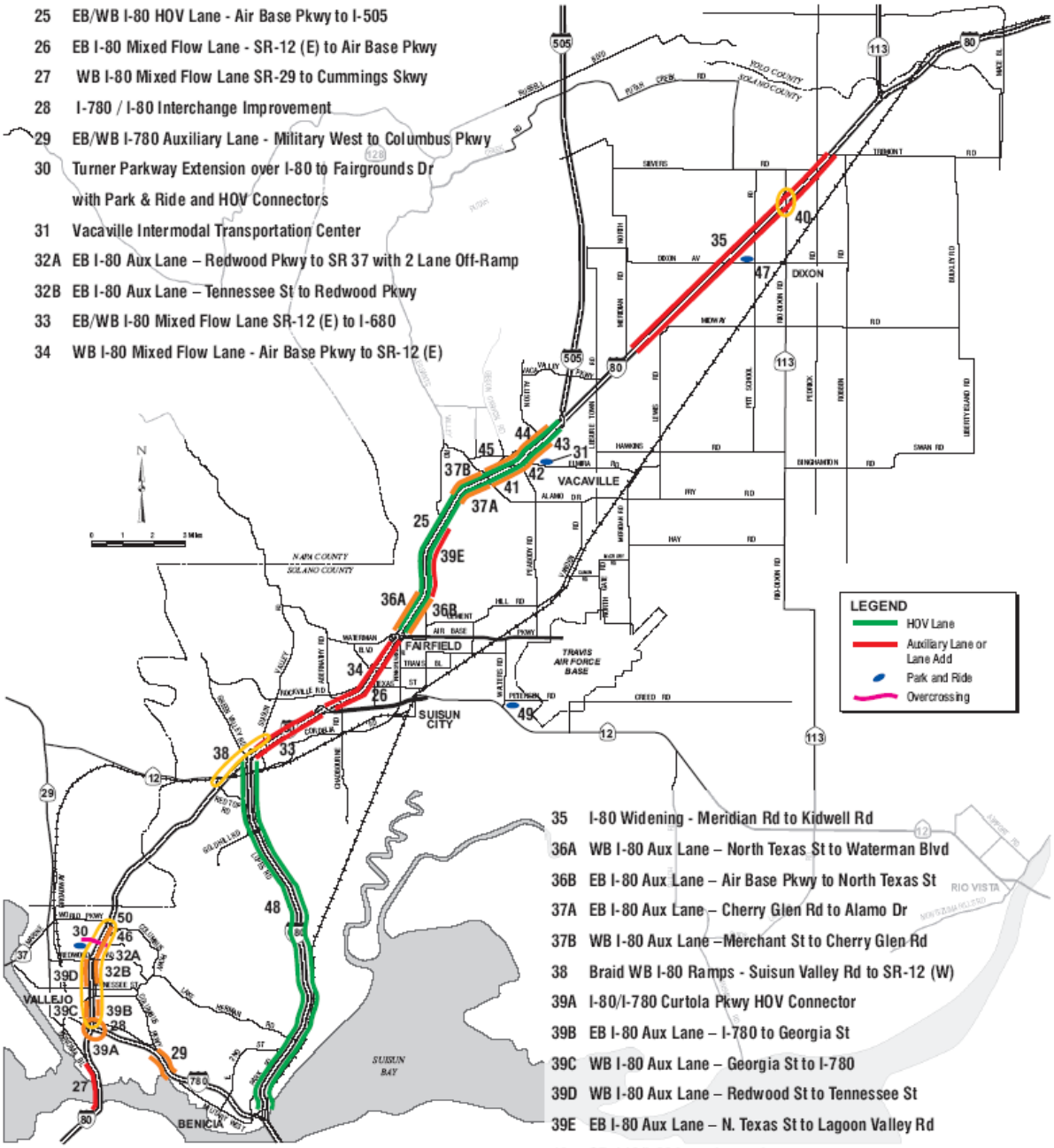


I-80 / I-680 / I-780 MIS / CORRIDOR STUDY

Figure 0-3

LONG TERM PROJECTS IN ORDER OF PRIORITY

June 5, 2003 Rev 7-1-03 Rev 7-7-03 Rev 8-7-03 Rev 8-11-03 Rev 10-1-03 Rev 11-25-03 Rev 12-15-03 Rev 1-15-04 Rev 1-26-04 Rev 1-28-04 Rev 1-29-04 Rev 2-23-04 Rev 3-04-04 Rev 5-06-04 Rev 5-07-04 Rev 5-18-04 Rev 5-25-04 Rev 6-17-04 Rev 8-4-04

0-8

STA
Solano Transportation Authority

Solano County

Transit Element


June

2005

SOLANO
Comprehensive Transportation Plan

TRANSIT ELEMENT

SUMMARY

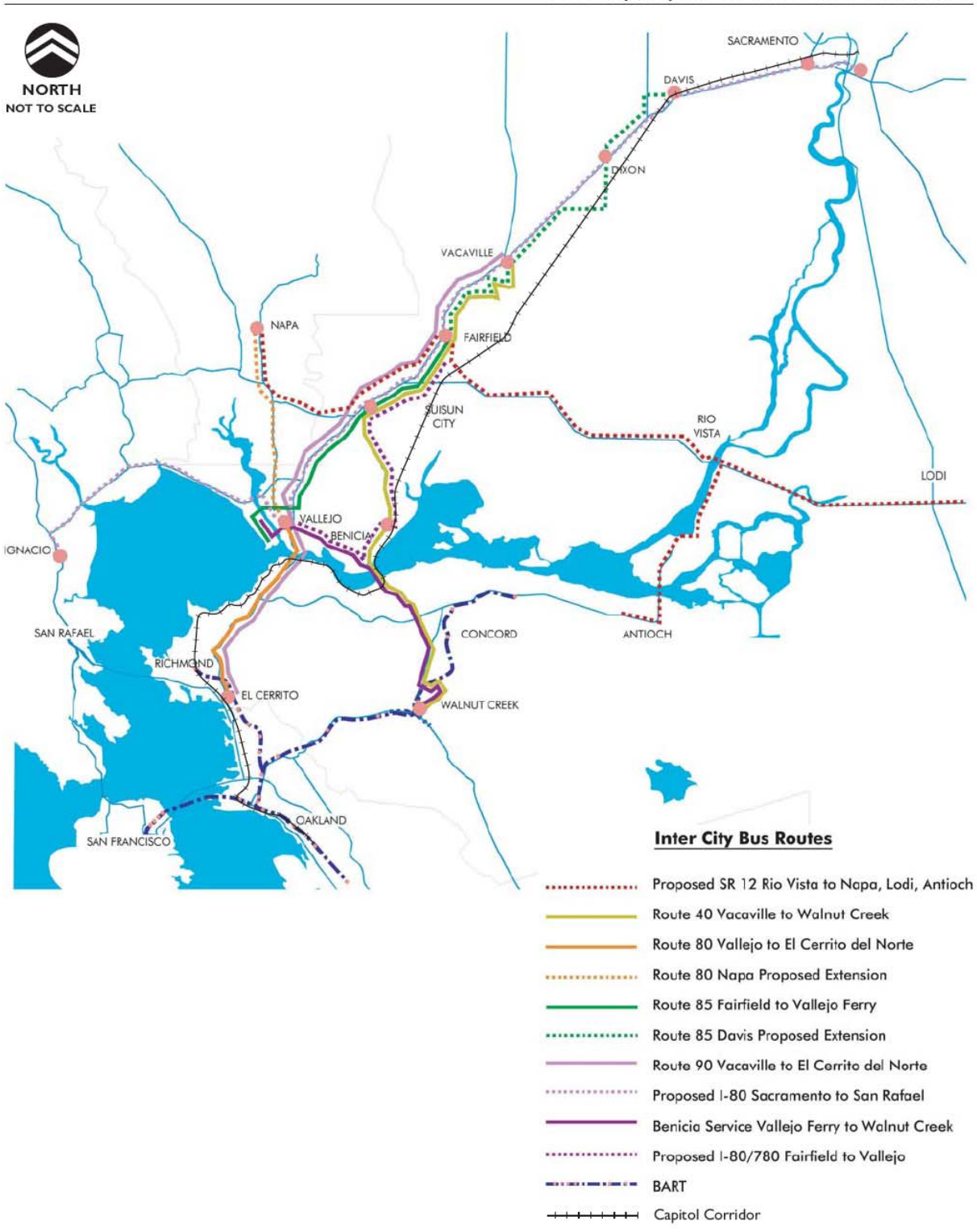
The Transit Element proposes to double the number of daily transit trips by 2030 assuming there is adequate funding. It does this by expanding the coverage of service, increasing frequencies, improving the quality of service and enhancing access to the service. Core elements of the plan include 15 minute frequency peak hour ferry service to San Francisco, hourly Capitol Corridor passenger rail service and half hour peak period commuter service with more Solano County stations to improve access and increasing intercity bus services by threefold. New Sunday service is proposed on at least three key intercity bus routes. Improvement to the intercity transit services will need to be coordinated with improvements to local bus, pedestrian, bicycle and automobile access (park and ride). Improvements to the freeway and highway system need to consider opportunities to improve access. These improvements are proposed to increase daily ridership of intercity transit services from 6,000 today to approximately 12,000 by Year 2030.

The Transit Element of the Solano Comprehensive Transportation Plan consists of five components:

- Intercity Bus
- Intercity Passenger Rail
- Ferry Services
- Intercity Transit Service for Senior and Disabled (Paratransit)
- Support Systems

PURPOSE AND NEED

Intercity transit services enhance travel mobility to/from and within Solano County as well as providing increased transportation capacity. The population of Solano County is projected to increase 46 percent between 2000 and 2030. This suggests a corresponding increase in the number of intercity commute and other travel.



ENGINEERS PLANNERS ECONOMISTS
Wilbur Smith Associates

Figure 2.1
COMPREHENSIVE TRANSPORTATION PLAN
2025 VISION INTERCITY BUS SERVICE PLAN
388000\FR\CHAPTER 5\FIGURE 5-1 - 6/14/04

By 2030, ABAG is projecting an increase in total jobs in Solano County from 123,210 in 2000 to 218,000 jobs by 2030. However, by 2030, the number of employed workers is also expected to increase from 179,517 to 305,500 adding increased pressure on already congested roads. Without added investment in intercity transit services, regional roadways will become increasingly congested thereby adversely impacting the quality of life in Solano County and also its economic vitality. Solano County's location midway between the Bay Area and Sacramento provides special opportunities to share transportation costs with neighboring counties.

INTERCITY BUS TRANSIT PLAN

Nine public intercity bus routes are presently operated by Solano County transit agencies. One route (Route 20) connects Fairfield-Vacaville, another (Route 30) connects to Davis and Sacramento, two routes (Routes 40 and Benicia Route 1) connect to the Pleasant Hill BART Station, two routes (Route 85 and Benicia Route 1) connect to the Vallejo Ferry Terminal and three routes (Routes 80, 90 & 91) connect to the El Cerrito del Norte BART Station. Public intercity bus connections to Napa from Vallejo are provided by VINE Transit and YoloBus provides connections to Winters and Davis from Vacaville. No Sunday service is currently provided on these lines.

The recommended intercity bus service plan (Figure 2.1) represents a financially unconstrained vision or blueprint for service. Three intermediate levels of service or phases were defined reflecting a range of possible funding resources (Table 2.1). Implementation of the service vision would involve expanded public discussion and input to refine its elements.

TABLE 2.1, LEVELS OF SERVICE

Level	New Annual Funding	Source
1	$500,000	All local TDA used for transit
2	$1 million + TDA and growth	Sales tax and all TDA
3	$2 million + TDA and growth	Sales tax and all TDA
4	Unconstrained "vision"	Sales tax, RM2 bridge tolls, TDA, etc.

Based on the recently completed I-80/I-680/I-780 Transit Corridor Study, net increased capital costs (using current fleet as baseline) associated solely with bus fleet and bus storage and maintenance facilities would range from a low of $16.3 million for Phase 1 service levels to $70 million for the Vision service levels over a 25 year period. These costs are based on $400,000 each for intercity bus coaches and an allowance of $100,000 per bus for supporting storage and maintenance facility improvements. Fleet costs are based on a 13-year useful life for buses, which translates into a full replacement or nearly two times over a 25-year funding period. Recognizing that the full implementation of the different service improvement levels would not likely occur at the outset of the 25-year planning program a factor of 0.8 was applied to the net increased service level to estimate bus fleet purchases. As some of the proposed intercity bus services link with neighboring counties, it is logical to consider that Napa, Contra Costa, San Joaquin, Yolo/Sacramento and Marin/Sonoma counties might partner in funding these services.

INTERCITY PASSENGER RAIL PLAN

One of the principal passenger rail recommendations for the Transit Element is the active support of Capitol Corridor service upgrades along with improved access for Solano County.

The 10-year Vision Plan of the Capitol Corridor Joint Powers Authority (CCJPA) proposes to expand intercity regional service to sixteen trains daily in both directions of travel by 2010 (Figure 2.2), subject to availability of additional state funding. The 16-train frequency would result in almost hourly service. An early objective was achieved in 2002-03 to add a morning train that gets Solano County commuters to Sacramento before 8:00 AM (the current first train now arrives in Sacramento at 7:35 AM).

In addition to more trains, reduced travel times and improved reliability are important service improvements. These are amongst the overall objectives and policy actions, which were defined for intercity transit services. The CCJPA has identified a number of improvements to reduce travel times and to improve schedule reliability. These improvements in and near Solano County include:

ENGINEERS PLANNERS ECONOMISTS
Wilbur Smith Associates

Figure 2.2
KEY REIGONAL HIGHWAYS/PASSENGER RAIL/ FERRY TRANSPORTATION LINKAGES FOR SOLANO COUNTY
388000\DFR\CHAPTER 1\FIGURE 1-1 - 11/20/03

Immediate Projects

- Addition/replacement of a second track for the Yolo Causeway, (completed and opened to service in January 2004).
- Upgrade the Bahia Viaduct and industrial siding track (Benicia)
- Addition of a third track in Dixon

Near-term Period

- Extend and rehabilitate Tolenas lead track

Vision/Long-term Period

- Suisun Bay Bridge Replacement

Potential to increase Solano County ridership of Capitol Corridor stations is closely related to convenience of access. New stations at Fairfield/Vacaville, Benicia and Dixon all look promising. CCJPA policy is to incrementally add stations to the corridor in order to balance improved passenger access with running speeds. Analysis of Solano County station location opportunities indicated that the Fairfield/Vacaville site located at Peabody Road offered good potential for patronage and for quick implementation. This station is being advanced first towards implementation. The Benicia site near Lake Herman Road also looked promising, but alternative sites are being considered and will require more time to implement. The Dixon site appeared to lend itself most to commuter rail patronage oriented towards Sacramento. All three of these sites are included in the Solano Comprehensive Transportation Plan.

Passenger rail service has advanced significantly in the past twenty-year period and has the promise to expand to serve new markets important to Solano County. The Solano Transportation Authority and other partnering counties and transit agencies recently completed commuter rail studies that explored opportunities to add viable passenger rail services to its intercity transit network. These opportunities include:

- I-80 commuter service from Solano County to Oakland/Richmond BART and Sacramento
- Vallejo and Suisun City-Fairfield service to Napa

Ongoing follow-up work is currently underway for the proposed Oakland to Sacramento Regional Rail service. With the passage of Regional Measure 2 and the potential for a transportation sales tax measure, the initial phase of a commuter rail service could commence in Solano County as soon as 2008-10.

FERRY TRANSIT PLAN

The City of Vallejo sponsors "Vallejo Baylink" fast ferry service between the downtown Vallejo waterfront and San Francisco. Currently, the Baylink fleet consists of four boats, three of which will be in daily operation by spring 2005. The fourth vessel will function as a spare to protect Baylink schedule reliability, to be rotated into regular service to ensure a timely repair and preventative maintenance schedule, and to provide service during unscheduled maintenance and other emergencies. Vallejo's Short Range Transit Plan and this Transit Element propose the purchase of a fifth vessel, placed in service by 2007 or 2008.

Other ferry capital improvement needs includes approximately $9 million to complete the $56 million Vallejo Station intermodal facility at the Vallejo Ferry Terminal, including a 1,200-space parking structure, amenity upgrades, an off-street bus transfer facility, and other terminal improvements; and $3 million to complete the Baylink's maintenance facility on Mare Island. This will include sufficient overnight mooring slips, fuel storage, and upgraded maintenance. Regional Measure 2 includes $2.7 million of annual subsidy for the Baylink ferry service.

Based on 2002 costs, Baylink's operating expenses are projected to average $30,000 per typical weekday (current dollars) for four boats in regular daily service, plus one spare. This calculation projects 20 round trip sailings per day, and an average operating expense of $750 per vessel revenue hour. If Vallejo was able to maintain Baylink's FY 2000-01 farebox recovery of 72%, a daily operating subsidy of about $8,000 would be needed, therefore, about $3.0-$3.5 million in annual subsidies would be required for a five boat scenario. The required subsidy could be higher if fuel prices escalate, other costs increases, or if fare ratios of 72% cannot be maintained.

Due to the fact that Solano County has three unrestricted right-of-ways to San Francisco and the Central Bay Area including rail, water, I-80 HOV, Solano should take advantage of all three. In particular, a strategy of adding buses to supplement San Francisco-Vallejo ferries should be followed, particularly once four boats are in regular daily service. Adding buses rather than more ferryboats is far more cost-

effective in terms of both capital and operating costs once the four-boat threshold has been reached. Buses can provide the added flexibility and capacity particularly needed during "the peak of the peak" between 6:00 a.m - 8:00 a.m. and 4:00 p.m. – 6:00 p.m. Additional buses can be added easily and cost-effectively if demand warrants. Vallejo currently uses buses to supplement Baylink ferries during peak times, and also to provide service at times when demand does not warrant a ferryboat.

VALLEJO BAYLINK CAPITAL NEEDS 2005-2010

Vessels	$12,000,000
Maintenance Facility Upgrades	$3,000,000
Vallejo Station Intermodal Facility	$9,000,000
TOTAL	$23,000,000

The City of Benicia would also like to have ferry service and is studying such a potential service as part of their Short Range Transit Plan currently underway. STA believes that any additional ferry service should be coordinated and jointly operated with Vallejo Baylink ferry service to ensure cost effectiveness of such an expanded service. Perhaps a pilot project between Benicia and Vallejo could be considered after the fifth ferry is in operation and sufficient docking facilities are provided in Benicia

TRANSIT SERVICE FOR SENIOR AND DISABLED (PARATRANSIT)

Intercity paratransit services would be expanded in parallel with fixed route services. Efforts would be made to shift passengers able to use the fixed route services onto these more efficient services, in order to better serve the needs of those passengers unable to use the fully accessible fixed route services. The Solano Transportation Authority's "Senior and Disabled Transit Study for Solano County," proposes a wide array of short, medium, and long-term projects such as same-day medical paratransit, service consolidation, and Rio Vista to BART paratransit service, respectively.

TRANSIT SERVICE SUPPORT SYSTEM PLAN

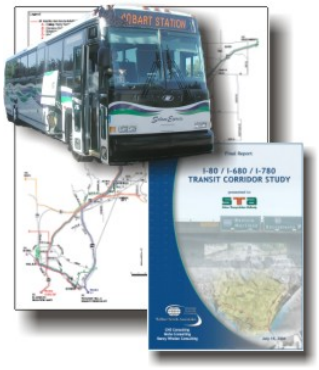
Access to intercity transit service will be important to successfully attracting patronage and enhancing travel mobility in the county. Presently there are about fifteen existing formal park-and-ride lots in the county, one train station and one ferry terminal along with several transit centers and informal park-and-ride lots.

TheI-80/I-680/I-780 Transit Corridor Study and the State Route 12 Major Investment Study propose to expand six park-and-ride lots and to add eight new park-and-ride lots along the I-80 Corridor, two in the I-680 Corridor, three in the I-780 Corridor and two in the Highway 12 Corridor by 2030. Major expansions are proposed for the Vallejo Ferry Terminal, the Curtola park-and-ride lot, and the Fairfield Transportation Center. Aside from the investment in the Vallejo Terminal project, which has already been identified, approximately $55 million is estimated to fund these improvements. Costs associated with improved pedestrian and bus access to interchanges is assumed to be included in overall freeway interchange improvement costs.

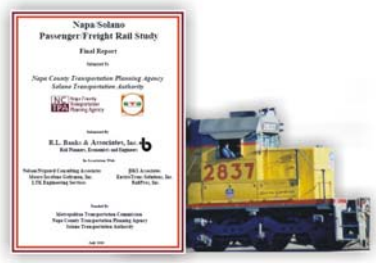
NEXT STEPS

Key to implementing elements of the intercity transit plan is obtaining the necessary funding required to cover operating deficits and to purchase buses, boats and trains and provide supporting infrastructure. The most logical sources for this funding are added Bridge Toll revenues and local "self help" sales tax revenues. Thus, in addition to its ongoing efforts to attract federal and state funding for transportation improvements, Solano County needs to explore revenue potentials from bridge tolls and a local sales tax. Public support will be essential to gain these new revenue sources.

To support these funding requirements, Solano County decision-makers have recently completed or are currently conducting the following important studies. These studies are:



- I-80/680/780 Transit Corridor Study Implementation - This study reviewed the express bus capital and operating needs along the I-80/680/780 corridors. It recommends various short, medium and improvements to the current system and a long range Vision Plan for park and ride facilities, increased express bus services and expanded maintenance facilities. Completed in 2003-04, the implementation of this study will help to program Regional Measure 2 funds as well as prioritize funds from a local transportation sales tax measure.



- Napa-Solano Passenger/Freight Rail Study – This report documented significant travel between Napa and Solano Counties. There is an existing rail corridor that connects the two major centers, and a rail study would determine potential patronage, revenues, costs and subsidy levels for such a service. The STA, the Napa County Transportation Planning Agency (NCTPA) and MTC joined together to fund and manage such a study. This Study was completed in 2003 and follow-up work to this study is expected in the future, beginning with the SR 12 Transit Corridor Study.

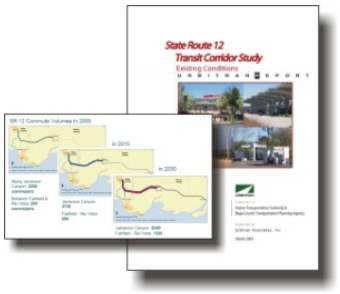
- Auburn to Dixon Commuter Rail Study – As noted in this plan, the Sacramento commute-shed extends well into Solano County. Placer County has in the past expressed interest in working with other counties to explore the potential of passenger rail services operating between Auburn and Dixon or even Fairfield/Vacaville. As with the Napa Study, potential patronage, revenues, costs and subsidy levels for such a service was explored. The Phase 1 work for this Study was completed in 2003-04. Phase 2 will be completed as part of the Oakland-Sacramento Regional Rail study during 2004-05.

- Oakland to Sacramento/Auburn Regional Rail Study (formerly Solano to BART Commuter Rail Study (sBART) – A substantial demand for peak period commute travel exists and this demand is projected to increase in coming years. Commuter trains are a high capacity alternative commute mode, totally segregated from highway congestion problems. The potential for augmenting Capitol Corridor peak commute period capacity, providing a linkage to Richmond BART, Oakland and perhaps even San Jose was investigated as part of the Contra Costa-Solano Rail Feasibility Study,

completed in the summer of 2003 and continues to be investigated as part of the Oakland – Sacramento/Auburn Regional Rail Study to be completed in 2005.

- Local Transit Studies – Local transit studies for the Benicia, Fairfield-Suisun, Rio Vista and Vallejo transit systems are either currently underway or are expected too be completed by 2005/06. These studies will identify critical short term transit needs for each of these communities and will be important input for providing enhanced countywide or subarea services.

- SR 12 Transit Corridor Study – This study was authorized by the STA Board in the fall 2004 with participation by the SolanoLinks Transit Consortium and the Napa County Transportation Planning Agency. It will examine and update the demand for intercity bus service between Rio Vista-Suisun City-Fairfield-Napa and identify a proposed schedule, phasing plan, institutional arrangements and potential funding plan to implement the service. The study is expected to be completed in 2005.



- Transit Consolidation and Institutional Feasibility Study – This study will identify various institutional, financial and organizational options for improving and expanding express and intercity transit services throughout Solano County and into adjoining counties and regions. The success of this study will require the full participation of all Solano transit operators and communities.

In addition to these broad planning and studies, a number of project planning and design studies need to be initiated to advance major projects like the Curtola park-and-ride expansion.

The Transit Consolidation and Institutional Feasibility Study is planned to begin in 2006 after the completion of the other local and regional transit studies, listed above, are completed. The growth of Solano County transit operations may be exceeding the ability of the current institutional structures to provide quality service within an appropriate policy and financial framework. A Transit Consolidation and Institutional Feasibility Study would provide the opportunity for Solano County policymakers to discuss and recommend the overall strategic direction and structure of transit services for the future.

INTRODUCTION

Vallejo Transit, Fairfield-Suisun Transit and Benicia Transit presently operate all of the intercity public bus services in the county. Collectively these intercity services are referred to and marketed as SolanoLinks. The focus of the Transit Element is on these intercity SolanoLinks bus services along with the ferry, passenger rail and intercity paratransit services for Solano County. Local transit services are each addressed by separate individual locally based planning efforts.

The Transit Element Report begins with a Statement of Goals and Objectives along with descriptions of: Forecast Market Demands for intercity transit services; the Current Institutional Framework; and Key Planning Issues. Bus, rail, ferry, and senior/disabled transit service modes are also described. Lastly, infrastructure elements needed to support the Service Plan are described.

PLAN OVERVIEW

The recommended plan represents a "vision" or "blueprint" for intercity transit services in 2030. The Plan is not financially constrained. The proposed implementation strategy; however, is closely linked to the availability of funding resources required to support provision of intercity transit services. Three implementation phases linked to short term funding resource levels (i.e. next 5 years) for operating subsidies are described for illustrative purposes:

- Full utilization of all current local transit funding resources
- An increment of one million dollars annually in new operating revenues
- An increment of two million dollars annually in new operating revenues

The long term unconstrained Vision Plan can most likely be achieved with full resources made available from Regional Measure 2 and a local transportation sales tax measure.

The Plan utilizes the high capacity strengths of ferry and rail modes where possible and uses the flexibility of lower capacity buses to feed these high capacity modes and to serve travel demands not located along rail and ferry corridors. Baylink ferries have capacity to serve 325 passengers per boat trip and Capitol Corridor trains can

serve up to 600 passengers per train. Standard 40 foot long buses have capacity to serve about 45 or more seated passengers.

GOALS AND OBJECTIVES

One stated goal of the Solano Comprehensive Transportation Plan, specifically for intercity public transit is:

> **Develop a Comprehensive Transit System for Buses, Rail and Ferries to Meet Future Demand**

Five objectives have been defined for this transit goal:

- **Objective A -** Convenient Public Transit
- **Objective B -** New Service
- **Objective C -** Efficient Transit
- **Objective D -** Multi-modal system
- **Objective E –** Economic Considerations

Objective A – Convenient Public Transit:

Provide intercity public transit services with convenient access to developed areas of the county

Objective A Policy Actions:

1. Provide intercity service coverage with convenient access for the County's population
2. Provide basic non-commute oriented intercity services seven days a week
3. Provide hours-of-service weekday service coverage as needed
4. Meet ADA requirements for fully accessible intercity services

Objective B – New Service

Provide improved and new services to maximize usage and minimize traffic congestion.

Objective B Policy Actions:

1. Maximize intercity patronage
2. Provide reliable service
3. Provide competitive travel times to automobile travel
4. Provide convenient access to intercity service stops
5. Provide comfortable, safe and passenger friendly stop facilities
6. Provide easy to remember frequent service
7. Define fare policy for easy payment and affordable fares, incorporating the new TransLink technology and addressing the needs of low and moderate-income persons
8. Provide a choice of mode in the I-80 and I-680 corridors
9. Support congestion relief objectives
10. Set priorities for new intercity transit and countywide paratransit services
11. Set new intercity and commuter rail service priorities
12. Develop priorities, standards and a funding plan for long range ferry services

Objective C – Efficient Transit

Provide efficient intercity transit services to maximize ridership and cost effectiveness.

Objective C Policy Actions:

1. Prioritize capital investment to favor riders per dollar and coverage equity
2. Minimize Operating and Maintenance costs per vehicle-mile, vehicle-hour, passenger and passenger mile served
3. Balance service supply with passenger demands
4. Coordinate intercity services with other regional providers
5. Encourage use of high-capacity alternative travel modes
6. Provide funding for priority countywide transit services

Objective D – Multi-modal system

Integrate intercity services with local transit and other modes to provide a seamless multi-modal transportation system.

Objective D Policy Actions:

1. Provide safe and convenient pedestrian access to intercity service stops
2. Provide for bicycle carry on for bus/train/ferry and bicycle lockers at key stops
3. Structure service around time transfer hubs/stations to maximize transfer opportunities
4. Configure HOV facilities to be transit accessible and maximize usage of these facilities
5. Develop countywide HOV system and priorities for implementation
6. Coordinate Solano County service plan and operations with other providers in the Region
7. Coordinate passenger information and marketing efforts
8. Coordinate fare and transfer policies
9. Study the feasibility of consolidating transit providers in Solano County

Objective E – Economic Considerations

Address economic considerations when conduction transit plans and implementing new services.

Objective E Policy Actions:

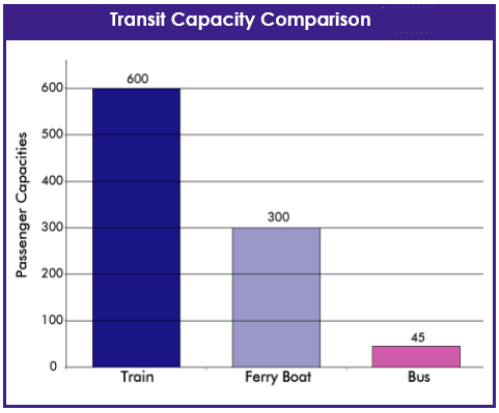
1. Provide opportunities for community involvement when improving and expanding various transit services, the transit operators should address the needs of minorities and low to moderate income persons in Solano County
2. Support proposals of the SolanoWorks (Welfare-to-Work) program and community based or lifeline transportation plans whenever feasible

MARKET DEMAND

A brief description of the role intercity transit could play in meeting projected mobility needs is presented here as a prologue and foundation for the recommended intercity transit plan.

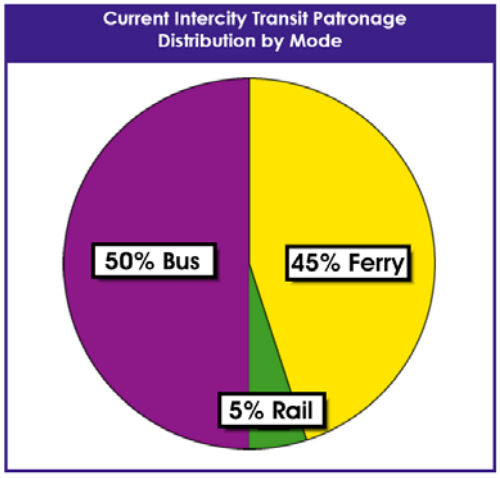
Transit Mode Capacities

Transit is a means to minimize traffic congestion as well as a means of providing mobility choices. Capitol Corridor trains, which each provide capacity for 600 passengers, can provide the equivalent transportation capacity of 400 to 500 private automobiles, which translates into about 20 to 25 percent of a freeway lane capacity. Four to five trains per hour would provide the equivalent capacity as an entire freeway lane.



Baylink ferries with capacities of 325 passengers per boat could provide the equivalence of half a freeway lane of capacity with 15-minute headway service. Standard size buses with capacities of 45 passengers per bus can provide a freeway lane's equivalent capacity if operated on one-minute headways. Perhaps more importantly these high capacity transit modes can facilitate significantly improved travel flow conditions. As illustrated by Caltrans' ramp metering and metering measures for the Bay Bridge, very modest reductions in traffic volume can significantly improve overall traffic flow. Thus, buses, ferries and trains diverting demand away from Single Occupant Vehicle (SOV) commuting can provide substantial benefits even to those choosing to drive. The ability of buses to share HOV facilities also helps to increase the person carrying capacity of freeway facilities.

Current Transit Usage



Approximately 6,000 intercity transit trips are made to or from Solano County on an average weekday. Approximately 50 percent of these inter-county transit trips are made by bus, with 45 percent made by ferry and the remaining 5 percent made by train. Another 800 daily intercity transit trips are made between communities in Solano County. While this seems like a large number, it is quite small in comparison to average daily traffic volumes entering and leaving the county, not to mention the large number of vehicle trips traveling between Solano County communities. Over 300,000 vehicle trips daily cross into/out of Solano County. Estimating an average of 1.2 persons per vehicle translates into 360,000 daily person trips of which 6,000 presently use public transit. This daily transit patronage amounts to less than two percent of the total intercity trips. Since some of the vehicle trips entering and leaving the county are through trips, transit usage is probably in the two to

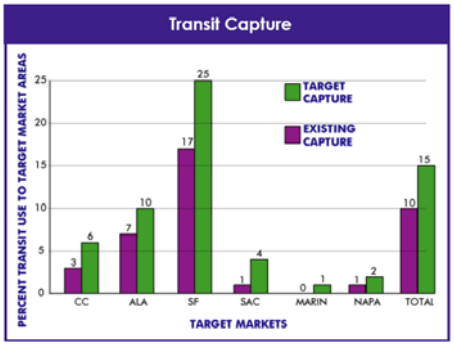
three percent range. As such, a substantial opportunity exists to increase intercity transit usage.

Projected Growth in Travel

Population and employment projections prepared by the Association of Bay Area Governments (ABAG) for Solano County indicate that commute travel to and from the County will continue to increase. In Year 2000 Solano County was estimated to have 179,500 residents employed in the workforce. Fifty-four percent worked within the County and 46 percent commuted to other counties for work. Year 2030 forecasts that Solano County will have 305,500 residents working, with 42 percent working outside the county. While the percentage of residents working outside the county is projected to decrease, the absolute amount increases from 82,000 today to 113,000 in 2030. This is a net increase of 31,000 additional residents commuting out of the county to work.

The largest commute destination is projected to be Contra Costa County (34,600 jobs). Alameda County is projected to be the second largest commute destination (18,100 jobs), Napa is the third largest with 16,800 jobs and San Francisco eventually moving from third to fourth with 16,700 jobs. Sacramento and Yolo counties are also expected to provide a total of 15,400 jobs by 2030. Marin and Sonoma Counties together account for 9,400 and 8,200 jobs respectively. . Percentage-wise the Napa commute market appears to be growing the fastest according to the ABAG forecasts. The documented commute market to Sacramento and Yolo counties appears to understate actual commute activity. Most Solano County workers are projected to be county residents.

Target Transit Capture



Based on data from the 2000 U.S. Census, current proportions of peak commute and total daily trips made using transit to points outside of Solano County were estimated by comparing transit patronage data with MTC travel modeling data. The intent of this comparison was to identify order of magnitude transit capture relationships. Not unexpectedly, the San Francisco capture rate is very high, reflecting the high cost of parking, high levels of congestion, relatively concentrated trip destinations and high level of intercity transit resources focused on this market. Alameda County also has a relatively high capture rate, for many of the same reasons (excellent BART linkages, but low parking costs). Contra Costa County capture rate assessment focused on the Concord and Walnut Creek destinatons. Absence of parking costs and the dispersed development pattern for intercity transit services results in lower usage rates.

CURRENT INSTITUTIONAL FRAMEWORK

Intercity transit services serving Solano County are provided and supported by about a dozen key agencies:

- Solano Transportation Authority (STA) and its Solano Napa Commuter Information (SNCI) program
- Vallejo Transit (VT)
- Fairfield-Suisun Transit (FST)
- Benicia Transit (BT)
- Vacaville City Coach (VCC)
- Dixon Readi Ride
- Rio Vista Transit
- Solano County
- Capitol Corridor Joint Powers Authority (CCJPA)
- Amtrak
- Metropolitan Transportation Commission (MTC)
- Caltrans
- Greyhound Bus Lines

In addition to these key agencies, two neighboring counties provide important intercity connections to Solano County. VINE Transit and YoloBus provide linkages to Napa and to Winters/Davis respectively. No intercity public transit services are presently provided across Highway 37 linking Vallejo and Solano County communities to Marin and Sonoma counties, other than the dedicated Capitol Corridor/Amtrak feeder buses.

Table 2.2 summarizes principal roles for each of the twelve key agencies identified above. Greyhound Bus Lines operates private intercity bus services. Capitol Corridor Joint Powers Authority operates the intercity passenger rail service and the City of Vallejo operates the Baylink Ferry service. Vallejo Transit, Fairfield-Suisun Transit, Benicia Transit, Vacaville City Coach and Dixon Readi-Ride provide local feeder bus services in support of intercity transit services. The STA's Solano Napa Commuter Information (SNCI) program and Caltrans are key partners with respect to park-and-ride facilities. In addition to Solano County, the SNCI program also serves Napa County. Rio Vista provides some intercity specialty transport services. With the exception of Greyhound, all the agencies are important partners in funding public transit services in

Solano County. The Solano Transportation Authority provides the forum for coordinating funding, service and marketing interfaces and other major elements important to intercity bus services.

TABLE 2.2 – TRANSIT RESPONSIBILITY MATRIX

	Policy	Funding	Ferry	Rail	Local Bus	Intercity Bus	Para-transit
STA	✓	✓				✓	✓
Vallejo	✓	✓	✓		✓	✓	✓
Fairfield-Suisun City	✓	✓			✓	✓	✓
Benicia	✓	✓			✓	✓	
Vacaville	✓	✓			✓		
Dixon	✓	✓			✓		
Solano County	✓	✓					
Rio Vista	✓	✓			✓	✓	
CCJPA	✓	✓		✓		*	
Amtrak	✓	✓		✓		*	
MTC	✓	✓					
Caltrans	✓	✓					
Greyhound						✓	

* Dedicated feeder buses to rail services.

Brief descriptions of the STA and the operators of intercity transit services in Solano County are provided in this section. Descriptions of the services are discussed later in this element.

Solano Transportation Authority

The STA was created under a Joint Powers Agreement in 1990 to act as the Congestion Management Agency (CMA) for Solano County to program federal, state and regional transportation funds. Membership is comprised of representatives from the cities of Benicia, Dixon, Fairfield, Rio Vista, Suisun City, Vacaville and Vallejo as well as County of Solano. In addition to programming requirements, STA is also responsible for countywide transportation planning and management of Solano Paratransit and intercity bus Route 30.

The Mission Statement for STA is "to improve the quality of life in Solano County by delivering transportation projects to ensure mobility, travel safety, and economic vitality." Eight goals were established to achieve this Mission Statement:

1. Document transportation needs from both the local and countywide perspectives

10. Provide safety and operational improvements
11. Preserve the existing transportation system
12. Reduce congestion and maintain mobility
13. Improve commute options to the Bay Area and Sacramento regions
14. Promote transit including intercity bus, rail, and ferries
15. Promote alternative modes such as carpooling, vanpooling, and bicycling
16. Encourage Transportation for Livable Communities projects

STA coordinated the development of a multimodal comprehensive transportation plan for Solano County. This Transit Element is a core part of this comprehensive planning effort.

EXISTING INTERCITY TRANSIT PROVIDERS

City of Vallejo Transit Program

Vallejo's transit system is administered by the Vallejo Transportation Division, part of the City's Department of Public Works. The Transportation Division plans, oversees and controls Vallejo's ferry, bus and paratransit services, consistent with City Council-adopted policies outlined in the Short-Range Transit Plan (SRTP). The Transportation Division oversees and monitors operation of the City's transit services through contracts with private sector transportation providers. The Division is also responsible for transit

planning, budgeting, capital project implementation, regional coordination, and other activities required to operate the transit system.

Vallejo operates Vallejo Baylink ferry and bus services to San Francisco, which is supported by bridge toll revenues. Vallejo Transit buses provide local service within Vallejo, and regional express bus service along the I-80 corridor. The cities of Fairfield and Suisun City and the County of Solano provide financial assistance to Vallejo Transit route 85 through an agreement with Vallejo. "BartLink" routes 90 and 91 are subsidized through purchase of service agreements between Vallejo and Fairfield/Suisun City and Vacaville, respectively.

Fairfield-Suisun Transit

The City of Fairfield, through its Public Works Department, manages the contracted operation of Fairfield-Suisun Transit System (FST). Two previously separate city systems were consolidated in 1989 to form one larger system with Fairfield taking the lead role. The City Transportation Manager, under the direct supervision of the Director of Public Works, oversees the service and manages the transit contractor. A full time transit technician and a management analyst provide assistance. Suisun City contracts with Fairfield for operation of the Suisun City routes, and Suisun public works and planning staff offer recommendations on system operation and fare policy. Fairfield contracts with MV Transportation to provide both FST fixed route and paratransit service. FST operates Solano Paratransit and Route 30 via an agreement with STA. In addition, FST operates intercity Routes 20 and 40 through an agreement with the City of Vacaville.

Benicia Transit

Vallejo Transit currently provides day to day direction and management of the fixed route and paratransit transit services for Benicia Transit, which both are contracted out to private providers.

The mission statement for Benicia Transit consists of three elements:

1. The overall purpose of the City of Benicia transit program is to increase mobility opportunities for all Benicia citizens and aid in improving air quality in the region and reducing congestion;

2. As a minimum, the transit program should provide a level of intracity and intercity service that meets the needs of the transit dependent in Benicia; and
3. Where economically feasible, commuter-oriented service will also be offered to encourage use of transit as a viable transportation alternative. Service will be provided to and from important destination points, including transportation center locations, such as BART stations and ferry terminals.

Benicia Transit operates intercity service via I-780 and I-680 from the Vallejo Ferry Terminal, through Benicia, to Pleasant Hill BART.

Vacaville City Coach (Intra-City)

The City of Vacaville, through its Public Works Department manages its contracted transit service operations. This consists of Vacaville's fixed route and paratransit operations. Both services limit their operational area to within the Vacaville City Limits. Vacaville's transit fleet consists of 12 large buses including five fueled by CNG. Vacaville City Coach partners with both Fairfield-Suisun Transit and Vallejo Transit for the provision of inter-city and commute service. Specifically, Vacaville partners with Fairfield-Suisun Transit for their Route 20, 30 and 40 services and with Vallejo for their Route 91 service.

Capitol Corridor Joint Powers Authority (CCJPA)

The CCJPA was created in 1997 and is comprised of members from the Placer County Transportation Authority, Sacramento Regional Transit Agency, BART, Santa Clara Valley Transportation Authority (VTA), Solano Transportation Authority and the Yolo County Transportation District. According to the CCJPA Annual Report, BART provides staff and administrative management to the CCJPA including the following day-to-day responsibilities:

- Oversee the day-to-day train operations contained in the Amtrak operating agreement;
- Coordinate with Amtrak to make changes to the current contract to gain efficiencies that will be used to enhance the service;
- Manage and administer maintenance as performed by Amtrak of the state owned and other rolling stock assigned to the Capitol Corridor and San Joaquin Corridor;
- Oversee the deployment of the rolling stock;

- Oversee the portion of the dedicated feeder bus system for the Capitol Corridor Service that is contracted to private bus operators through the Amtrak contract; and
- Coordinate with Caltrans, Amtrak, UPRR, and the California Transportation Commission (CTC) and local communities to develop and implement a capital improvement program to improve and expand service through track and signal improvements, station upgrades, rolling stock acquisitions/ renovations, and passenger convenience projects and amenities.

By contracting with Amtrak, the CCJPA currently funds 12 daily trains in each direction between the Bay Area and Sacramento.

Amtrak

Amtrak is the national passenger rail service operator, which plans and provides passenger rail services of national interest. Because Amtrak has statutory authority to operate passenger service over the lines of private freight railroads, Amtrak is the vehicle used by states and local agencies that wish to supplement Amtrak's national service trains with corridor trains such as those supported by Caltrans and the CCJPA. Subject to negotiation with the affected railroad, Amtrak can increase or decrease the level of service provided over each route, and to determine where stations are to be served. Amtrak also negotiates with the railroads on behalf of state or local agencies that fund corridor services. Amtrak, by virtue of operating national services and having an in-place administrative system, trained operating crews, and maintenance and service facilities throughout the nation, is also in a good position to be the contract operator of state or locally funded services.

Summary

A number of different intercity transit services are provided to Solano County in order to efficiently serve the individual needs of different local and regional travel markets. A high degree of coordination is evidenced between agencies from the perspective of providing these services. It is very important that these coordination efforts are also apparent to the transit consumer.

PRESENT IMPROVEMENT PLANS AND KEY PLANNING ISSUES

Transportation is very important to Solano County and numerous local and regional planning efforts relate to and influence Solano's Comprehensive Transportation Plan. These planning efforts were reviewed to integrate key recommendations into the Comprehensive Transportation Plan and to identify major unresolved planning issues.

MTC Transportation 2030 Plan

The Regional Transportation Plan is being updated in 2004-05 and is called the "Transportation 2030 Plan." Both a "fiscally constrained" (formerly called Track 1) and an unconstrained component called the "Vision" are being developed and will refine and replace the previous 2001 Track 1 and Blueprint plans.

MTC Express Bus Plan

The STA, Vallejo Transit and Fairfield-Suisun Transit submitted four Solano County oriented Express Bus proposals for consideration in the MTC Express Bus Plan. The I-80, I-680 and I-780 corridors were all identified for service. These proposals for express bus services linking BART stations in Contra Costa County were submitted during 2001-02. Funding opportunities were explored, and implementation scheduled for 2005 and beyond. A key issue will be how to fund the operating subsidies. Approved by voters on march 2, 2004, Regional Measure 2 (RM2 provides $3.4 million pool of annual operations funds for various North Bay express bus routes and is expected to provide the major funds for the regional express bus program including express bus services for Solano County residents and employees.

HOV Facilities Plans

Future medium term plans to provide for High Occupancy Vehicle (HOV) lanes in Solano County call for the addition of center median lanes between I-680 near Cordelia to I- 505 in Vacaville and on I-80 between the Al Zampa (Carquinez Bridge) and SR 37. Caltrans will develop a Project Study Report (PSR) for this project segment. Future HOV lanes are proposed on the Carquinez and Benicia Bridges. The westbound I-80 link between the Carquinez Bridge and Highway 4 in Contra Costa County is included in current proposed projects for State funding. STA has also proposed future long-range HOV lanes on I-680.

Vallejo Transit

The FY 1999/2008 Short Range Transit Plan (SRTP) proposes to:

- Purchase over-the–road coaches to replace aging transit buses for express services
- Rehabilitate the M/V Jet Cat Express (ferry) (already completed)
- Improve San Francisco ferry terminals (completed)
- Fund a fourth fast ferryboat, allowing three in daily service plus a spare (completed)
- Construct Intermodal Ferry Terminal Facility
- Establish a permanent maintenance facility for the Baylink ferry
- Increase capacity of the Curtola park-and-ride facility
- Construct an off-street bus transit center to replace the current on-street Sereno Transit Center (completed)

Vallejo Baylink Ferry Service

The City of Vallejo's highest priority transit capital project is construction of the proposed $56 million "Vallejo Station" project adjacent to the Vallejo Ferry Terminal. So far, about $47 million in federal, state, and local funds has been secured for the project with assistance from the Solano Transportation Authority as well as state and federal legislators and Regional Measure 2 ($28 million).

Vallejo Station will support Vallejo's highly successful Baylink fast ferries and express buses, regional BartLink express buses, and other express bus services by providing 1,200 off-street, structured parking spaces for transit patrons. Improved operating facilities for regional and local bus service will be provided, plus major amenity improvements for regional and local bus riders including improved weather protection, upgraded lighting, transit information services, fare media sales, and upgraded safety and security. Other Vallejo Station features include roadway access improvements, bicycle facilities, and improved pedestrian access between downtown Vallejo, the Ferry Terminal, and the waterfront.

By 2010, the Vallejo SRTP Strategic Vision projects that "Vallejo Baylink" ferries and supplemental buses will carry about 5,000 daily commuters and day travelers, with Baylink ferry feeder buses carry 600-700 daily passengers. A fleet of express coaches will also connect Vallejo and Solano County to key BART stations, serving

about 4,000 daily commuter and other trips. Buses would run at least every 15 minutes on each route during rush hours, every 30 minutes during midday and hourly at other times. The intermodal facility will be required before four boats are operated in regular daily service. In the latter years of the SRTP planning period, expansion of the bus maintenance facility is also envisioned.

The acquisition of a fourth Baylink fast ferryboat was funded and received in the summer of 2004. This vessel will enter service in spring 2005 when three boats will be in regular daily operation. The additional operating subsides needed to support a three boat operation is expected to be provided from Regional Measure 2 (RM2) funds. Another funding source, such as a local transportation measure, would be necessary to provide for the capital and operating of a fourth boat in regular daily operation.

Ferry Service to Benicia

Benicia has studied and favors ferry service directly to Benicia. Because a significant proportion of current Vallejo ferry riders (10-15%) are Benicia residents, there is concern that Benicia ferry service could be competitive rather than compatible with the Vallejo ferry service. Previous studies of Benicia ferry service propose a joint Martinez-Benicia ferry service to San Francisco, rather than two individual routes from the nearby cities located across Carquinez Straits. More refined analysis is required to determine whether there is sufficient demand and support for such a route. The Bay Area Water Transit Authority has embarked on a region-wide planning study, which will assess the need for new and expanded ferry services.

Fairfield-Suisun Transit (FST)

The FST Fiscal Year 2000/01 Short-Range Transit Plan identifies nine planning emphasis areas and issues:

1. Need for more frequent local service (30 minute headways)
2. Need for 30 minute service on Route 20 to Vacaville
3. Development of the Fairfield Transportation Center and associated route restructuring plans
4. Development of bus transfer facility in the North Texas Street Corridor
5. Service to developing areas of the community – Rancho Solano, Rolling Hills and Solano Business Park

6. Expansion of Route 40 to Walnut Creek BART Station, possibly with service to Benicia Industrial Park
7. Possible service expansion between Fairfield and Sacramento area destinations
8. Possible implementation of Express Bus Service Concept with service to Benicia Industrial Park
9. Need for increase in driver wages

The Fairfield Transportation Center (item #3) was opened in 2001 with 400 parking spaces and has proven very successful. A 234 space Phase 2 expansion to the Center was completed at the end of 2004.

Benicia Transit

Discussion has been ongoing to transfer the operation of the Vallejo Ferry Terminal to Pleasant Hill BART station intercity bus service to Vallejo Transit. Planning and site selection of an Intermodal Transportation Center near Lake Herman Road, as a first phase towards establishment of a passenger rail station is progressing. New bus service to the Benicia Industrial Park is also being considered. Discussion is underway to consider transferring the operation of Benicia Route 1 from the Vallejo Ferry Terminal to the Pleasant Hill BART station intercity bus service to Vallejo Transit. The City of Benicia is currently updating their Short Range Transit Plan to operating responsibilities to Vallejo

Capitol Corridor Joint Powers Authority

Current plans are to maintain 12 trains during 2003/2004 through 2004/2005. Improvement plans and issues include re-installation of the second track on the Yolo Causeway section (completed), construction of some third track segments between Benicia and Davis to facilitate mixed freight and passenger operations, and improve the Bahia industrial sidings in Benicia for increased speeds and strategies to minimize delays at the UPRR crossing of the straits. The 2004 State Transportation Improvement Program (STIP) includes $2.3 million in state funding and Regional Measure 2 will provide about $7.5 million to fund the Bahia siding track improvements.

Other Passenger Rail Studies

Several commuter rail studies were initiated in 2002/2003 and are continuing through 2004-05. Among these is the possible establishment of commuter rail services in the Sacramento Region overlaid on the Capitol Corridor services. Solano, Placer, and Yolo Counties, SACOG and Sacramento Regional Transit are participating in a track capacity study to determine the operational feasibility of commuter rail service between Auburn/ Sacramento, Davis, Dixon, Fairfield-Vacaville, Suisun City, Benicia, Martinez, Richmond BART, and Oakland). It is possible that such a service could be up and running in five years if local funding for capital and operating expenses can be found.

In 2003, the STA, the Napa County Transportation Planning Agency (NCTPA) and MTC completed a passenger rail study for new service between Napa and Vallejo and the Jameson Canyon (State Highway 12 corridor) service connecting to Fairfield and Suisun City.

North Bay (Highway 37) Corridor Study

The 1998 planning study for this corridor did not find any transportation alternatives that could effectively substitute for automobiles and trucks for this corridor. However, it recommends that subsequent planning for the corridor should re-evaluate the conclusions reached in light of any new information that becomes available. Average daily traffic volumes were estimated to increase from base year 1996 volumes of 26,830 to Year 2015 volumes of 35,800 vehicle trips. A corridor with these demand levels eventually will need to be served by public transit. A key question is where are these trips going to/from? Are these Mare Island and Solano County trips or longer distance through trips from Marin/Sonoma to Sacramento? Also to what extent would Mare Island employment development require intercity bus services?

Interstate-80/Interstate-680/Interstate 780 Corridor Study

In July 2004, STA completed a Major Investment and Corridor Study to determine how to upgrade highway facilities in these critical corridors. Integration of HOV lanes and express bus services into these plans was an important part of the study.

State Route 12 Major Investment Study

In 2001, the STA completed the SR 12 Major Investment Study on the portion of SR 12 from I-80 to Rio Vista Bridge. It examined

various alternative packages to improve the corridor including roadway capacity, safety, transit and ridesharing proposals.

MTC Lifeline Service Program

The Metropolitan Transportation Commission is proposing the establishment of "lifeline" transportation services in the region. For Solano County this would involve slight expansion of coverage and substantial increase in service hours. Off-peak service could possibly involve use of small sized transit vehicles.

TABLE 2.3, TRANSIT NEEDS BY JURISDICTION

In the Fall of 2003, as part of the overall CTP update process the STA conducted a "Needs Analysis." The following transit needs were identified by each of the STA member jurisdictions:

Benicia:

- Construct Benicia Multi-modal Rail Station
- Provide ferry service to Benicia
- Provide more joint bus operations
- Improve or replace bus shelters
- Construct transfer facilities (initial transit stop for Benicia Industrial park at Park Road/Industrial Way)
- Improve schedules
- Increased marketing
- Increase service and routes

Dixon:

- Dixon Multi-modal Rail Station/Transportation Center
- Increased operating hours
- Increase rolling stock
- Increase personnel
- Additional intercity express bus routes
- Transition to fixed route system

Fairfield:

- Fairfield/Vacaville Multi-modal Rail Station
- Expand Fairfield Transportation Center
- Acquire Land and Develop Transit Operations Center
- Commuter Information Systems (GPS)
- ADA Access at bus facilities
- Expand local bus service
- Expand express bus service
- Construct N. Texas Bus Transfer Facility
- Provide change of mode facilities

Rio Vista:

- Construct Ferry Dock
- Provide intermodal transit centers for fixed intercity routes to BART and Rail
- Intra-city shuttle bus

Solano County:

- Solano Paratransit support
- More joint bus operations
- Subsidized paratransit taxi service
- Expand regional express bus service
- Study the consolidation of intercity transit services
- Support Solano County paying its fair share for transit services provided to unincorporated residents by others

Suisun City:

- Improve and provide additional bus shelters
- Provide express bus from Lawler Ranch
- Provide direct bus connections to rail station

Vacaville:

- Vacaville Bus Terminal and Transfer Facility (Downtown)
- Timed Transfer Station near Ulatis Center
- New Transit Yard
- More joint bus operations
- Expand local bus service
- Additional transit vehicles and commuter buses
- Improve Security
- Increase Bus Routes

Vallejo:

- Vallejo Ferry Terminal Intermodal Terminal
- Vallejo Ferry Terminal Parking Structure
- New ferries (3rd and 4th vessels)
- Upgrade/expand maintenance facilities
- Vallejo SRTP transit capital program
- Vallejo SRTP operating revenues
- Expand regional and local bus service
- Expand paratransit
- Improve Mare Island maintenance facilities
- Upgrade Sereno Bus Transfer Facility
- Upgrade York & Marin Bus Transfer Facility
- Vallejo Station Intermodal Parking and transfer center
- Provide evening and weekend bus service
- Expand Capitol Corridor rail service
- Napa Valley rail service to Ferry Terminal
- Vallejo-Fairfield rail service
- Mare Island Bus Service Phase 1 and 2

IMPLEMENTATION STRATEGY

A prime benefit of implementing a bus rapid transit system is the advantage of incremental improvements in quality and service as funding increases and facility improvements occur. The suggested phasing plan first outlines the financially and capitally unconstrained system, which is the 25-year objective. It then details suggested service increases at three different levels: the first with all county TDA allocated to transit operating costs (about a $1.6 million annual increase), a second with an additional $1 million annual spending plus TDA and increases in TDA based on growth in population and retail sales ($1.5 million annual total), and a third assuming $2 million plus the TDA increases ($2.5 million annual total). The unconstrained system assumes that bridge tolls will be available in sufficient qualities to fully fund the "Bridge Toll Eligible" services, freeing up the TDA and potential sales tax funds for other countywide services.

Unconstrained System – The 100 Bus System

The Unconstrained System features BART type headways on most services and makes transit attractive and convenient to Solano County residents. These transit service demands lead to the 100 bus regional system.

Table 2.4 – UNCONSTRAINED INTERCITY BUS NETWORK VISION FOR YEAR 2030

ROUTE	TO/FROM	HEADWAYS		BUS REQUIREMENT		SCHED. CYCLE
		PEAK	BASE	PEAK	BASE	
40	Vacaville to Walnut Creek	10	30	15	5	150
80	Napa to del Norte	15	30	8	4	120
80A	Vallejo and Benicia to El Cerrito (del Norte)	5	15	13	4	60
90	Fairfield to del Norte	10	30	10	4	100
91	Vacaville to del Norte	15	60	8	2	120
New	Sacramento to Marin	30	30	9	9	270
New	Vallejo Ferry to Walnut Creek	10	30	15	5	150
	Subtotal			78	33	
85	Davis to Vallejo Ferry	30	30	6	6	180
85A	Fairfield to Vallejo Ferry	30	0	4	0	120
New	Napa to Suisun Station	30	60	3	2	90
New	Suisun Station to Rio Vista	30	60	3	2	90
New	Rio Vista to Antioch	60	0	1	0	60
New	Rio Vista to Lodi	60	0	1	0	60
20	Vacaville to Fairfield	30	30	2	2	60
30	Davis to Fairfield	0	0	0	0	120
New	Ferry via Benicia Ind. Park	60	0	2	0	120
	Subtotal			22	12	
	Total			**100**	**45**	

First Phase System

The First Phase System increases service by dedicating all TDA funds not presently used for transit to the intercity network.

Table 2.5 – FULL LOCAL TDA POTENTIAL INTERCITY BUS NETWORK YEARS 2005 TO 2030

ROUTE	TO/FROM	HEADWAYS		BUS REQUIREMENT		SCHED. CYCLE
		PEAK	BASE	PEAK	BASE	
40	Vacaville to Walnut Creek	30	0	5	0	150
80	Napa to del Norte	60	30	2	4	120
80A	Vallejo to del Norte	7.5	30	8	2	60
90	Fairfield to del Norte	20	60	5	0	100
91	Vacaville to del Norte	30	0	4	0	120
New	Sacramento to Marin	0	0	0	0	270
New	Vallejo Ferry to Walnut Creek	10	60	10	3	150
	Subtotal			34	9	
85	Davis to Vallejo Ferry	30	30	6	6	180
85A	Fairfield to Vallejo Ferry	0	0	0	0	120
New (12A)	Napa to Suisun Station	60	60	1.5	2	90
New (12B)	Suisun Station to Rio Vista	60	60	1.5	2	90
New (12C)	Rio Vista to Antioch	0	0	0	0	60
New (12D)	Rio Vista to Lodi	0	0	0	0	60
20	Vacaville to Fairfield	60	60	1	1	60
30	Davis to Fairfield	0	0	0	0	120
New	Ferry to Fairfield via Benicia Ind. Park	60	0	2	0	120
	Subtotal			12	11	
	Total			**46**	**20**	

Second Phase System

The Second Phase System increases service by using all county TCA funds not presently used for transit and adding another $1 million annually from other sources.

Table 2.6 – FULL TDA INTERCITY AND $1 MILLION BUS NETWORK YEARS 2005 TO 2030

ROUTE	TO/FROM	HEADWAYS		BUS REQUIREMENT		SCHED. CYCLE
		PEAK	BASE	PEAK	BASE	
40	Vacaville to Walnut Creek	30	0	5	0	150
80	Napa to del Norte	30	30	4	4	120
80A	Vallejo to del Norte	5	30	12	2	60
90	Fairfield to del Norte	20	60	5	2	100
91	Vacaville to del Norte	30	0	4	0	120
New	Sacramento to Marin	60	120	4	2	270
New	Vallejo Ferry to Walnut Creek	10	60	10	3	150
	Subtotal			44	13	
85	Davis to Vallejo Ferry	30	30	6	6	180
85A	Fairfield to Vallejo Ferry	0	0	0	0	120
New	Napa to Suisun Station	60	60	1.5	2	90
New	Suisun Station to Rio Vista	60	60	1.5	2	90
New	Rio Vista to Antioch	0	0	0	0	60
New	Rio Vista to Lodi	0	0	0	0	60
20	Vacaville to Fairfield	60	60	1	1	60
30	Davis to Fairfield	0	0	0	0	120
New	Ferry to Fairfield via Benicia Ind. Park	60	0	2	0	120
	Subtotal			12	11	
	Total			**56**	**24**	

Third Phase System

The Third Phase System increases service by using all county TDA funds not presently used for transit and increasing funding by another $2 million annually.

Table 2.7 – FULL TDA INTERCITY AND $2 MILLION BUS NETWORK YEARS 2005 – 2030

ROUTE	TO/FROM	HEADWAYS		BUS REQUIREMENT		SCHED. CYCLE
		PEAK	BASE	PEAK	BASE	
40	Vacaville to Walnut Creek	15	30	8	5	150
80	Napa to del Norte	30	30	4	4	120
80A	Vallejo to del Norte	5	0	12	0	60
90	Fairfield to del Norte	15	60	7	2	100
91	Vacaville to del Norte	30	60	4	2	120
New	Sacramento to Marin	60	120	4	2	270
New	Vallejo Ferry to Walnut Creek	10	30	10	5	150
	Subtotal			49	20	
85	Davis to Vallejo Ferry	30	30	6	6	180
85A	Fairfield to Vallejo Ferry	30	0	4	0	120
New	Napa to Suisun Station	60	60	1.5	2	90
New	Suisun Station to Rio Vista	60	60	1.5	2	90
New	Rio Vista to Antioch	60	0	1	0	60
New	Rio Vista to Lodi	0	0	0	0	60
20	Vacaville to Fairfield	60	60	1	1	60
30	Davis to Fairfield	0	0	0	0	120
New	Ferry to Fairfield via Benicia Ind. Park	60	0	2	0	120
	Subtotal			17	11	
	Total			**66**	**31**	

Weekend Service

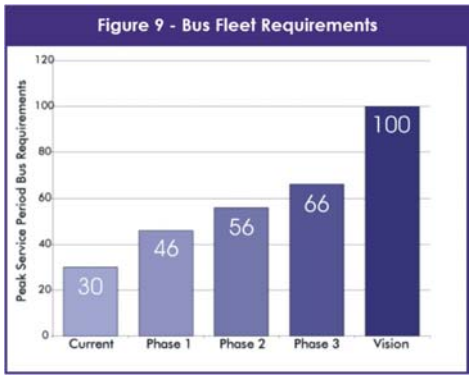
At present only the Capitol Corridor rail service and the Baylink ferry operate on Sundays. Both services presently only have a single stop in Solano County. Operation of Route 85 from Davis to the Vallejo Ferry Terminal is proposed along with Vallejo to del Norte Route 80 service on Sunday to expand access to intercity transit services. To complement these I-80 services, operation of the new service between Vallejo Ferry Terminal and the Walnut Creek BART station is also proposed for Sunday.

Equipment and Support Facility Needs

Estimated peak commute/service period bus requirements to operate the phased intercity bus service improvement plan are as follows:

ESTIMATED PEAK PERIOD BUS REQUIREMENTS

Phase	Peak Hour Buses	Total Including Spares
Current	30	35
First Phase	46	53
Second Phase	56	65
Third Phase	66	76
Unconstrained	100	115



The chart to the left graphically describes the peak bus fleet requirements associated with the vision and its intermediate implementation phases.

Current bus storage and maintenance facilities are over capacity and do not have resources to support the expanded intercity bus fleet nor expansions of their local bus fleets. Major expansions of current facilities are limited, indicating the need for one or more new bus maintenance/storage facilities, depending on expansion needs of local bus services.

Capital Funding Needs

Net increased capital costs (using current fleet as baseline) associated solely with bus fleet and bus storage and maintenance facilities would range from a low of $16.3 million for Phase 1 service levels to

$70 million for the Vision service levels over a 25 year period. These costs are based on $400,000 each for intercity bus coaches and an allowance of $100,000 per bus for supporting storage and maintenance facility improvements. Fleet costs are based on a 13-year useful life for buses or full replacement 1.5 times over a 25-year funding period. Recognizing that the full implementation of the different service improvement levels would not likely occur at the outset of the 20-year planning program a factor of 0.8 was applied to the net increased service level to estimate bus fleet purchases.

KEY ISSUES

Solano County is a fast changing community located midway between two of the most important regions in the world, the San Francisco Bay Area and the capital city of Sacramento. Intercity travel needs include those trips within Solano County as well as trips to neighboring regions. Its location between two important regions of the state provides strategic opportunities to upgrade intercity public transit services. Key issues include:

- What will be the market/community needs for intercity public transit services in the near and distant future?
- What is the best balance between intercity bus, intercity rail and ferry services? Local bus service?
- Bus rail and ferry services oriented to San Francisco are booming – what is the best balance for services oriented to Sacramento and intra-county travel?
- How many rail stations are warranted in Solano County and how should their implementation be phased?
- Will the increase in rail service frequency ultimately lead to the need for local stop commuter rail to complement higher speed long distance Capitol Corridor train service?
- What is the best strategy to integrate intercity transit services into the County and State comprehensive transportation plans?
- What is the best organizational framework to provide future intercity transit services?
- What passenger intermodal terminals, vehicle, maintenance/storage facility needs might be required to support successful service?
- What funding is required to support these services and how might they be funded?

INTERCITY BUS SERVICES

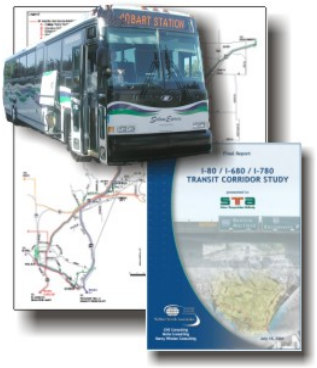
Descriptions of current bus services are provided followed by a description of the recommended bus component of the intercity plan and its implementation strategy.

EXISTING BUS SERVICES

A brief summary of key service features for each of the intercity transit operators is provided in this section. Figure 6 shows the present publicly provided SolanoLinks intercity bus routes serving Solano County, along with the passenger rail corridor.

Overall, the SolanoLinks bus services, the Capitol Corridor passenger rail service, and the Baylink ferry service are estimated to serve approximately 6,000 daily passenger trips on an average weekday. Capitol Corridor service carries about 300 daily riders from Solano's only rail station, located at Suisun City. The Baylink ferry service carries about 2,800 daily riders. Vallejo Transit serves about 2,300 trips to/from the County on Routes 80, 90 and 91. Fairfield-Suisun Transit carries about 150 trips to/from the County on Routes 30 and 40 and Benicia Transit is estimated to carry 400 daily riders to/from Solano County on an average weekday.

As such, the Capitol Corridor serves approximately 5 percent of intercity transit trips to points outside Solano County, and the Baylink ferry serves about 45 percent with the remaining 50 percent served by intercity bus services.



I-80/I-680/I-780 Transit Corridor Study

The I-80/I-680/I-780 Transit Corridor Study Final Report, prepared by Wilbur Smith Associates in 2003-04, provides an analysis of existing transit services and transit demand, and implementation plans for the County's intercity express bus services and auxiliary facility improvements (Figure 2.3). Solano County has a need to develop a short and long-range multi-modal transportation plan for the I-80/I-680/I-780 Transit Corridor to accommodate projected growth through 2030.

Along with an analysis of intercity bus services, the report reviewed existing park and ride facilities, transit centers, rail services, corridor express bus service plans, and ferry terminal routes. The Transit Corridor Study recommends ten actions for implementation. The recommended actions are as follows:

- Incorporate the I-80/I-680/I-780 Transit Corridor Study Plan into this Update of the Solano County Comprehensive Transportation Plan;

- Fund and implement the first five year projects (with particular attention to right of way protection for park and ride facilities);

- Develop an annual and multi-year funding agreement (Memorandum of Understanding: M.O.U.) for intercity transit services;

- Fund and conduct a Transit Consolidation Study, which includes bus maintenance and storage yard issues;

- Seek funding through Regional Measure 2 and local transportation measure to implement elements of the Plan;

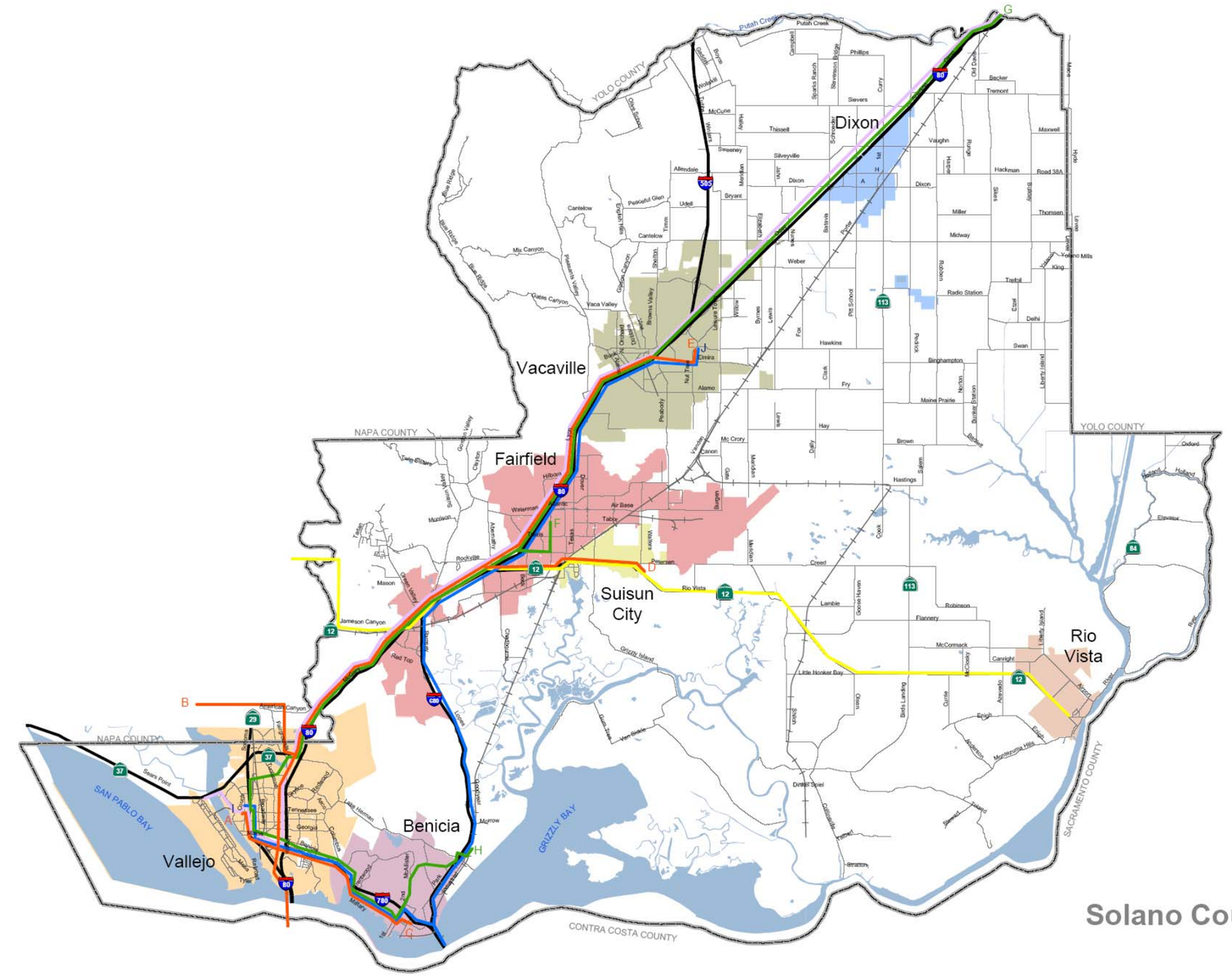
- Work with Caltrans and Contra Costa County to provide a continuous eastbound HOV facility on I-80 by eliminating the short gap approaching the Carquinez Bridge;

- Work with Caltrans to provide a southbound HOV approach to the Benicia Bridge and across the span;

- Coordinate with ongoing planning of Segment 1 with respect to opportunities to add direct ramp at Abernathy Road should studies show the overpass must be rebuilt;

- Coordinate with BART to upgrade the del Norte shelter for Vallejo Transit passengers, including provision of real time passenger information at the shelter; and

- Initiate a multi-modal corridor study for State Route 12 (in coordination with Districts 4 and 10, and Napa and San Joaquin Counties).



LEGEND

EL CERRITO DEL NORTE BART BUS ROUTES
- A VALLEJO FERRY TERMINAL
- B SEVERUS DRIVE
- C DOWNTOWN BENICIA
- D HIGHWAY 12 WALTERS ROAD
- E VACAVILLE INTERMODAL CENTER (NEW)

VALLEJO FERRY TERMINAL ROUTES
- F SOLANO MALL
- G SACRAMENTO
- H BENICIA INDUSTRIAL PARK

PLEASANT HILL & WALNUT CREEK BARTS
- I VALLEJO FERRY TERMINAL
- J VACAVILLE INTERMODAL CENTER (NEW)

MARIN-SOLANO-DAVIS-SACRAMENTO EXPRESS

HIGHWAY 12 NAPA-SOLANO-LODI/ANTIOCH

N
W E
S

0 5
Miles

1.10.2005

STA
Solano Transportation Authority

Comprehensive Transportation Plan

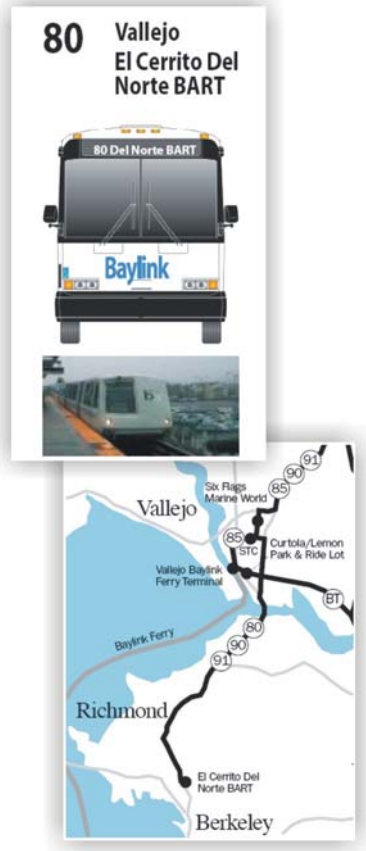
Intercity Bus Vision Plan

Figure 2.3

Vallejo Transit Bus Service

Vallejo Transit operates four regional bus services including:

- Route 80, Vallejo to El Cerrito del Norte BART
- Route 85, Fairfield and Suisun City to Vallejo via Solano College
- Route 90, Fairfield and Suisun City to El Cerrito del Norte BART
- Route 91, Vacaville to El Cerrito del Norte BART



Route 80 is the original BARTLink service, and connects downtown Vallejo (near the Ferry Terminal) with the del Norte BART station. Some morning peak period trips originate north of downtown Vallejo. Service is provided Monday through Saturday. On weekdays, the first trip departs Vallejo at 4:15 a.m. and the last return trip leaves BART at 11:00 p.m. Service is provided every eight to fifteen minutes during the peak, and every 30 minutes in the midday. On Saturdays, service is provided every 30 minutes. Travel time from Vallejo to del Norte BART using the I-80 HOV lanes is about 25 minutes.

Route 85 links Vallejo and Fairfield, via the Solano Community College. Service is provided Monday through Saturday. On weekdays, the first trip departs at 6:33 a.m. from Fairfield and 5:35 a.m. from Vallejo. Morning peak period commute service operates on 30-minute frequencies and service continues at hourly frequencies until 9:30 p.m. from Vallejo and 10:30 p.m. from Fairfield. On Saturday mornings, service starts one hour later. All trips connect with the Vallejo Ferry Terminal and with Route 80. Travel time from Vallejo to Fairfield is about 55 minutes.

Route 90 links Fairfield and Suisun City with the El Cerrito del Norte BART Station. Service is provided weekdays only at 60-minute service frequencies with additional service in the peak periods (15 to 20 minute frequencies). First trip departs at 5:00 a.m., with the last trip returning at 7:30 p.m. from BART. Travel time from Fairfield to BART is about 40 minutes. Fairfield-Suisun Transit covers all subsidy needs for Route 90.

Route 91 provides four morning trips from Vacaville, and four evening trips return from BART to Vacaville. There is no midday or weekend service. First trip departs at 5:00 a.m., with the last trip returning at about 8:15 p.m. from BART. Travel time from Vacaville to BART is about 55 minutes.

Patronage Characteristics

On a typical weekday, Vallejo Transit's intercity routes carry approximately 2,685 passengers. Route 80 from Vallejo to del Norte BART carries the most (1,454) with Route 85 carrying 482 passengers and Routes 90 and 91 carrying 543 and 206 passengers respectively.

Equipment and Support Facilities

Vallejo Transit operates from an extensive and modern maintenance facility located in north Vallejo. This city owned five-acre facility currently accommodates 63 buses, although it was originally designed for 48 vehicles.

A total of 16 vehicles are assigned to these intercity services (nine on Route 80, two on Route 85, and five on Routes 90/91). All vehicles are standard transit coaches (generally buses with utilitarian seats, hard floors, standing room, and several doors), as opposed to more comfortable over-the-road coaches (generally intercity-like buses which have larger, more comfortable seats, less standing room, and a quieter ride), which are used by Golden Gate Transit and recently AC Transit for long-haul express bus services. Buses for express routes 85, 90 and 91 enter and leave service each day from Fairfield and Vacaville terminals. The distance between the Vallejo Transit bus storage yard and Route 85 and 90 service portal is about 16 miles. The distance between Route 91's service portal and the Vallejo Transit storage yard is about 24 miles. At average speeds of 55 mph it requires 18 minutes each day to put a bus into service for Routes 85 and 91 and 25 minutes each day to put a bus into service for Route 90. These are unproductive hours during which no passengers are served.

Passenger facilities are generally good, with ongoing planning for additional improvements. At the El Cerrito del Norte BART Station, buses use the improved bus waiting areas. There is good signage and adequate passenger shelter. The Curtola park-and-ride facility's 450 auto spaces are often full by 7 am. The City of Vallejo is in the process of developing a major improvement to the ferry terminal. This $56 million "Vallejo Station" project would provide 1,200 parking spaces and enhanced bus transfer facilities.

Policies

As a multi-modal operator, Vallejo has several key objectives as outlined in the system's Short Range Transit Plan (SRTP). These five objectives are:

1. Control the operating budget
2. Increase system productivity
3. Implement effective marketing
4. Focus expansion on high demand and high farebox return
5. Undertake efforts to obtain new funding sources

A series of actions are anticipated in the SRTP to achieve compliance with the five objectives. These action items include:

- Competitive procurement of transit services
- Targeted patronage objectives (for example, 809,000 annual Baylink passengers)
- Maintenance and facility upgrades
- Purchase of new vehicles and vessels

Fares and transfers vary according to distance. The following is a matrix of adult fares:

Transfers to and from the connecting local bus system are valid at their face value for credit on the intercity buses. Monthly passes are available and cost $85 for the Fairfield to BART service and $91 for the Vacaville to BART trip. The monthly pass for the Route 80 costs $77, as does the pass valid for Vallejo to Fairfield trips.

Service is fully linked at various locations in Solano County. A major new intermodal transportation facility, the Fairfield Transportation Center (site of the former Magellan Road park-and-ride lot), opened in 2001 and is served by Vallejo Transit Route 85, 90 and 91 buses. Vallejo Transit also serves the Vallejo Ferry terminal and the El Cerrito del Norte BART station. Other key transportation nodes include the Vacaville Regional Transportation Center at Davis Street, Solano Mall, and the Suisun City Amtrak Station.

It should be noted that Vallejo Transit's BARTLink buses (which connects Solano County with the BART system at El Cerrito del Norte station) have routinely achieved farebox recoveries of 80 to 90 percent.

Fairfield-Suisun Transit

FST operates three intercity routes: Route 20 links Fairfield and Vacaville, Route 30 links Fairfield, Vacaville, Dixon, UC Davis, and Sacramento, and Route 40 links Vacaville, Fairfield and the Pleasant Hill BART station. Service frequencies on all three lines are sparse. Service is fully linked at various locations in northern Solano County. A major new facility, the Fairfield Transportation Center, opened in 2001 and is being expanded in 2004. Other key transfer nodes include the Vacaville Regional Transportation Center, Solano Mall, and the Suisun City Amtrak Station. FST intercity routes serve the Pleasant Hill BART station, allowing easy connections to BART for trips to Oakland and San Francisco. The public timetable includes the connecting times (which are generally less than 10 minutes) as well as the overall trip times from Fairfield and Vacaville to San Francisco (about 90 minutes).

Route 20 is an Interstate 80 freeway connector between Fairfield's Solano Mall and the Vacaville Regional Transportation Center, with intermediate stops at Walmart, the Vacaville Factory Stores, and the Vacaville downtown transfer center. Service operates hourly from about 7:30 a.m. to 6:30 p.m. and the total round trip running time is 53 minutes (one bus is assigned to the service).

Route 30 is primarily a UC Davis and Sacramento connector. Five roundtrips daily provide service from Fairfield, Vacaville, Dixon, UC Davis and Sacramento. The first trip departs at 6:48 a.m., and the last trip returns at 6:11 p.m. Trip time is about 54 minutes for the 25-mile Fairfield to Davis trip because it makes 6 stops in Fairfield, Vacaville, Dixon and Davis. The 6:52 a.m. express bus trip from Fairfield to Sacramento also takes about 54 minutes because it does not stop in Davis. Headways are generally a little over two hours (one bus is assigned to the service).

Route 40 provides a fast feeder service from Vacaville and Fairfield to the Pleasant Hill BART Station. In the southbound direction, four morning trips and five evening trips are offered, while northbound four morning trips and five afternoon trips serve Solano County commuters. Travel time from the Pleasant Hill BART station to Fairfield is about 45 minutes, while to Vacaville it is about one hour. The first trip departs at 5:05 a.m., and the last trip returns at 8:31 p.m. (allowing a 6:30 p.m. departure from San Francisco attractions). The distance from Pleasant Hill BART to Fairfield is about 30 miles.

Patronage Characteristics

Fairfield-Suisun intercity transit routes carry approximately 367 daily passengers on a typical weekday. All of the 202 daily trips served by Route 20 are internal to the county and some of the 36 passengers carried by Route 30 are also internal county trips. Most of Route 40's 129 daily passengers are to/from the Pleasant Hill BART Station. Thus, perhaps about 100 daily trips served by Fairfield-Suisun Transit are trips to points outside the county.

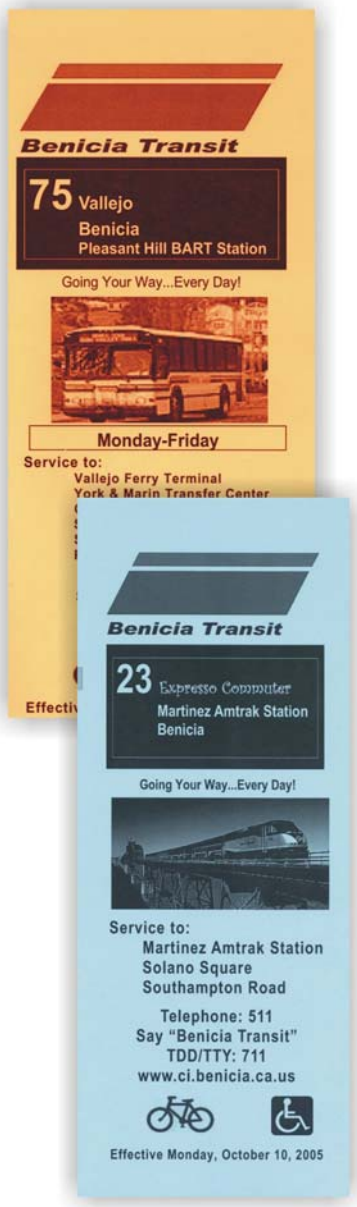
Equipment and Support Facilities

The City of Fairfield owns 26 transit vehicles, and uses 19 of these vehicles in both intercity and local service. The vehicles are stored at the city's corporation yard, with city staff servicing and maintaining the vehicles.

Route 20, 30 and 40 require a total of five buses, of which three are assigned to Route 40. Buses for both Routes 20 and 40 enter/exit service at Vacaville. Route 30 buses enter and exit service from Fairfield. The distance between Fairfield-Suisun Transit's bus storage yard and the Vacaville service portal is about eight miles and involves approximately 30 minutes (15 minutes each way) daily per bus to get buses into and out of service each day. Passenger facilities are spartan; however, the City is aggressively emphasizing park-and-ride facilities including the Fairfield Transportation Center, which combines a 400-space park-and-ride garage with a large bus transfer area.

Policies

The Short-Range Transit Plan includes a detailed set of Goals and Objectives. Generally, like most transit systems, FST strives to enhance mobility in an effective and efficient manner. System indicators of these goals for the intercity services are the following (all for FY 2004/05):



Benicia Transit

Benicia Transit operates one intercity bus route,. The route provides service to the Pleasant Hill BART Station and connects to the Vallejo Ferry Terminal and Downtown Vallejo's Transit Center.

Service

The main intercity bus service operates from Vallejo Transit's York and Marin Transit Center to the Pleasant Hill BART Station via the Curtola Park-and-Ride lot, Military West & 14th, Solano Square, H and E. 3rd Streets L and E. 5th Streets, and Sun Valley Mall. This trip takes about 20 minutes between Vallejo and H Street, 18 minutes from H Street to Sun Valley Mall and another 16 minutes to reach the Pleasant Hill BART Station. Service operates from 5 a.m. to 7 p.m.

Patronage Characteristics

Benicia Transit carries about 450 daily riders to and from Contra Costa County and BART.

Equipment and Support Facilities

The City owns its fleet of transit vehicles, which are stored and maintained at contractor facilities. Vehicles are fueled at the City Corporation Yard. The peak direction travel is towards Pleasant Hill BART in the morning and away in the evening. This suggests that the most efficient location to introduce and remove buses from service would be in Vallejo.

Policies

Fares differ depending on the service used, characteristic of the rider (senior, disabled, youth) and bulk-prepaid fares (passes and tickets).

Transfer connections are provided to I-80 corridor service at the Curtola Park-and-Ride lot and to Vallejo Transit and Napa Transit at the York and Marin Transit Center. Direct service to the Baylink ferry terminal is provided. Transfer connections to I-680 bus services are not provided, due to physical and operational constraints at the I-680/780 interchange and the somewhat similar destinations of these services. Transfers are also provided to BART at the Pleasant Hill BART Station.

VINE Transit (Napa County)

VINE Transit operates Route 10 between Calistoga, St. Helena, Oakville Yountville and Napa to Vallejo. About a dozen roundtrips are made daily to and from Vallejo. Stops within Vallejo include the Sereno Transit Center, Ferry Terminal and York-Marin Transit Center. Most of the southbound trips serve the ferry terminal prior to arriving at the York and Marin Transit Center, while only about half the northbound trips stop at the ferry terminal after leaving the York and Marin Terminal.

YoloBus

YoloBus operates Route 220 from Davis via Winters to Vacaville. It makes three roundtrips daily to Vacaville (with stops at Safeway and Walmart). Adult fare is one dollar.

Summary

Nine public intercity bus routes are operated by Solano County agencies. One route connects to Davis and Sacramento, two routes connect to the Pleasant Hill BART Station, one route connects to the Vallejo Ferry Terminal and three routes connect to the del Norte BART Station. Public intercity bus connections to Napa from Vallejo are provided by VINE Transit and YoloBus provides connections to Winters and Davis from Vacaville. While Figure 6 suggests that frequent service exist along the I-80 Corridor, it is very sparse east of Vacaville (only Route 30). The segment between Vacaville and Fairfield is served by four routes (FTS routes 20, 30 and 40; and Vallejo Transit route 91). The segment between Vallejo and del Norte BART Station is served by 27 bus trips in each direction on an average weekday. There is no service to Sacramento.

RECOMMENDED BUS SERVICE PLAN

The recommended intercity bus service plan represents a financially unconstrained vision or blueprint for service. Three intermediate levels of service or phases were defined reflecting a range of possible funding resources. Implementation of the service vision would involve expanded public discussion and input to refine its elements. A more detailed implementation and phasing plan was recently developed in the I-80/I-680/I-780 Transit Corridor Study. The overall bus service plan would take substantial new funding sources to fully implement, including the proposed Regional Measure 2 and/or a proposed half-cent transportation sales tax in Solano County.

Solano Intercity Bus Service "Vision"

Buses would be comfortable, with a relaxing interior environment. Service would be fast and reliable, and fare collection would take place off vehicle, so that station dwell times are minimal.

Service would be implemented incrementally, as funding increases and capital improvements come on-line. But the basic plan would be well understood by the public and decision-makers; route simplicity and service attractiveness would be combined with extensive marketing to project an image of quality service and high customer satisfaction.

AVAILABLE IMPLEMENTATION FUNDING

Funding Level	New Annual Funding Available	Source
1	$1.6 million (2005-06)	All local TDA used for transit
2	$1 million + TDA and growth	New local sales tax and all TDA
3	$2 million + TDA and growth	New local sales tax and all TDA
4	Unconstrained "Vision"	New local sales tax, RM2, bridge tolls, TDA, etc.

The plan provides good connections with local bus services and with regional transportation hubs. It also allows transfers to all routes in the intercity bus network with a maximum of one transfer.

Route Network

All the intercity bus routes would be eligible for sales tax funding. Routes crossing the Bay or Strait, however, are the most logical to support with Bridge Toll revenues. Figure 2.2 on page 83 shows the proposed route network and Table 2.5 on page 96 summarizes the proposed 2030 Vision Service Plan frequencies.

Route: 40 Vacaville-Fairfield to Walnut Creek BART

Route 40 would be improved to become an all day line with better service, larger buses, and better connections. Service would begin at the Vacaville Park and Ride Lot at Davis Street, provide express service along I-80 to the Fairfield Transportation Center, express

service via I-680 and make a new stop for the Benicia Industrial Park at the I-680 and Industrial Way/Park Rd. then express service via I-680 to Treat Boulevard to Pleasant Hill BART, and then via local streets (Oak and Jones Roads) to the Walnut Creek BART station.

Connections: At the Vacaville Park and Ride center to local buses and to Sacramento/Fairfield/Vallejo/Marin County service buses, at the Fairfield Transportation Center to Route 12 and local buses, and at the Walnut Creek BART station to County Connection buses and shuttles to Bishop Ranch Business Park.

Route: 80 Napa-Vallejo to El Cerrito del Norte BART

Route 80 would be improved with better service, larger buses, and better connections. Service would begin at Pearl Street in downtown Napa, and then operate via Highways 121 and 29 into Vallejo, connecting with the Vallejo Ferry, and stopping at the Curtola Park and Ride Lot before operating express via I-80 to the El Cerrito del Norte BART station. Every other trip would operate from Napa.

Connections: At Napa with all local VINE buses and Route 12 to Fairfield Suisun, at the Vallejo Ferry Terminal with the ferries and local Vallejo buses, and at the El Cerrito del Norte BART station.

ESTIMATED PEAK HOUR BUS SERVICES

CORDON LINE	HOURLY BUS SERVICE
Carquinez Bridge	18
Benicia-Martinez Bridge	12
Yolo Causeway	2
Highway 37	2
SR 12 Jameson Canyon/Highway 29	2

Route: 90 Vacaville-Fairfield to El Cerrito del Norte BART

Route 90 would be improved to include midday service and increased service, larger buses, and better connections. Service would begin at the new proposed Vacaville Ulatis/Allison Intermodal Center and the Vacaville Park and Ride facility on Davis

Street, with access via I-80 at the Fairfield Transportation Center, and would operate express to El Cerrito del Norte BART.

Connections: At Vacaville and Fairfield with all local buses, and at the El Cerrito del Norte BART station.

Route: Sacramento to Novato via Solano County

This route would incorporate the current Route 30 and reinstate the former Route 100, but with better service, increased frequencies, and more destinations. Service would begin at 8th and Capitol Mall in downtown Sacramento (connection to Sacramento LRT and State Capitol), and operate via I-80 to Curtola Parkway, then via Curtola to the Vallejo Ferry Terminal, then via Mare Island Way to Highway 37 and then via Highway 101 to Novato. Stops would be as follows: West Sacramento at the Enterprise Park and Ride, Davis Amtrak station, Dixon (freeway ramp), Vacaville (park and ride), Fairfield Transportation Center, Solano College, Curtola Park and Ride, Vallejo Ferry Terminal, Novato. Service would be scheduled to meet every other ferry.

Connections: At Sacramento with RT light rail, Davis with UniTrans and YoloBus, Vacaville and Fairfield with local bus systems and with Route 12 to Napa and Rio Vista, Curtola with Route 80, Vallejo Ferry with ferry, Novato with Golden Gate Transit.

Route: Napa-Vallejo to El Cerrito del Norte BART

This route would improve the existing Benicia Transit service to Pleasant Hill BART. It would improve the service with larger buses, greater transfer opportunities at the Walnut Creek BART Station and better service levels and span-of-service. Service would begin at the Vallejo Ferry Terminal, operate via Curtola Parkway, I-780 and Military West through Benicia, I-680 to Treat Boulevard to Pleasant Hill BART, and then via local streets (Oak and Jones Roads) to the Walnut Creek BART. Rerouting can cover the Benicia Flyer area.

Connections: At the Vallejo Ferry Terminal with the ferries, Route 80 and local Vallejo buses, and at the Walnut Creek BART station to County Connection buses and shuttles to Bishop Ranch Business Park.

Route: Napa to Fairfield and Suisun

This route would establish a new link between Napa and Fairfield and Suisun via Highway 12. Service would begin at Pearl Street in

downtown Napa, and then operate via Highways 121 and 29 to Highway 12, then via Highway 12 into Fairfield.

Connections: At Fairfield Transportation Center with Routes 85 and the proposed Sacramento-Vallejo-Novato route, and with local service to both Fairfield and Suisun along with Napa local VINE.

Table 2.5 – PROPOSED 2030 BUS NETWORK – UNCONSTRAINED SYSTEM

Existing Route #	Proposed Route #	Origin	Destination	Via	Service Peak Freq.	Freq. Base
Express Routes – Bridge Toll and Sales Tax Eligible						
40		Vacaville	Walnut Cr BART	Fairfield, I-80, I-680, Pleasant Hill BART	10	30
80		Napa	El Cerrito del Norte BART	Vallejo, I-80 (connects with ferry)	5	15
90		Vacaville	El Cerrito del Norte BART	Fairfield, I-80	10	60
30	New	Sacramento	Novato	Davis, Dixon, Vacaville, Fairfield, Vallejo (connects with ferry) and Marin	30	30
	New	Vallejo	Walnut Cr BART	Benicia, I-780	10	30
Express Routes – Sales Tax Eligible						
	New	Napa	Suisun City	Jameson Canyon	30	60
	New	Suisun City	Rio Vista	Hwy 12	30	60
	New	Rio Vista	Antioch	Hwy 160	60	
	New	Rio Vista	Lodi	Hwy 12	60	
20	20	Vacaville	Fairfield	Local	30	30
85		Davis	Vallejo	Dixon, Vacaville, Fairfield, Vallejo (connects with ferry)	15	15
	New	Vallejo	Fairfield	Via Benicia Industrial Park	60	No service

New Route: Fairfield and Suisun to Rio Vista

Route 12B would establish a new link between Rio Vista and Fairfield and Suisun via Highway 12. Service would begin at the Suisun Amtrak Station then operate via Highway 12 to Rio Vista.

Connections: At Fairfield Transportation Center with Routes 85 and 180, and with local service to both Fairfield and Suisun.

New Route: Rio Vista to Lodi

Route 12C would establish a new link between Rio Vista and Lodi via Highway 12. Service would begin in Rio Vista and then operate via Highway 12 to Lodi.

Connections: In Lodi to local transit services.

New Route: Rio Vista to Antioch

Route 12D would establish a new link between Rio Vista and Antioch via Highway 160. Service would begin in Rio Vista and then operate via Highway 160 to Antioch.

Connections: Possible connection to BART's extension to Antioch.

Route: 85 Vallejo to Davis Local/Limited

Route 85 would be improved with better service, larger buses, and better connections. The enlarged Route 85 combines Routes 20 and 30. Service would begin at the Vallejo Ferry Terminal and operate through northern Vallejo via Marine World, then via I-80 with service to Solano Community College, to the Fairfield Transportation Center, and then via Route 20 to Vacaville, then via Route 30 to Dixon and into UC Davis, with a terminal at the Davis Amtrak Station. All service would operate to Vacaville – every other bus would operate to Davis.

Connections: At the Vallejo Ferry Terminal with the ferries, Route 80, Route 780, and local Vallejo buses, at the Fairfield Transportation Center with Route 12, Route 180 and local FST buses, at Davis Street in Vacaville with local Vacaville buses, and at Davis with Amtrak, UniTrans and YoloBus.

New Route: Vallejo to Central Benicia Industrial

This new route establishes a new link connecting the Benicia Industrial Park with both Vallejo and central Benicia. Service would

begin at the Vallejo Ferry Terminal, operate via Curtola Parkway to I-780, then via I-680 to the Benicia Industrial Park.

Connections: In Vallejo to Vallejo Transit network.

Route: 20 Vacaville to Fairfield

Route 20 would continue in its current form providing local coverage between Vacaville and Fairfield. With the opening of the planned new Fairfield/Vacaville Capitol Corridor Station, Route 20 would be realigned to serve this station. Its frequency would be increased from its current 60 minutes to 30 minutes.

Connections: Local and intercity transit connections would be provided at the Fairfield Transportation Center and Solano Mall transit center in Fairfield and also at the Vacaville Transit Center.

Estimated Fares (2004 dollars)

Fares and transfers vary according to distance as shown in the Fare Matrix below. Monthly passes would be priced at 40 rides, while 10 ride tickets would give a 20 percent discount.

INTERCITY ADULT BUS FARE MATRIX

Between/and	Sacto.	Davis	Vacaville	Fairfield	Vallejo	BART (WC or d'Norte)
Sacramento	—	$2.50	$3.50	$3.75	$5.00	$8.00
Davis	—	—	$2.75	$3.50	$4.50	$7.00
Vacaville	—	—	—	$1.50	$4.00	$5.00
Fairfield	—	—	—	—	$3.50	$4.50
Vallejo	—	—	—	—	—	$3. 50
Novato	$9.00	$7.50	$6.00	$5.00	$4.00	—
Napa	$5.00	$4.00	$3.00	$2.50	$2.50	$5.00

RAIL SERVICES

The Intercity Transit Plan proposes a significantly increased role for passenger rail services towards meeting the County's travel needs. A description of the current role provided by the Capitol Corridor passenger rail service is provided in this section, followed by proposed improvements to attract increased ridership. A discussion of non Capitol Corridor rail service improvement opportunities is provided at the end of the section.

EXISTING PASSENGER RAIL SERVICES

Passenger rail services and their supporting network of feeder bus services link Solano County to the Bay Area and to the Sacramento Region.

Existing Passenger Rail Service Providers

Amtrak

Amtrak long distance intercity trains do not stop at the Suisun City Station. Two daily long distance trains serve Solano County at neighboring stations located in Davis and Martinez. Passenger fares for these long distance trains are set higher than for the Capitol Corridor trains. The California Zephyr is a long distance train operating between Chicago, Denver, Salt Lake City, and the Bay Area. A second long distance train, the Coast Starlight, runs between Seattle, Portland, Sacramento, Oakland, and Los Angeles.

Capitol Corridor Train Service

Prior to 1991, Amtrak's California Zephyr was the only train serving the Suisun/Fairfield Station. The Capitol Corridor service was introduced in December of 1991 with three daily trains meeting regional transportation needs between the Bay Area and Sacramento. The Capitol trains stopped at Suisun City in addition to

the service provided by the Zephyr. The Zephyr stop at Suisun City was discontinued in October 1998.

CCJPA has outlined plans to expand Capitol Corridor passenger rail service to eventually hourly service between Sacramento and San Jose. Experience on other California intercity rail corridors has indicated that the best operating practice is for all trains to make all stops rather than operating a two-tier local and express passenger rail service. Thus, current thinking is for all trains to stop at the Suisun/Fairfield Station.

The railroad industry distinction between intercity passenger rail service and local/commuter rail service is not clearly defined. Intercity passenger rail services typically run faster, have less frequent headways and have higher fares than local/commuter passenger rail services. They focus on inter-regional travel rather than intra-regional travel markets. The distinction between the two types of passenger rail services is important in terms of CCJPA's track sharing agreements with the UPRR and the State's role in funding service versus regional/local funding. The CCJPA's agreement with UPRR allows it to operate up to 16 daily intercity service roundtrips, but does not provide for operation of any local or commuter services. The State's funding for intercity rail services does not cover local and commuter passenger rail services, which are seen as the responsibility of regional and local governments.

Service Features

Capitol Corridor frequencies have increased in the ten years since introduction and the route now provides 12 daily round trips. One of the trips runs through to Auburn, and four trips operate south of Oakland to San Jose. The Richmond station provides a direct connection to BART on an adjacent platform. The Richmond station was recently renovated to improve efficiency and safety. Rail patronage at the Suisun City Station has mirrored the expansion of Capitol Corridor service, growing from about 15,000 annual passengers in 1992 to 38,660 in 1999, 57,880 in 2000 and 98,000 in 2003. Figure 10 describes the service corridor and current stations.

During 2003-04, many of the travel times between stations improved as a result of recent track improvements such as the completion of the second track at the Yolo Causeway. See below for a list of some of the currently scheduled travel times between key stations.

2004 CAPITOL CORRIDOR TRAVEL TIMES (MINUTES)

To/From	Davis	Suisun City	Martinez
Sacramento	15	39	60
Davis	0	24	45
Martinez	45	21	0
Richmond	70	46	25
Emeryville	87	61	40
San Francisco	110	86	65
San Jose	175	151	130

Source: April 26, 2004 Capitol Corridor schedule

Current Capitol Corridor schedules provide service to and from Suisun City approximately an average of about 1 to 1-1/2 hours throughout the day. The increase, in service levels to seven daily trains in 2000, nine trains in 2001 and twelve trains in 2004, is a significant reason for the ridership growth now being experienced. The service provides schedules allowing day trips to either Sacramento or the Bay Area, with schedule times and options that are enticing ridership. Current weekday schedules to and from Suisun City are summarized in Table 2.8.

The ultimate goal of the Capitol Corridor management is to provide hourly service all day, with 16 daily round trips.

Table 2.8 – CURRENT TRAINS SERVING SUISUN – FAIRFIELD STATION

Eastbound Times	Origin/Destination	Westbound Times	Origin/Destination
6:43 AM	Oakland/Sacramento	5:09 AM	Sacramento/San Jose
7:33 AM	Oakland/Sacramento	6:09 AM	Roseville/San Jose
8:53 AM	San Jose/Colfax	6:59 AM	Roseville/San Jose
10:23 AM	San Jose/Sacramento	8:19 AM	Colfax/San Jose
11:53 AM	San Jose/Colfax	9:49 AM	Auburn/San Jose
1:23 PM	Oakland/Sacramento	11:19 AM	Sacramento/Oakland
2:53 PM	San Jose/Colfax	12:49 PM	Colfax/San Jose
4:38 PM	San Jose/Auburn	2:49 PM	Sacramento/San Jose
5:58 PM	San Jose/Auburn	5:19 PM	Colfax/San Jose
6:38 PM	San Jose/Auburn	6:19 PM	Sacramento/San Jose
8:03 PM	San Jose/Colfax	7:19 PM	Sacramento/Oakland
9:28 PM	San Jose/Sacramento	9:19 PM	Colfax/San Jose

Thus, for eastward trips to/from Sacramento, train trips themselves are 33 minutes shorter from Davis than they are for trips from Suisun City. For westward trips to San Francisco train trips are 21 minutes shorter from Martinez than from Suisun City. Transfer connections to San Francisco from the Capitol Corridor via BART at the Richmond station take approximately 91 minutes (49 minutes on the Capitol, an allowance of 5 minutes for transfer and 37 minutes on BART to Montgomery Street) from Suisun City. Capitol Corridor passengers also have the option of traveling to Emeryville, where a connecting Amtrak bus takes passengers to San Francisco (Ferry Building, Union Square, or Fisherman's Wharf).

Passenger Rail Stations

The CCJPA has adopted a policy for adding new stations. In addition to Fairfield/Vacaville, Benicia and Dixon, the Cities of Hercules, Fremont and Union City have all indicated interest in obtaining new Capitol Corridor stations. The Solano Transportation Authority has adopted the new Fairfield/Vacaville station site

located at Peabody and Vanden Roads as Solano County's next priority rail station. The CCJPA is requiring local sponsors of new stations to:

- Reach a consensus of the political entities within the jurisdiction that the station is needed
- Arrange 100% of the funding including any improvements requested by the UPRR and approved by the CCJPA (CCJPA will support the efforts of project sponsor to obtain funding)
- Meet or exceed minimum station facility requirements
- Arrange for station maintenance including funding
- Demonstrate and achieve a minimum of ten boardings or alightings per train (i.e. with ten trains per direction need 100 boardings and 100 alightings daily)
- Maintain a minimum of five mile spacing between stations
- Coordinate CCJPA and Amtrak negotiations with the UPRR
- Submit a local marketing plan for the new station
- CCJPA has begun to introduce a seamless free transfer from trains to local transit, starting with AC Transit, Sacramento RT, UniTrans, Yolobus, County Connection and Fairfield-Suisun Transit.

In addition to the Suisun City Station, the Capitol Corridor serves 14 other stations in the San Jose to Auburn travel corridor (Figure 10). From Suisun City to Sacramento, Capitol Corridor trains stop at the Davis Station, which is located 27 miles to the east and at Sacramento, which is located 13 miles east of Davis. From Suisun City to San Jose, Capitol Corridor trains stop at Martinez (17 miles), Richmond (20 miles farther west), Berkeley (3.7 miles farther west), Emeryville (2 miles farther west), Oakland (5 miles farther west), Hayward (12 miles farther west), Fremont (11 miles farther west), Great America (13 miles farther west) and San Jose (7 miles farther west). A new station is under consideration for Hercules midway in the 20-mile gap between Martinez and Richmond. At present the 134 mile corridor between Sacramento and San Jose, has an average station spacing of 12 miles. The 42-mile segment in Solano County with one station has an average spacing of 22 miles.

The UPRR maintains approval authority for addition of stations, changes to track/signal facilities and operation of more than the

currently approved number of passenger trains. With the projected increase in the number of trains, it is becoming increasingly important to minimize opposite direction running (e.g. running westbound trains on the eastbound track). The track signal system is configured to allow this opposite direction running, but opposite direction running increases train dispatch efforts. The only current Solano County station (Suisun City), and the two adjacent stations (Davis and Martinez) all have a sidetrack platform and a center loading platform. Passengers must cross the tracks at-grade to reach the center platform. The Suisun and the Martinez stations have their side platforms located on the south side of the track serving the predominantly eastbound train direction, whereas the Davis Station has its side platform on the north side of the tracks serving the westbound track. Trains are routinely held outside of stations until trains boarding passengers pull out.

The UPRR has also indicated that it cannot guarantee sufficient notice of which track passenger trains will be using at stations. This position combined with the strong desires not to have passengers crossing tracks at-grade, means that new stations will need to have center loading platforms where passengers can board trains on either track. Access to the center platform desirably should be grade separated using a pedestrian subway or overpass.

Patronage

Caltrans managed the Capitol Corridor service until July 1, 1998, when day-to-day oversight responsibility was transferred to the Capitol Corridor Joint Powers Board, an agency representing local governments along the route. Actual train operation is contracted to Amtrak.

Rail service frequencies and annual passenger counts at the Suisun City station are shown in Table 2.9.

Table 2.9 – SUISUN CITY RAIL SERVICE AND PATRONAGE

Year	Service (each direction)	Annual Passengers
1990	California Zephyr	2,650
1991	California Zephyr; 3 Capitols[1]	3,710
1992	California Zephyr; 3 Capitols	15,760
1993	California Zephyr; 3 Capitols	20,080
1994	California Zephyr; 3 Capitols	19,850
1995	California Zephyr; 3 Capitols	18,090
1996	California Zephyr; 4 Capitols[2]	23,260
1997	California Zephyr; 4 Capitols	27,420
1998	California Zephyr[3]; 5 Capitols[4]	32,000 est.
1999	6 Capitols[5]	38,660
2000	7 Capitols[6]	57,880
2001	9 Capitols	78,000
2002	11 Capitols	76,000
2003	12 Capitols	87,667

Notes:

[1] Service initiated December 1991 with 3 round trips.

[2] Service expanded to 4 round trips in April 1994.

[3] Zephyr service discontinued October 1998.

[4] Service expanded to 5 round trips in October 1998.

[5] Service expanded to 6 round trips in May 1999.

[6] Service expanded to 7 round trips in February 2000.

The 87,667 annual boardings and alightings for 2003-04 were served by about 7,000 annual train stops, which translate to an average of approximately 12.5 boardings and alightings per train. Suisun City station ridership continues to increase as a result of the expanded Capitol Corridor service and the more than doubling of parking spaces in 2003 to about 250 spaces.

Predominant travel to and from Suisun City on the Capitol trains is between Sacramento and Suisun City, and between Suisun City and Emeryville (San Francisco bus connection). Oakland and Martinez also have significant traffic levels for Suisun passengers.

Equipment and Support Facilities

Presently most trains are five cars in length or about 600 feet including the locomotive. Trains typically include: one locomotive, one dining car, three to four coach cars and one "cab" coach car. The latter allows the train to operate in the "push" mode with the locomotive in the rear of the train. Most Capitol Corridor trains currently operate with the locomotive at the front of the train (in the pull mode of operation) in the westbound direction and with the locomotive on the rear or the train (push mode) in the eastbound direction. Each coach car holds up to 88 passengers (84 for the cab car). Trains are capable of speeds of up to 110 mph, but the track is limited to a maximum of 79 mph. The early morning westbound train has been increased to six passenger cars in order to accommodate the patronage demands.

The Suisun City station is the historic Southern Pacific depot serving both Suisun and Fairfield. The building was renovated, new passenger platforms were installed and parking and bus-loading space was improved. The station has both a station side platform and a center passenger-loading platform. The Suisun City Redevelopment Agency is responsible for station maintenance and operating costs. There is no Amtrak ticketing or baggage service provided at the facility. The station also serves as the Greyhound depot. As train frequencies increase the likelihood of westbound and eastbound trains arriving at the same time will increase. Annual operating cost for the Suisun City Station average approximately $20,000. This cost does not include security, insurance and major building improvement reserve fund costs. Costs would be higher if non-Greyhound Bus Lines personnel staffed the station.

Policies

Current fare schedule practice for Capitol Corridor service is distance based and attempts have been made to provide easy payment fares – multiples of 50 cents or one dollar. It is likely that longer distance trips from adjacent Solano County stations would have similar fares, while short distance trips (i.e. Davis) differential fares would be charged. As such a slight fare incentive might exist to use one station versus the adjacent station. Availability of parking and of earlier pick of seats is another factor that typically influences station choice. Capitol Corridor service provides a basic one-way

fare, which is doubled for round trip travel. For frequent riders, there are 10-ride tickets valid for 45 days and for daily riders a monthly pass. Discounted fares (15%) are available for seniors. Special promotional fares are offered from time to time, such as "kids ride free" and "two for one" promotions.

CURRENT FARES TO AND FROM SUISUN
EFFECTIVE JUNE 6, 2005

Suisun to	Miles	Fare	10 Ride (45 day)	Monthly Pass
Sacramento	40	$13.00	$78.00	$213.00
Oakland	49	$13.00	$79.00	$213.00
San Jose	94	$20.00	$121.00	$326.00
Martinez	17	$8.00	$50.00	$135.00

In terms of productivity, the Capitol Corridor service has seen its ridership increase dramatically. Ridership has jumped from 544,000 in FY 98-99 to 1,165,300 in FY 03-04.

Other Passenger Railroad Service Opportunities and Planning Issues

In addition to the UPRR mainline used by Capitol Corridor passenger rail service, Amtrak's California Zephyr and Coast Starlight, Solano County is served by several other potentially important railroad assets.

Rail passenger service in Solano County has also been discussed for the Napa-Solano connection to the Vallejo Baylink Ferry Terminal and/or to Richmond BART via the Carquinez Bridge. Another proposal is to shift Capitol Corridor trains from the UPRR Bridge over Carquinez Strait onto the Benicia-Martinez Bridge. This latter proposal would eliminate delays caused by the UPRR Bridge, which opens to accommodate shipping traffic. The 1997 study Long Range Rail Alignment for the I-80 and I-680 Corridors addressed both of these issues.

The 1997 report considered establishment of light rail transit across the Carquinez Bridge; connecting to Napa via four different alignments:

- Sonoma Boulevard to California Northern tracks north to Napa
- Sonoma Boulevard to Curtola Parkway, Mare Island Way and California Northern to Napa
- I-80 to Curtola Parkway and California Northern tracks (near Solano Avenue) to Napa
- I-80 to Curtola Parkway, Mare Island Way and California Northern tracks to Napa

Variations of these concepts would be to terminate the Carquinez light rail service in Vallejo without extending to Napa or merely connecting Napa to Vallejo without crossing the Carquinez Bridge. Use of light rail type vehicles would require time separation from freight rail and Napa Wine train traffic. Subsequent to completion of the 1997 report, Caltrans has incorporated the flexibility to run light rail trains across the bridge in its current bridge design and construction. The bridge is not able to accommodate the loads of BART or commuter rail on the new bridge structures. The 1997 report focus on light rail transit rather than Capitol Corridor, Amtrak or BART rail technology was to avoid major costs associated with strengthening bridges across the Carquinez Strait. Light rail equipment is also better able to handle steep grades. The 1997 report also examined potentials for operating light rail trains across the Benicia Bridge. These opportunities proved to be very expensive.

The Capitol Corridor JPA has expressed increasing concerns about depending on the UPRR Bridge to cross the Carquinez Strait. The UPRR Bridge must open for shipping traffic several times a day, which will increasingly disrupt Capitol Corridor service. The CCJPA believes that its equipment could possibly operate on the grades across the Benicia Bridge and has asked Caltrans to examine the feasibility of shifting their trains from the UPRR Bridge to the Caltrans Benicia Bridge.

Operating and Capital Costs

According to the most recent annual report, CCJPA actual costs for FY 03/04 were $22.4 million for operations, $1.2 million for marketing and $97.5 million for capital improvements either

underway or commited programming. CCJPA's ten year capital improvement plan envisions a total investment of about $457 million consisting of $48 million for additional trains, $78 million for new/improved stations, $17 million for amenities and safety improvements and $314 million for track/signal improvements.

Funding for the operating expenses and capital costs are primarily from the State.

RECOMMENDED RAIL PLAN AND IMPLEMENTATATION STRATEGY

Some of the principal passenger rail recommendations for this Transit Element include the active support of Capitol Corridor service upgrades along with improved access for Solano County.

Support Capitol Corridor Service Upgrades

The Capitol Corridor Joint Powers Authority (CCJPA) proposes to expand service to 18 trains daily in both directions of travel by 2015. The 18 train frequency would result in almost hourly service. An early objective would be to add a morning train that would get Solano County commuters to Sacramento before 8:35 AM (current first train).

In addition to more trains, reduced travel times and improved reliability are important service improvements. These are among the overall objectives and policy actions, which were defined for intercity transit services. The CCJPA has identified a number of improvements to reduce travel times and to improve schedule reliability. These improvements in and near Solano County include:

Immediate Projects

- Addition/replacement of a second track for the Yolo Causeway, (completed in 2004).
- Upgrade the Bahia industrial siding project (Benicia)
- Addition of a third track in Dixon

Near-Term Period

- Extend and rehabilitate Tolenas lead track for the Fairfield-Vacaville Station

Vision/Long-Term Period

- Suisun Bay Bridge Replacement

Yolo Causeway Double Track Project – This project essentially replaces the old double track section and would reduce train conflicts and delays over this four-mile segment. Construction was completed 2004.

BahiaIndustrial Siding Project – This project would provide industrial siding track that would minimize conflicts on the mainline.

Dixon Third Track Project – Would add a third passing siding to allow high speed trains to pass slower freight trains and thereby increase passenger train speeds and improve their schedule reliability. The passing siding would most probably be located between the two main tracks, west of Downtown where the current two tracks spread a part. This project needs to be further analyzed as part of the Dixon Multimodal Train Station projects and track plans that need to be developed for review by the Capitol Corridor and the Union Pacific Railroad.

Fairfield Tolenas Lead Track Extension Project – This project would extend the current lead track serving the Tolenas industrial siding (near Peabody Road) and thereby reduce passenger train conflicts and schedule delays associated with freight train activities. .

Suisun Bridge Replacement Project – This project is envisioned to construct the rail crossing between Benicia and Martinez at a higher grade to eliminate delays related to bridge openings for shipping traffic. The concept would be to run Capitol Corridor trains on a single track across the Benicia-Martinez Bridge. A feasibility study was prepared in 2003 to provide a preliminary analysis of this concept. Some of the above improvements have been defined without the benefit of sophisticated track capacity analyses and will likely be refined. Specifically, the best strategy for providing passing opportunities and for upgrading track alignment for increased speed warrants more attention. Additional track modeling is being conducted as part of the Oakland-Sacramento Regional Rail Study.

Addition of New Intermodal Train Stations

Potential to increase Solano County ridership of Capitol Corridor stations is closely related to convenience of access. New stations at Benicia and Dixon all look promising, and preliminary plans for the Fairfield / Vacaville Station have been prepared for review and approval by the Union Pacific Railroad. CCJPA policy is to incrementally add stations to the corridor in order to balance improved passenger access with running speeds. Analysis of Solano County station location opportunities indicated that the Fairfield/Vacaville site located at Peabody Road offered good potential for patronage and for quick implementation. The Benicia site near Lake Herman Road also looked promising, but will require more time to implement. The Dixon site lends itself most to commuter rail patronage oriented towards Sacramento. All three of these sites are recommended for inclusion in the Solano Comprehensive Transportation Plan.

Investigation of New Passenger Rail Service Opportunities

Passenger rail service has advanced significantly in the past twenty-year period and has the promise to expand to serve new markets important to Solano County. Solano County should explore opportunities to add viable passenger rail services to its intercity transit network. Six opportunities include:

Napa to Vallejo and Jamieson Canyon Services - STA and the Napa County Transportation Planning Agency haver completed a feasibility study for establishing passenger rail service from Napa to Vallejo and from Napa to Suisun City. The findings of this study identified the potential patronage potential as well as investment requirements needed to implement these services.

Solano- Oakland - Sacramento Commuter Rail Service – The Metropolitan Transportation Commission has studied transportation problems and potential BART extensions to Solano County on several occasions. Current patronage of Capitol Corridor trains indicates that there might be a commute market for this type of service. The STA, the Capitol Corridor and the counties of Contra Costa, Yolo, Sacramento and Placer are continuing to analyze the

potential for commuter rail service coordinated with the intercity Capitol Corridor service.

Colfax/Auburn to Dixon Commuter Rail Service – Ten years ago, Placer County studied the feasibility of commuter rail service between Placer County and Davis. A Steering Group has been organized to further explore the feasibility of this service. STA joined this group to explore the merits of extending the Davis service to Dixon. A key issue currently under study is the track capacity to accommodate commuter rail service through the Roseville area. Near-term service to Dixon appears promising if track capacity issues can be resolved. In the longer-term future, extension of this commuter service to Fairfield-Vacaville Station, Dixon and Benicia stations are being studied as part of the Oakland-Sacramento Regional Rail Study (also called sBART by the STA) being studied.

Solano to BART Commuter Rail Service (sBART) – A substantial demand for peak period commute travel exists and this demand is projected to increase in coming years. Commuter trains are a high capacity alternative commute mode, totally segregated from highway congestion problems. The potential for augmenting Capitol Corridor train service during peak hours linking with BART would also benefit Contra Costa and Alameda counties.

Super Capitol Corridor Service –Twelve trains in each direction are presently provided in Solano County during weekdays. Sixteen trains are planned and approved by UPRR. What might be the merits of 20 or more trains in each direction? The passenger commute rail service between San Francisco and San Jose/Gilroy currently operates at 40 trains per direction a day over its 50-mile (San Jose) to 80-mile (Gilroy) corridor. Aside from the track capacity issue, would the market benefit from increased levels of service?

High Speed Rail Service – The Bay Area to Sacramento corridor is not on the proposed High Speed Rail Plan. If it were, the chances are that the service would not stop more than once if that in Solano County.

Bus Plan Implications

If one or more of these potential new passenger rail services prove viable or should be implemented; adjustments would likely be needed to the proposed bus service plan.

FERRY SERVICES

High-speed ferry service between Vallejo and San Francisco began in 1986 with one 25-knot vessel. That service provided five round trips a day, including one commute run to San Francisco in the morning and a late afternoon return. Under threat of abandonment by the private sector as a result of continuing losses, the City of Vallejo agreed in 1988 to subsidize continuing operation of the service in its function as a "transit operator."

EXISTING FERRY SERVICE (VALLEJO BAYLINK)

Successful expansion of ferry service with borrowed vessels after the 1989 Loma Prieta earthquake led to the 1991 Vallejo Ferry Plan, the planning basis for the current Vallejo Baylink ferry and bus network. As a result of the adoption of the Ferry Plan, the City acquired federal, state and regional funds to move forward with implementation. The first step was the 1994 City acquisition of the M.V. Jet Cat Express, a 28-knot, 365-passenger vessel. The City selected Blue & Gold Fleet of San Francisco to operate the ferry service under contract.

Baylink ferries operate over a 24 nautical mile route between the Vallejo Ferry Terminal and the San Francisco Ferry Building. Several trips a day also stop at Fisherman's Wharf Pier 41. Seasonally (April through October), one morning trip is provided daily from Vallejo to Angel Island State Park with a return in the late afternoon. The running time for the basic Vallejo to San Francisco route is 53-55 minutes. The Jet Cat Express, the older back-up and weekend vessel, takes five to ten minutes longer to run the route.

The ferries operate from 6:00 a.m. to 8:30 p.m. (last return leaving San Francisco) on weekdays, with trips approximately once an hour during peak periods and every second hour off-peak.

Ferries provide eleven round trips a day, with five additional trips provided by bus.

On weekends and holidays, six round trips are scheduled in winter, and eleven during the spring, summer and early fall periods. Weekend schedules operate from 8:00 a.m. to 8:30 p.m. year round.

Because demand exceeded vessel capacity, Vallejo initiated supplemental Baylink bus service (Route 200) in June 1998, initially during the afternoon peak period, but presently including two morning (when needed) and four afternoon supplemental bus trips. Two additional night return bus trips were added at 7:30 and 10:30 p.m. to provide schedule flexibility for Baylink patrons.

Patronage

Ridership growth has been outstanding on the Baylink service. At this point, three and a half years after its initiation, ridership is constrained by commute period capacity. Up to10 percent of monthly trips operate at capacity.

Ridership in 1997/98, the first year of two-vessel service, was 546,000, up 102% from the previous year. Table 2.10 summarizes annual ridership and the annual growth rate through 2003/04.

Table 2.10 – VALLEJO BAYLINK FERRY RIDERSHIP TRENDS

Year	Ridership	Annual Growth Rate
1997-1998	546,500	
1998-1999	613,100	12.2%
1999-2000	735,900	20.0%
2000-2001	801,000	8.8%
2001-2002	709,846	-11.4%
2002-2003	694,700	-2.1%
2003-2004	680,500	-2.0%
2004-2005	722,000	6.2%

About 2,600-3,000 weekday passengers currently use Baylink ferries and buses between Vallejo and San Francisco.

When a third vessel is placed in service, expected in spring -2005, the current 11 weekday round trips will expand to about 17-18, with five morning and afternoon commute trips, providing a 66%

expansion of commute capacity, from 900 seats to 1,500. With three vessels operating, daily ridership is expected to eventually top 4,000. A fourth operating ferry is anticipated for the 2007-08 fiscal year, but ridership patterns may require it sooner.

Passenger Information

About one half of current ferry riders reside in Vallejo. Ten percent of ferry riders reportedly reside in Benicia, ten percent in Napa, 6 percent in Fairfield, and three percent in Vacaville. Virtually all trips began or ended at the rider's home (home based trip) and nearly 90 percent are journey to work commute trips. Only two percent of ferry riders used buses to access the ferry terminal, with 71 percent drove alone, and 12 percent carpool.

At present, the Baylink service carries an average of between 90-110 passengers per trip. This is calculated by dividing daily ridership by the 22 daily service hours.

Facilities and Equipment

The 10,000 square foot Vallejo ferry terminal building was completed in 1988, and includes a waiting room, ticket office, restroom facilities, and concession areas. It was funded by a combination of local redevelopment and state funding. The terminal also has a high-capacity $1.7 million dock completed in 1998-99, which allows rapid boarding and disembarking from both vessel doors.

The primary vessels used for the Vallejo Baylink ferry service are two 35-knot, 300-passenger catamaran ferries (M.V. Mare Island and M.V. Intintoli), designed by Advanced Multi-hull Designs of Australia and built by Dakota Creek Industries, Inc. of Anacortes, WA. They were acquired in 1997. The M.V. Vallejo, (renamed after a 2001 modification to the former Jet Cat Express), provides a back-up vessel with a capacity of 300 passengers and a 32 knot speed.

Vallejo currently uses an interim vessel maintenance facility at Mare Island. Berthing space, spare parts, a small shop, and operational offices are leased approximately one mile north of the ferry terminal.

Vallejo has selected Mare Island Building 165 as the permanent home of the Baylink ferry maintenance facility. This will allow for on-going maintenance needs of the expanding vessel fleet. Approximately $3 million of the $5 million project has been funded through a combination of federal, state, and regional funds. At

completion, the project will include an upgraded maintenance dock and overnight docking facilities, fuel storage sufficient for a week of operations, maintenance and operations offices, and workshops and parts storage.

The Port of San Francisco has implemented phase 1 of Ferry Building terminal improvements, which upgraded the dock presently used for most trips to San Francisco. Vallejo is completing the permitting process for a new public dock at San Francisco Pier 43, Fisherman's Wharf, which will be available for all ferry services. It was funded by a $2 million FHWA Section 1207 grant. A recently awarded Section 1207 grant will fund docking improvements at Angel Island State Park, also served by Vallejo Baylink service during spring and summer.

In 1999, Vallejo paved and lit the 700-space interim parking lot across Mare Island Way from the Vallejo Ferry Terminal. Capacity continues to be added to accommodate demands.

Policies

Current adult fares for the Vallejo-San Francisco ferry service (Baylink) are $9.50 one-way/$15 for a round trip (Daypass), or $200 for a monthly pass. The fare for the Baylink monthly pass increased to $215 on April 4, 2004, as approved in a three-year budget by the City Council in 2002. Youth, senior, and disabled patrons pay $4.75 each way.

The Baylink Daypass is good for all Vallejo Transit bus service as well as ferry service. A Baylink Monthly Pass offers a full month of travel on the ferries, Vallejo Transit buses and San Francisco MUNI. Vallejo Transit provides reciprocal transfers with connecting operators but this does not extend to the ferry service. Napa and Benicia provide bus connections to some Baylink trips.

Operating Costs

Baylink operating costs for FY00-01 were approximately $6 million. Costs are expected to increase at approximately 3-4% annually although escalation of fuel prices in 2000-01 has caused an increase in the cost structure. Costs will increase when additional vessels are placed in service, with current projections showing increases in FY03-04 and FY08-09.

The primary determinants of the cost of operating Baylink service are the operating agreement with Blue & Gold Fleet and the cost of

fuel. The former is based on a three-year agreement, with cost of living adjustments. The cost of fuel for a vessel is equal to 25-30% of operating costs, a higher proportion than for landside transit.

The present operating cost is approximately $7 per passenger trip.

As with all Bay Area transit, farebox revenues are insufficient to cover all costs. However, the Baylink Ferry has demonstrated a strong financial performance. For fiscal year 1999-2000, operating cost for the Baylink service was approximately $5.2 million, of which $3.75 million came from fare revenue – approximately 72 percent. The previous year, fare revenues generated approximately 64 percent of the $4.7 million operating budget. Additional operating support is derived from TDA revenues and Bridge Toll 5% funds, as well as several lesser sources. The FY2000-01 year farebox recovery ratio was 77.7%. This farebox recovery ratio decreased to 73.4% in FY2001-02 and to 63.0% in FY2002-03 as a result of dramatic economic adjustments in late 2001 and a reduction of approximately 60,000 jobs in downtown San Francisco.

Capital Costs

Vallejo has received commitments for $ 47 million of state, federal, Regional Measure 2 and local funding for the design and construction of the intermodal facility, which is now estimated at $56 million.. Other future projects include dredging, programmed for every three years, maintenance facility improvements, and the fourth operating ferry.

FERRY PLAN

The recommended ferry plan for Solano County is consistent with the 2010 vision outlined for Vallejo Baylink in Vallejo's 1999 Short Range Transit Plan Update. The plan is designed to carry 5,000 weekday ferry and bus passengers between Solano County (Vallejo) and San Francisco. Approximately 2,000-morning peak period trips and 2,000 afternoon/evening peak period trips are expected on a typical weekday in 2010. This is about double the current Vallejo Baylink ferry and bus patronage.

Currently, Baylink operates a fleet of three 300-passenger catamarans. Two vessels are in service at any given time. The third serves as a backup, to protect the reliability of the schedule, and to ensure that repairs and preventative maintenance are completed on a timely basis. Because of the 55-minute travel time in each direction

between the Vallejo Ferry Terminal and the San Francisco Ferry Building, each vessel can provide a 120-minute headway. A total of 900 seats are currently provided between Vallejo and San Francisco between 6:00 a.m. and 9:00 a.m. The vessel assigned to the existing 6:00 a.m. departure from Vallejo also operates the 8:00 a.m. departure.

Service Plan

A schedule providing at least 2,000 peak seats requires a minimum of seven Baylink ferry trips between 5:30 a.m. and 9:00 a.m. Supplemental buses will be needed to round out available capacity, given that the earliest and latest trips leaving the Vallejo Ferry Terminal are unlikely to operate at the full capacity of a 300-passenger boat. A total of four boats (excluding a fifth, the spare) is sufficient to operate every half hour between 5:30 a.m. and 8:30 a.m., providing 7 trips with 2,100 seats. Buses would fill in at 0:15 and 0:45 minutes past the hour, providing an effective 15-minute headway between Vallejo and San Francisco during each peak period (e.g., 5:30 a.m. to 9:00 a.m., and 3:30 p.m. to 7:30 p.m.) Ferry service would be provided every hour midday on weekdays, and hourly all-day on weekends and holidays.

Buses would provide the added flexibility and capacity needed during "the peak of the peak" between 6:00 a.m. and 8:00 a.m. and 4:00 p.m. to 6:00 p.m. A minimum of one bus would run each scheduled time between ferries. However, additional buses can be added more easily than additional ferryboats and would be cost-effective if demand warranted. While every additional vessel beyond the proposed four in daily Baylink service (plus a spare) would cost $10 million to purchase and more than $1,000,000 annually to operate, bus capital costs for similar capacity would be about $2.5 million. Annual bus operating costs for the same capacity as a boat would be about $500,000 per year.

This program would have implications for capital and operating needs. The following summarizes the program needs required to supplement the service to achieve this level.

Capital Plan

The ferry service plan will require additional vessels, expanded maintenance facilities and terminal facility improvements.

Vessels - Vallejo's SRTP Vision for 2010 envisaged a fleet of five Vallejo Baylink ferryboats plus supplemental buses, carrying about

5,000 daily passengers. Service life replacement of several boats near the end of the 25-year Comprehensive Transportation Plan along with post ten-year operations, would require additional boats.

Maintenance Facility - Significant improvements would be required, including overnight mooring slips, fuel storage, equipment, etc. Estimated cost for this would be $8-10 million (Robbins).

Parking/Intermodal - The current 700 spaces are planned to be replaced by a 1,200 space garage plus intermodal improvements. Total project cost, including extension of Georgia Street, is estimated to be $56 million.

With some reduction in the proportion of patrons accessing the terminal by driving alone (from current 75% of commuters and 44% of non-commuters to 65% and 35% respectively), total parking needs for 6,000 daily riders would be expected to be about 1,500 –1,700 spaces, or 300-500 in excess of that planned for the parking structure/intermodal center. Additional interim parking may be available north of Georgia Street, but it is not clear that long-term parking for more than 1,200 spaces will be available without utilizing street parking. Vallejo is projecting that a monthly pass would include parking, but that others would pay for daily parking at the terminal. This should marginally improve mode split.

Redevelopment and terminal improvements should increase the number of patrons accessing on foot or bicycle, but increased transit use is also required. At present, fewer than 100 commuters use bus as their access mode, about 3-4% of commuters. This is projected to increase to 12%, or about 240 riders during the morning peak period. Improved pedestrian access will be provided between the Vallejo transit/transfer center and the ferry terminal, and additional regional service from Napa, Benicia, and Fairfield/Suisun City will be required. Service from Vacaville and Sacramento (perhaps on an hourly basis to match the basic schedule) would also generate some transit and ferry trips. This level of service and ridership would require additional fare equipment, signage, and bicycle storage. A designated kiss-and-ride area should also be provided.

Operating Needs

Baylink's operating expenses are projected to average $28,000 per typical weekday (2002 dollars) for four boats in regular daily operation. This calculation projects 20 round trip sailings per day and an average operating expense of $700 per vessel revenue hour of service. Maintaining Baylink's FY 2000-01 farebox recovery of 72% translates into a daily operating subsidy of about $8,000. About $2.5-$3.0 million in annual subsidies would be needed to support service, including weekend service.

The potential to increase off-peak patronage and revenue relating to off-peak fare programs should be explored.

Benicia Service Strategy

Given the level of service and parking difficulties that may result from 6,000 daily riders accessing the Vallejo terminal, a secondary commute terminal in Benicia should be considered for the long-term future. If the Vallejo landside facility capacity begins to constrain growth in ferry ridership, a Martinez/Benicia combined ferry, being studied by the San Francisco Bay Area Water Transit Authority, might divert 5-10% of Vallejo ferry patronage (a portion of Benicia based riders). Cost of minimum ferry improvements in Benicia would be $5-10 million for a dock, minimal terminal, and improving parking. Land acquisition for 2-3 acres of parking or a parking structure would increase the cost, and might only be possible at the Fifth Street site alternative that has been considered for Benicia.

Non-peak (midday and weekend) service from Benicia would compete with Vallejo service and take a portion of the market that would have adverse financial consequences for both services. Offering peak period only service from Benicia could work in conjunction with connecting bus transit that would accommodate patrons returning to Vallejo. The on-going Water Transit Authority studies will further assess the commute and non-commute potential for the Benicia service.

TRANSIT FOR SENIOR AND DISABLED (PARATRANSIT)

Solano County is experiencing an aging population, as are similar metropolitan regions throughout the country. The current percentage of the County population over 65 is expected to grow faster than any other Bay Area county. Solano County residents with disabilities are increasingly mobile and using accessible transportation in record numbers to access services. Between 2005 and 2025, the ADA paratransit eligible population is projected to more than double.

The Solano Transportation Authority (STA) considers the mobility needs of this growing paratransit population a priority. While there is a wide range of transportation services available, service gaps remain due to changes in traffic conditions, limitations on fixed-route service, program constraints, and eligibility limitations. Specifically, there is a growing population of the frail elderly who are not considered to be ADA-paratransit eligible, yet experience mobility challenges.

Intercity paratransit services in Solano County are provided by Vallejo Transit, Fairfield-Suisun Transit and Benicia Transit. Benicia, Vallejo, Fairfield-Suisun, Dixon and Rio Vista also operate local paratransit services

VALLEJO TRANSIT

Vallejo Transit contracts with a private operator to provide door-to-door ADA paratransit services in the southern portion of the county for Vallejo and Benicia residents. This joint service is provided by Vallejo and Benicia Transit, which includes a single dispatch center and administration by the City of Vallejo. The Runabout service continues to show ridership increases and the proportion of trip denials due to capacity scheduling conflicts is creeping up, although still quite low. Approximately 61 percent of the runabout passenger trips are to points within the City of Vallejo. Twelve percent of the passenger trips are between Benicia and Vallejo and the remaining 27 percent of passenger trips are to/from Vallejo and Benicia and other points. According to the most recent Short Range Transit Plan the average subsidy cost per passenger trip in FY 98/99 was nearly $21. This average cost includes local as well as intercity trips. The intercity trips are longer and are more costly to provide. Similar to

fixed route bus services, no Sunday paratransit services are currently provided.

FAIRFIELD-SUISUN TRANSIT (FST)

FST provides intercity paratransit services to the northern portion of Solano County under contract from STA. Ridership has remained steady over the past years, hovering around 4,000 annual riders. No Sunday service is provided.

Requirements of the 1990 Americans with Disabilities Act (ADA)

The ADA requires transit operators to provide comparable service to those unable to use fixed route transit services. Under the ADA transit operators must provide comparable services as measured in-terms of six criteria:

6. Service area
7. Response time
8. Fares
9. Service days and hours
10. Meet request for any trip purpose
11. No service limitations because of capacity constraints

Due to the high cost of providing this specialized door-to-door service many transit operators restrict use to those unable to use fixed route services. For longer distance trips, transfers from door to door onto fixed route services are often required. Commute fixed route transit services are exempt from the comparable service requirement.

RECOMMENDED PLAN

The STA has conducted a study entitled the "Solano County Senior and Disabled Transit Study." The Study provides an analysis of the transportation limitations faced by seniors and the disabled in the County and lists strategies to address service gaps.

Recommended strategies from the study are organized into short-term, medium-term and long-term strategies as follows:

SHORT TERM STRATEGIES

- Expand fixed route driver sensitivity training and retraining
- Improvedissemination of bus schedules
- Identify opportunities for freeing up paratransit capacity
- Develop procedures for same-day medical return trips
- Train social service staff on paratransit limits and application preparation
- Develop guidelines to ensure transit-oriented development
- Promotee deliveries from markets and pharmacies
- Develop casual carpool programs

MEDIUM-TERM STRATEGIES

- Include more low floor buses in future fixed-route fleet expansions
- Improve timed transfers between regional and local services
- Expand local service to connect Dixon and Vacaville
- Consolidate paratransit services
- Develop feeder services from paratransit to core fixed routes
- Evaluate intercounty paratransit service
- Provide partial subsidy of paratransit fares for low-income users
- Create shopper shuttles
- Create new volunteer driver programs
- Provide Free midday fixed-route fares on local service for seniors and the disabled
- Evening/weekend subsidized taxi service
- Provide fixed route travel training
- Establish a travel information clearinghouse

LONG-TERM STRATEGIES

- Improve headways on Route 30
- Establish Sunday transit and paratransit service

- Convert some paratransit to Flex-route service
- Establish Service from Rio Vista to Pittsburg BART
- Create Driver Wellness programs

The proposed expansion of the intercity transit services including limited service on Sunday, will require expansion of ADA paratransit services, even though all fixed route transit services in Solano County are "fully accessible" (lift equipped buses). At present the ratios of peak deployment intercity service transit vehicles to intercity paratransit vehicles is about four to one. Four levels of service increase (linked to funding for paratransit fixed route service) are proposed.

YEAR 2030 SERVICE INCREASE/VEHICLE RATIO

Existing Service	8 vehicles
First Phase - 50% service increase	12 vehicles
Second Phase - 90% service increase	15 vehicles
Third Phase - 120% service increase	17 vehicles
Unconstrained Plan - 230% service increase	26 vehicles

As noted previously a limited trunk Sunday fixed route service is proposed. Paratransit services would also be required to serve demands within this service corridor. Where appropriate long distance trips should be accommodated in coordination with fully accessible fixed route services via transfers. Only ADA eligible riders should be served by the intercity paratransit service.

Where possible, partnership service should be explored with medical, government social service agencies and private developers. For example, Kaiser HMO should participate with the fare subsidy of its patients and retirement village developers should be urged to sponsor paratransit services for residents of their projects.

Please refer to the STA's recently completed "Solano County Senior and Disabled Transit Study" for more detailed data and recommendations on the demand and need for expanded paratransit services over the next 25-30 years.

INTERCITY TRANSIT SUPPORT SYSTEM ELEMENTS

Provision of a seamless and accessible transit system will involve expansion of park-and-ride facilities and upgrading intermodal transit centers.

PARK AND RIDE FACILITIES

Existing Conditions

There are about fifteen formal park-and-ride locations in Solano County and a number of informal locations (Table 2.10). Vallejo maintains a large park-and-ride lot at the ferry terminal and a medium size lot at the York and Marin Transit Center. The Curtola park-and-ride lot in particular seriously lacks capacity and continues to be seriously oversubscribed. Typically, 20 to 30 cars are parked at each of the informal Red Top Road and American Canyon Road I-80 interchange park-and-ride areas. Commuters also park in private off-street parking lots and along public streets near popular bus routes.

Since the first Transit Element was approved in 2002, an additional approximately 650 park and ride spaces have been constructed by 2005.

Future Park and Ride Demands

The future demand for park-and-ride facilities will be determined by a number of factors. Paramount among these factors will be the expansion of High Occupancy Vehicle (HOV) facilities into the County, the levels of Single Occupancy Vehicle (SOV) general flow traffic lane congestion, the attractiveness of public transit services and the convenience of the park-and-ride lot locations for commuters. Several of these key factors were addressed in the I-80/680/780 Transit Corridor Study completed by the STA in July 2004. A major challenge for intercity bus service use of HOV lanes historically has been access. HOV lanes tend to be located in the

center median lanes, which are difficult for express buses to use, since express buses often must make stops at major freeway interchanges to serve passengers. Some HOV systems provide direct HOV only ramps to/from the center median HOV lanes and minimize these access challenges. Where possible direct ramps should be considered in the planning of Solano County HOV facilities. Two specific direct ramps were proposed as part of the I-80/I-680/I-780 Transit Corridor Study.

Park and Ride Siting Principles

Successful park-and-ride lots are generally located as follows:

- Upstream of major points of congestion
- Upstream of HOV facilities
- Upstream of toll facilities
- At major junctions of transit routes
- Upstream for long distance highway segments
- Along intercept paths to freeways, particularly high visibility sites near freeway

The Curtola park-and-ride site exemplifies most of these criteria and with the completion of the I-80 HOV system between the Carquinez Bridge and the Bay Bridge, it will meet all of the criteria.

Table 2.11 – SOLANO PARK-AND-RIDE FACILITIES COMMUTER INFORMATION

City	Location	Spaces
Benicia	East Second St. & East S St. at I-780	15
Cordelia	Green Valley Rd. at I-80	65
Dixon	Market Ln. at Pitt School Rd.	100
Dixon	B St. at Jackson (Future Capitol Corridor Station)	114
Fairfield	Cadenasso Dr. near West Texas at I-80 (Phase 1)	634
Fairfield	Kmart at North Texas & Air Base Pkwy	48
Suisun City	Main St. at Route 12	250
Vacaville	Cliffside at I-80	129
Vacaville	Leisure Town Road at I-80	46
Vacaville	Davis St. at I-80	250
Vacaville	Bella Vista Road and I-80	201
Vallejo	Benicia Rd. at I-80	13
Vallejo	Curtola Parkway & Lemon St. at I-80 (SW)	379
Vallejo	Curtola Parkway & Lemon St. at I-80 (SE)	64
Vallejo	Magazine St. at I-80	19
Vallejo	Intermodal Center at Mare Island Way & Georgia St.	650
Total		2977

It should be noted that park-and-ride sites do not need to be owned and constructed by public agencies, some transit operators contractually agree to share underutilized weekday private parking resources. Privately owned parking lots are often not fully utilized during time periods needed by commuters (6 a.m. to 6 p.m. on weekdays). Shared use agreements can be employed to allow commuters to use these empty parking spaces. The agreement can involve community goodwill, advertising benefits and/or money. The use of private parking is simplest at locations that do not require buses to enter the parking lot (on-street loading). Possible candidates for shared use parking include the Brendan Theater lot in Vacaville, the Target shopping lot adjacent to the new Fairfield Transportation Center and private lots in central Rio Vista.

Proposed Major Expansions of Existing Facilities

Major expansions are proposed for the Vallejo Ferry Intermodal Center and to the Curtola park-and-ride lot. Expansions to the Fairfield Transportation Center lot and the Dixon Downtown lot are also proposed.

Vallejo Baylink Intermodal Center - Planning has been completed for the 1, 200 spaces park-and-ride garage to serve expansion of the Baylink ferry service.

Curtola Park and Ride Lot – Demand for this lot is seriously over available capacity. It is used by both rideshare commuters and transit riders and has a near ideal location at the junction of two major commute corridors. Completion of the westbound I-80 HOV lanes from the Carquinez Bridge to Highway 4 will further increase demand and worsen current problems.

The proposed plan is to construct a 1,200-space parking structure on the west end of the site and to consolidate the bus loading at the eastern end of the site. A new traffic signal would be installed on Curtola Parkway to improve access and to allow buses destined to Downtown Vallejo to directly exit onto Curtola Parkway. Currently these buses must double back to Lemon Street. The increased parking supply also requires increased driveway access to support it. Location of bus loading facilities at the eastern end of the site is proposed to enhance pedestrian accessibility and to increase visibility. The transit center element of the project is intended to serve Greyhound buses, which can have long dwell times and intercity express buses, which only stop long enough to load and unload passengers. Prepayment of fares could be considered for this high passenger activity location. Real time passenger information is

also recommended for this site. The parking structure would be four levels and would be constructed in two phases in order to minimize parking loss during construction. Access to the PG&E yard would be maintained. The estimated cost for this project is $12 million. During construction of the garage, an interim replacement facility should be identified. One possibility is the site that is located on the suth side of Curtola Parkway at Sonoma Boulevard.

Fairfield Transportation Center - The recently constructed parking garage is successfully operating near its capacity. Phase II of the project added a surface lot and expanded capacity to 634 spaces. Phase III would add an additional 400 spaces for a total of 1,000 spaces, (refer to I-80/I-680/I-780 Transit Corridor Study).

Vacaville Regional Transportation Center Street Lot - This lot presently operates near its capacity. The nearby Bella Vista park-and-ride lot project (completed in 2005) will expand capacity and help support future demands.

Expansion of Suisun City Amtrak Station Lot – Land was available in the Caltrans right-of-way for expansion of the park and ride lot. The expansion was completed in 2003 and helped handle the overflow demand conditions that were occurring as well as support the Capitol Corridor patronage in the future.

Dixon Downtown Lot – The City has completed Phase I of the Downtown intermodal project. Demands at this lot will increase significantly when commuter rail service is established to Sacramento and Oakland. The timing of the Phase I parking lot expansion therefore depends on the timing for passenger rail service. The station concept needs to be reviewed to reflect the UPRR's current preferences for station facilities.

New Highway and Bus Transit Oriented Park-and-Ride Lots

I-80 Corridor

Based on the I-80/680/780 Transit Corridor Study, nine new or expanded long-range park-and-ride lots are proposed for the I-80 Corridor to accommodate the projected 2030 transit and ridesharing demands. Two would be located in Dixon, one in Vacaville, three in Fairfield and two in Vallejo.

- Dixon – North First Street/SR-113
- Dixon - West A Street
- Vacaville – Vacaville Intermodal Center
- Vacaville – Bella Vista Park and Ride
- Fairfield – North Texas Street
- Fairfield - Red Top Road (to replace Green Valley Road Park and Ride)
- Fairfield- Fairfield Transportation Center
- Vallejo – Turner Road (near State Route 37 and Fairgrounds)
- Vallejo – Expansion of Curtola Parkway Park and Ride lot

These new facilities would complement current lots located at Pitt School Road, Davis Street, Cliffside Drive, West Texas Street (Fairfield Transportation Center), Green Valley Road, Benicia Road, Curtola Parkway and Magazine Street. The North First Street lot and West A Street lot would be well located to serve east and west oriented commuters respectively from Dixon. The Nut Tree site is conveniently located near the junction of I-505 and is recommended to be explored as an element of the proposed redevelopment of the Nut Tree area. The North Texas Street lot is well located to serve east and north oriented commuters form eastern Fairfield. With the planned reconstruction of the I-680 interchange, opportunities to expand park-and-ride facilities and incorporate direct bus access to it should be explored.

The Red Top Road project will convert the current ad hoc park and ride facility to a formal park and ride lot. Establishment of a park-and-ride facility at Turner Road Overcrossing (near the SR 37 junction) should be explored in conjunction with retail proposals being developed on a portion of the fairgrounds.. Should this not prove feasible a park-and-ride lot should be explored along SR 37 between SR 29 and Wilson Avenue.

I-680 Corridor

Two new park-and-ride lots are proposed for the I-680 Corridor.

- Gold Hill Road (Fairfield)
- Vista Point and Benicia Intermodal Center near Lake Herman Road
- Industrial Way/Park Rd. and /or the Benicia Intermodal Station near Lake Herman Road

The Gold Hill Road site would serve commuters in the Cordelia area southbound on I-680. The Benicia Intermodal site near Lake Herman Road is seen as the initial phase of development leading to establishment of a passenger rail station at this location. Improved access from I-680 is desired in conjunction with this project.

I-780 Corridor

In addition to the Benicia Intermodal site that serves commuters in this corridor, three new park-and-ride lots are recommended along the I-780 Corridor: .

- West Military and Southampton
- Columbus Parkway and Rose Drive
- East H Street

SR-12 Corridor

Three park-and-ride lots are proposed for the Rio Vista and Suisun City segment sof State Route 12.

- Rio Vista – State Route 12 and Church Street
- Rio Vista – Downtown near Main Street
- Suisun City - SR 12 near Walters Road (to serve the new residents along Walters Road and the Lawler Ranch areas)

The Church Street lot would serve residents located in the westside of the City and the Main Street site would serve residents located closer to downtown. Commuters prefer to use lots located near their home. The Main Street lot could be a shared use lot by an agreement with private property owners. The new Suisun City lot could also provide a stop for express bus service to the Suisun City Amtrak train station and other commuter destinations.

INTERMODAL BUS TRANSIT ORIENTED CENTERS

The proposed intercity bus service plan could be most attractive to passengers if delays at interchange bus stops could be minimized without the loss of pedestrian and local feeder bus access connections to the freeway intercity bus stops. Desirably the freeway bus stops should function much like station stops serving passenger rail services. These locations include:

- I-80 and North First Street in Dixon
- I-80 and Davis Street and Allison/Ulatis in Vacaville
- I-80 and North Texas in Fairfield
- I-80 and West Texas in Fairfield Transportation Center
- Red Top Road in Fairfield
- I-80 and I-680 in Cordelia
- I-80 and I-780/Curtola in Vallejo
- I-680 and Industrial Park and Lake Herman Road in Benicia
- I-780 in Downtown Benicia

On going planning for the I-80/I-680/SR-12 interchange located in Fairfield should specifically explore opportunities to integrate an express bus transit center into its design. The North Connector Road appears to provide the best opportunity for this new transit hub. This location could efficiently serve most all of the proposed new intercity routes including the new Highway 12 bus route and new Sacramento express bus route.

INTERMODAL FERRY AND RAIL CENTER FACILITIES

Solano County presently has one passenger rail station and one ferry terminal. The City of Fairfield and City of Vacaville are in the process of planning a second passenger rail station working with the STA. As described in the " Ferry Services" section, the Baylink ferry terminal in Vallejo is planned for major improvements, which include added parking and bus transit interface improvements. Planning for the expansion of the parking facilities at the Suisun City Station is also well advanced.

Fairfield/Vacaville Intermodal Train Station

Conceptual planning has advanced for development of a station at the Peabody Road crossing of the Capitol Corridor/UPRR tracks. Recent direction from the UPRR appears to require a center

platform for the station development. Revised track plans were submitted to the Union Pacific in fall 2004.

Benicia Intermodal Train Station

Development of a new train station near Lake Herman Road appears to have promising patronage potential. A station at this location was rated to be as promising as the Fairfield/Vacaville site, except it required a longer period of time for development. Thus, once the new Fairfield/Vacaville station is completed and demonstrates its patronage success, advancement of the Benicia Station should follow. The City of Benicia is considering alternate site locations for this project.

Dixon Intermodal Train Station

STA is coordinating with Sacramento area agencies exploration of the feasibility of commuter rail services between Oakland and Sacramento. This service and perhaps Capitol Corridor passenger rail service potentially could serve the new Dixon Intermodal Transportation Center, which is now under development.

Benicia Intermodal Ferry Terminal

The City of Benicia has indicated an interest in new ferry service to the Downtown waterfront. Between $5 and $10 million is estimated to be required to provide a viable ferry dock downtown. The Water Transit Authority is reportedly investigating the potential and improvement dock needs in Benicia.

Solano County

Alternative Modes Element



June

2005

SOLANO Comprehensive Transportation Plan

ALTERNATIVE MODES ELEMENT

This Alternative Modes Element has been developed as a part of the Solano Comprehensive Transportation Plan (CTP). The Solano Transportation Authority Board and its Alternative Modes Subcommittee developed the policies, strategies and programs identified in this Element. When this update was developed, opportunities for full public input were provided to the various communities in the fall of 2003 and additional workshops were held in spring and summer of 2004.

This Element focuses on a wide range of proposals from ridesharing to bike routes, pedestrian trails, downtown revitalization projects and related transportation for livable community/enhancement projects, and alternative fuels infrastructure. This Element is intended to be innovative with regard to encouraging alternative modes of transportation and proactive by supporting a set of projects and programs, that when developed will meet the goals of this Element and the Comprehensive Transportation Plan. In recent years, STA member jurisdictions have made substantial progress in encouraging the use of alternative transportation modes. Achieving the additional multi-modal options described in this report will help provide balanced transportation alternatives and improve the quality of life for Solano residents.

An early step in the CTP 2030 process was the distribution of Transportation Needs Survey to all STA member agencies. The surveys identified the long -range transportation needs of each agency by identifying specific alternative modes projects. These projects are presented in Table 3.1.

The Alternative Modes Element also begins to explore the various transportation-land use linkages in the cities and County. Such linkages should:

- Encourage direct transportation connections between a community's general plan and the countywide transportation system
- Support the efforts to improve downtown revitalization programs, urban core areas and corridor plans
- Identify some of the on-going Transportation for Livable Communities (TLC) projects and enhancement efforts now underway (such as the pending Countywide Pedestrian Plans) that will continue to make Solano County an attractive and desirable place to live and work

The cities and County are encouraged to fully explore and address these linkage proposals and strategies as part of their on-going land use and transportation plans. The STA will continue to identify programs and funding opportunities that will help achieve the goals and objectives of all Elements of the Comprehensive Transportation Plan. As a follow-up to this Element, in 2003 a "Best Practices" handbook entitled "Transportation and Land Use Toolkit" was prepared by the STA, the Yolo Solano Air Quality Management District and the Yolo County Transportation District to better describe and illustrate those types of alternative mode projects that should be considered and incorporated into the policies, plans and projects of the cities and county.

TABLE 3.1 - ALTERNATIVE MODE NEEDS BY JURISDICTION

Benicia:

- Widen State Park Road Overcrossing I-780 With Bike/Ped Access
- Construct Benicia Bridge Bike Path and Walkway Improvements
- Construct Park Road (Adams to Oak) Bike Path and Walkway Improvements
- Construct First Street Streetscape Project
- Construct 3 New Park-n-Ride Facilities
- Install Bike and Walkway Connections to the Historic Arsenal, Clocktower and Camel Barn Facilities
- Install Bay Trail Shoreline Connections Between Vallejo and the Benicia Bridge
- Install Citywide Bike Path Improvements Per General Plan/ CIP
- Install Citywide Walkway Improvements Per General Plan/ CIP
- Install Citywide Traffic Calming Improvements
- Construct Benicia Intermodal Transportation Station
- Provide Ferry Service to Benicia

Dixon:

- City Bikeway Plan
- Provide a grade separated pedestrian crossing of the Union Pacific Railroad tracks to replace the existing at-grade crossing at West B Street adjacent to the Multi-modal Center
- Intercity Bike Routes (to Vacaville)
- Downtown Streetscape Project (Phases 2 & 3)
- Dixon Multirmodal Transportation Center
- Alternative vehicle partnerships
- Air quality projects
- Add additional park and ride lots along the I-80 Corridor

Fairfield:

- McGary Road Bike Path
- Blossom/UPRR Pedestrian Grade Separation
- Linear Park Path
- Fairfield/Vacaville Intermodal Train Station
- Jepson Parkway Bike Path
- Laurel & Ledgewood Creek Bike Paths
- Union Creek Pedestrian/Bike Path
- I-80/Red Top Park-and-ride lot
- I-680/lndustrial Way Park-and-ride lot
- I-680 Gold Hill Park-and-ride lot
- Downtown Multimodal Project
- City Gateway Projects: 1-80/N. Texas, 1-80/W. Texas, SR 12/Pennsylvania, SR 12/Beck. 1-80/Red Top
- North Texas Street Transit Hub Access to Teen Center

Rio Vista:

- Waterfront Bikeways
- General Plan Pedestrian/Bike System
- SR 12 Pedestrian Underpass
- Riverfront Access Signage Project
- SR 12/Church Park-and-ride lot
- SR 12/Waterfront Streetscape Project
- Community Design Program

Solano County:

- Old Town Cordelia Improvement Project
- Pleasants Valley Road Bike Route
- Jepson Parkway Bike Path and Landscaping Project
- Green Valley Corridor Landscaping Project
- Reopening of McGary Road
- Vacaville-Dixon Bike Route
- Fulton Avenue Sidewalk
- Solano County Bridge Replacements to Provide Pedestrians and Bicycles

Suisun City:

- SR 12 Pedestrian/Bike Gap Closure Path
- Driftwood Waterfront Pedestrian Plaza
- Petersen Road Bike Path
- Blossom/UPRR Pedestrian Grade Separation
- SR 12 Pedestrian Path (south side)
- Suisun Marsh Pedestrian/Bike Path
- Park-and-ride lot Landscape Project
- Eastern Suisun City Park-and-ride lot
- Main Street Improvements (Phase 2)
- Rail Station Improvements
- Union Pacific Railroad Sound Walls
- Kellogg Street Waterfront Improvements

Vacaville:

- Ulatis Creek and Alamo Creek Bike Routes
- Centennial Park Bike Route
- Bicycle signage and markings
- Bicycle route landscaping
- Downtown Multi-Family Housing Program
- Electric Vehicle Subsidy Program
- Electric Vehicle Charging Station Program
- Fleet replacement with alternative fuels

Vallejo:

- Bay Trail Completion
- I-80/Turner Overcrossing Bike Lanes
- Blue Rock Springs Pedestrian/Bike Path
- Columbus Parkway Pedestrian/Bike Path
- I-780 Pedestrian/Bike Grade Separation
- Fairgrounds Drive Pedestrian/Bike Path
- Broadway Pedestrian/Bike Path
- Mare Island Pedestrian & Bike System
- Curtola Park-and-ride lot expansion
- Ferry transit-oriented development
- Investigate water taxi stops at Mare Island
- Sonoma Blvd/ SR29 TLC Corridor

THE LAND USE AND TRANSPORTATION CONNECTION

In Solano County, around the Bay Area, and across the country, governments are working to examine the relationship between transportation needs and planning and land use. For years, land use decisions have been made without fully addressing project impacts to transportation systems. Today, local decision makers are considering the interrelationship between transportation and land use, specifically how the location of residences, jobs, shopping, recreation, and other destinations are affected by land use and transportation decisions. Land use decisions affect the number of auto trips that people must take and how far they have to drive. Auto emissions and pollutants are a function of how many daily auto trips people make, how far they drive, and the type of vehicles driven. A key element of a livable community is a balanced transportation system allowing people to travel around not only by car, but also by transit, bicycling, and walking.

One of the goals in the Comprehensive Transportation Plan is to encourage the integration of transportation and land use planning. Land use authority is within the jurisdiction of the cities and the County. In order to accomplish this goal while recognizing local land use control, the STA is working with its member agencies to provide planning and funding assistance to candidate projects that demonstrate transit integration and incorporate alternative transportation modes.

STA strives to build partnerships between its member agencies to ensure that balanced transit-oriented development occurs throughout Solano County. A specific example of this concept is the Jepson Parkway Concept Plan. The Plan calls for the development of a new north-south cross county transportation corridor that includes a balance of transit modes to serve the citizens of Suisun City, Fairfield, Vacaville, and Solano County as a whole. The local jurisdictions along the corridor are planning to amend their General Plans and Zoning Ordinances to provide for transit supportive land uses at the planned rail and transit stations along this developing route. The expected result of these types of planning efforts is better linkages between communities and their land uses that offer people real transportation choices.

One of the major challenges facing Solano County today is maintaining the quality of life as population, development, jobs, and

congestion grow. According to the Solano Economic Development Corporation (Solano EDC), traffic congestion has the potential to threaten Solano County's ability to attract new employers and could directly impact the County's growing economy. As congestion worsens, the community looks to the STA to provide effective transportation solutions.

Through partnerships with its member agencies, the STA endeavors to address the relationship of transportation and land use planning. This Element establishes the foundation to focus on a balance of transportation alternatives to provide Solano County residents with convenient access to public transportation, services, jobs, recreation, community facilities, and travel destinations, while providing a sense of place.

GOALS, OBJECTIVES, AND POLICIES

STA has identified the following Alternative Transportation Modes Goal:

> *Emphasize that Alternative Transportation Modes are an integral part of travel and commuting in Solano County, by implementing and maintaining a transportation system that provides for transit integration and makes the use of alternative modes convenient, safe, efficient, and cost effective.*

Seven objectives and policies supporting each objective have been defined for this alternative modes goal:

- **Objective A -** Implement short and long range bicycle and pedestrian systems.
- **Objective B -** Maximize multi-modal connections.
- **Objective C -** Develop a Solano County TLC/Enhancements Program
- **Objective D -** Provide incentives to expand ridesharing modes.
- **Objective E -** Advance the understanding of both the environmental and economic benefits and costs of using clean technologies and alternative fuel vehicles.
- **Objective F -** Improve and increase available alternative fuel infrastructure and support services and funding.
- **Objective G -** Convene a forum of transit and fleet operators in Solano County to discuss alternative fuels technologies and policies.

Objective A- Implement Short and Long Range Bicycle and Pedestrian Systems.

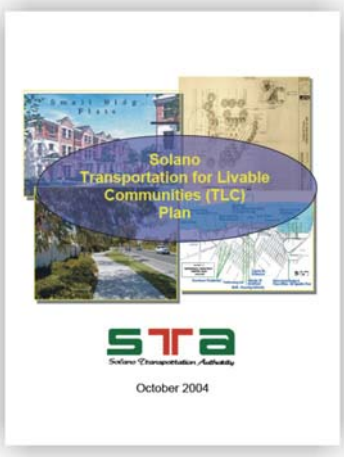
Objective A Policy Actions:

1. Update the Countywide Bicycle Plan and Countywide Pedestrian Plan periodically to maintain eligibility for State and Federal funding.
2. Provide funding only for bicycle and pedestrian projects included in the Countywide Bicycle Plan and Countywide Pedestrian Plan.
3. Coordinate with local jurisdictions to ensure appropriate opportunities for bicycle and pedestrian connections are planned, constructed, and maintained.

Objective B - Maximize multi-modal connections.

Objective B Policy Actions:

1. Prioritize funding for multimodal projects included in the Comprehensive Transportation Plan.
2. Coordinate with local jurisdictions to ensure appropriate opportunities for multimodal connections are planned, constructed, and maintained.



Objective C - Develop a Solano County TLC/ Enhancements Program.

Objective C Policy Actions:

1. Utilize local discretionary federal funds to provide funding for integrated transportation/ land-use projects that are identified in the Comprehensive Transportation Plan.
2. Coordinate with local jurisdictions to develop candidate projects for inclusion in the Comprehensive Transportation Plan.

Objective D - Provide incentives to expand ridesharing modes.

Objective D Policy Actions:

1. Develop marketing and educational strategies to inform private employers of the benefits of ridesharing.
2. Implement and expand programs that provide ridesharing incentives and encourage additional ridesharing activities.
3. Plan for and prioritize funding for additional park-and-ride lots or spaces throughout the County.
4. Support long-term funding opportunities to encourage employers to develop rideshare programs.
5. Maintain rideshare mode split with County growth.
6. Maintain Rideshare Program in Solano County in partnership with regional programs.

Objective E - Advance the understanding of both the environmental and economic benefits and costs of using clean technologies and alternative fuel vehicles.

Objective E Policy Actions:

1. Pursue various air quality strategies including funding for Alternative Fuels infrastructure.
2. Encourage and assist local and regional transit service providers to continue to purchase and use new alternative fuels and clean technology buses for their fleets.
3. Encourage local agencies to purchase alternative fuels and clean technology vehicles for their fleets.
4. Support the BAAQMD and YSAQMD in their endeavor to assist local agencies on code revision and development conducive to the use of clean and alternative fuel vehicles and fuels.
5. Develop transportation/land use strategies that could be incorporated into general plan updates.

Objective F - Improve and increase available alternative fuel infrastructure and support services and funding.

Objective F Policy Actions:

1. Develop alternative fuels marketing and educational strategies.
2. Explore the opportunity to create partnerships for shared access to new and existing refueling stations.
3. Support the development of electric vehicle recharging infrastructure at public and commercial locations.
4. Explore options available to assist in the installation of private business and/or home refueling infrastructure.

Objective G - Convene a forum of transit and fleet operators in Solano County to discuss alternative fuels technologies and policies.

Objective G Policy Actions:

1. Develop an alternative fuels and infrastructure committee comprised of transit operators, fleet operators, air board representatives, and other stakeholders.
2. Establish forum discussions on fuels and infrastructure technologies and trends.

TRANSPORTATION FOR LIVABLE COMMUNITIES PLAN

The Transportation for Livable Communities (TLC) Plan focuses on the relationship between transportation and land uses by supporting and promoting "smart growth" projects in Solano County. By creating communities that offer transportation options and 3promoting development patterns that foster multi-modal transportation, residents can decrease their dependence upon automobiles. The decreased automobile uses will eventually contribute to a reduction in auto pollution and traffic congestion

There are two substantial funding sources for the Bay Area for these types of projects: Regional TLC Program and the Countywide TLC Program. The Solano Transportation Authority created the TLC plan to support good planning practices and to assist in prioritizing and programming Regional and Countywide TLC funds.

From MTC's ***Transportation /Land-Use Connection Policy***

The Commission encourages community plans that:

1. Enable residents to use a range of travel modes, including transit, walking an biking, to access jobs, shopping, recreation and other daily needs.
2. Provide that the streets, transit, pedestrian and bicycl ways are part of a system of integrated routes.
3. Provide for development of housing and regional activity centers that are accessible to the regional transit network.
4. Provide for a diversity of development and other community-oriented transportation strategies designed to limit the extent to which it is necessary to travel from one community to another to access basic necessities of living.
5. Provide for the design of streets and other transportation facilities and amenities that are integrated into the overall community design and are conducive to sense of community identity and pride.

TLC GOALS, OBJECTIVES, AND ACTIONS

This section presents the recommended goals and objectives of the Transportation for Livable Communities Plan that will help encourage future transportation and land use linkages; and serve as a resource for local jurisdictions.

TLC Plan Goal

Provide a balanced transportation system to enhance the quality of life, support economic development, and improve accessibility for all members of the community by efficiently linking transportation and land uses utilizing multiple transportation modes.

Objectives

Prepare a TLC Plan that identifies policies, programs, and projects for transportation/land use linkages in Solano County.

Develop a TLC Plan that:

- Identifies TLC concepts.
- Identifies candidate TLC projects.
- Develops a competitive grant process that the STA member agencies can apply to for TLC projects.

RELATIONSHIP TO OTHER PLANS, POLICIES, PROGRAMS

A number of federal, state, regional, and countywide policies and programs indirectly or directly support TLC objectives, and are the cornerstones of policies and incentives for local development supporting alternative transportation modes:

Federal Programs

The Intermodal Surface Transportation Efficiency Act (ISTEA). A landmark Federal Program passed in 1991. For the first time, significant portions of the federal transportation budget were set aside for projects and enhancements to the highway system in an effort to mitigate its impact on the quality of life, or to support alternative means of transportation.

Transportation Equity Act for the 21st Century (TEA-21). Signed into law in 1998, TEA-21 continued the integration of alternative modes into the transportation mainstream, and enhanced the ability of communities to invest in projects that can improve the safety and practicality of bicycling and walking for everyday travel.

TEA-21 was reauthorized at least through 2004-05 to provide additional time for lawmakers to complete TEA-21's successive transportation spending bill. The new federal transportation bill is expected to build upon TEA-21 by preserving funding flexibility to allow the broadest application of funds to transportation solutions, as identified by state and local communities.

Federal Community Planning Programs. Primarily through the Department of Housing and Urban Development (HUD), the federal government provides grants, loans, and technical assistance for planning, improving, and preserving communities.

State Programs

The Transit Villages Act of 1994. Probably the most important step the state has taken in support of transit-oriented development; however, the Act had limited impact because it carried no funding.

Transportation Congestion Relief Program (TCRP) And State Proposition 42. The State's 2000 TCRP provided significant new funds for transportation by dedicating all state gasoline sales tax revenues. The program has been recommended for an additional year of funding through at least 2004-05 by the Governor.

California Department of Transportation (Caltrans) Programs. Caltrans manages several grant programs (generated by gas tax revenue and federal funds) to support alternative transportation modes projects.

The California Department of Housing and Community Development (HCD). The department manages grant and loan programs that support TLC principles in land use planning and development.

Regional Programs and Plans

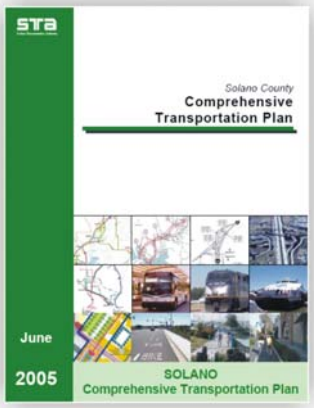
Metropolitan Transportation Commission's Transportation for Livable Communities (TLC) Program. Funded through the federal Congestion Mitigation and Air Quality Improvement program (CMAQ), the TLC program provides direct financial incentives for cities, counties, and community-based organizations to support projects that encourage pedestrian, transit and/or bicycle trips, and spur the compact development of housing, downtowns and regional activity centers. In addition, $24 million dollars of Transportation Enhancement (TE) funds have been awarded directly to each of the congestion management agencies including $1.5 million to the STA and its member agencies since 1998. The Metropolitan Transportation Commission's TLC Program has utilized the CMAQ funds and TE funds to program $59.8 million to 149 TLC projects around the Bay Area over the six-year life of the program.

In November of 2000, the program was expanded to include a Housing Incentive Program (HIP). The HIP Program awards TLC capital grants to cities or counties that build high-density housing within walking distance of a major transit station or transit corridor. In the 2001 Regional Transportation Plan (RTP), MTC allocated $27 million a year for regional TLC/HIP projects throughout the Bay Area as part of the re-authorization of TEA-21. In April 2004, MTC adopted new Regional TLC/HIP guidelines.

Solano County projects that have received funding from MTC's TLC/HIP program include:

- Jepson Parkway Bikeway (planning and capital grants)
- Rio Vista Main Street Improvements (capital grant) and Downtown Waterfront Plan (planning grant)
- Solano County's Old Town Cordelia Improvement Project

- Suisun City's Main Street (Phase 1) and Driftwood Waterfront Pedestrian Plaza (capital grants)
- Vacaville's Davis Street Streetscape Project (capital grant)
- Vallejo Georgia Street/Waterfront Redevelopment Plan (capital grant)
- Vallejo Sereno Transit Village (HIP grant)
- Vallejo Station



Solano Comprehensive Transportation Plan. In May 2002, Solano Transportation Authority (STA) adopted the Solano Comprehensive Transportation Plan (CTP), establishing a vision, providing direction, and setting priorities for funding to meet the transportation needs of Solano County through the year 2025. The CTP identifies overall transportation policies for three key plan elements: the Intercity Transit Element; the Arterials, Highways, and Freeways Element; and the Alternative Modes Element. The Alternative Modes Element contains more detailed goals, policies, and plans that support alternative modes of transportation to the prevalent single-occupant automobile, including bicycling, walking, ridesharing, park-and-ride, high-occupancy vehicle systems, projects that enhance pedestrian, bicycle, and transit experience and fuels infrastructure projects. The STA Comprehensive Transportation Plan Intercity Transit Element includes plans and concepts for improving intercity transit service. The Arterials, Highways, and Freeways Element identifies various needs on routes of regional significance and proposes various improvements to corridors, highways, and major arterials. Please see the STA's website for additional information on the CTP at: http://*www.solanolinks.com/plans.html.*

Solano County Proposition A. Proposition A was first passed in 1984 and extended in 1995 continuing the effort to keep urban development within the cities, preventing "new towns" and office complexes outside of municipal areas. Prop A effectively protected agricultural and open space land in Solano County by directing urban growth and development to existing cities. This proposition shall remain in affect until December 31, 2010.

WHAT IS A "TLC" PROJECT?

In communities across the Bay Area and the nation, there is a growing concern that historical development patterns - dominated by what is commonly known as "sprawl" - are no longer in the long-term interest of our cities, agricultural lands, wilderness areas, or community identities. In Solano County and other jurisdictions around the nation, regional policies and federal funding are emphasizing the importance of "livable communities" and "smart growth." Further support for these practices is evolving from changing demographics, strong environmental or stewardship ethics, increased fiscal concerns, and more nuanced views of unchecked growth. The result is both a new demand and a new opportunity for "livable communities" projects.

TLC projects can include a variety of improvements that encourage and enable alternative modes of transportation. Projects can range from major new or infill transit-oriented developments, to extensions of bicycle and pedestrian pathways, and enhancement of downtown sidewalks. The common thread in all TLC projects is a de-emphasis of the single-occupant vehicle.

In 1996, the U.S. Environmental Protection Agency joined with several non-profit and government organizations to form the Smart Growth Network (SGN). . The SGN provides over 700 local and state officials, development professionals, and public interest organizations with the latest information and resources on the world of smart growth. The following is SGN's ten smart growth principles and supporting policies that communities can adopt to create vibrant, diverse, healthy neighborhoods that decrease reliance upon automobiles.

$MART GROWTH
N E T W O R K

Smart Growth Networks - 10 Smart Growth Principles

1. Mix Land Uses

Integrating residential, commercial, and leisure activities within a neighborhood rather than segregating them allows people to live, work, and play without the need to drive. Modifying zoning ordinances to favor mixed-use developments, creating incentives to create jobs near housing, reusing existing structures for a variety of uses, and providing financial incentives to develop mixed use projects are some ways to gradually transform areas into vibrant neighborhoods.

2. Take Advantage Of / Promote Compact Building Design

Higher-density developments are crucial for supporting transportation choices. Compact developments encourage walking and dense concentrations of people are ideal to support public transportation. Compact buildings also create architecturally diverse neighborhoods, provide opportunities to construct an array of housing options, and allows cities to use land more efficiently. Methods to promote compact building design include density bonuses to developers, adopting traditional neighborhood designs, reducing or removing minimum lot size requirements, and reducing off-street surface parking.

3. Create a Range of Housing Opportunities and Choices

Finding affordable housing is one of the biggest issues in California. Creating neighborhoods with a variety of housing options for different income levels benefits both residents and cities. Diverse housing in a neighborhood reduces the concentration of poverty and moves away from the "cookie cutter" appearance that seems to be a common characteristic of newer developments. Housing options enable residents to change their housing situation to better adapt to their lifestyle or household size. Achieving this mix and providing affordable housing may require changes to zoning ordinances and building codes, establishing funding programs to encourage development in underserved communities, and working with employers through programs that support employee housing nearby.

4. Create Walkable Communities

Walkable neighborhoods benefit the residents and community by decreasing traffic and its negative environmental consequences, encouraging healthy lifestyles, making walking a viable transportation option, and increasing social interaction. There are innumerable ways cities can become more pedestrian-friendly but some of the most basic measures include developing a pedestrian plan, adopting design standards for streetscapes and pedestrian facilities, mixing land uses, and promoting walking through programs such as Safe Routes to School and safe routes to transit.

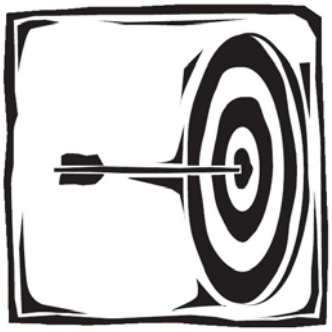
5. Foster Distinctive, Attractive Communities With a Strong Sense of Place

Unique architectural styles, landscaping, distinctive signage, landmarks, and other distinguishing elements of the physical environment foster a sense of pride in one's neighborhood. Residents enjoy where they live and work, and visitors are attracted to these areas to shop, dine, and walk. Ways to enhance existing communities and develop new neighborhoods that provoke this sense of pride include preserving historic buildings, creating public gathering places like plazas, establishing community festivals and street fairs, public art, and adopting streetscape guidelines to bring about a cohesive look and feel of the area.

6. Preserve Open Space, Farmland, Natural Beauty, and Critical Environmental Areas

Aside from the obvious environmental benefits of preserving open space and protecting critical environmental areas, open space is also an amenity that communities are finding attractive for other reasons. Accessible open space areas not only attract visitors but also entice people to relocate for the natural beauty. More open space translates into fewer developed areas that cause increased water runoff and encroach into wildlife habitat. Communities must aggressively work to maintain the natural environment through zoning to preserve open space, create trail and greenway networks, and transfer of development rights.

7. Strengthen and Direct Development Toward Existing Communities



Growth encouragement has become the subject of many heated discussions in city halls around the nation. Rapidly growing urban fringes cause growing pains on a city's infrastructure, increased time spent in transit, and an out-migration from a city's urban center that leaves behind decaying neighborhoods with a smaller tax base. Smart growth concentrates on infill and investment in existing neighborhoods – areas that are already equipped with infrastructure and often located closer to employment centers. Existing communities can be strengthened by creating business improvement districts, cleaning up brownfields for redevelopment, supporting community development corporations, and minimizing vacant properties through code enforcement and incentives.

Solano County supported this principle with the passage of Proposition A, effectively protecting agricultural and open space land in Solano County by directing urban growth and development to existing cities.

8. Provide a Variety of Transportation Choices

Providing transportation choices – this is the very heart of a TLC program. Ways to eliminate the necessity of owning a car benefits children and the elderly that may not be able to drive, low-income residents who cannot afford an automobile, and people who simply want a choice. Fewer cars on the road translates into improved air quality, less wear and tear on city streets, less congestion, less land devoted to parking lots, and residents living a healthier lifestyle. Encouraging transit-oriented developments (TOD), requiring sidewalks in all developments, installing bicycle facilities, and implementing car share programs are just a few of the countless ways to encourage multi-modalism.

9. Make Development Decisions Predictable, Fair, and Cost-Effective

Because the private sector is largely responsible for the development of today's communities, government must form good working relationships in order to bring about successful TLC projects. This communication can be enhanced with easy-to-use zoning codes and development regulations (which may need to be modified to remove barriers to some redevelopment projects), streamlined plan and permit approvals for TLC projects, and educating public officials on the benefits of TLC and smart growth ventures.

10. Encourage Community and Stakeholder Collaboration in Development Decisions

Engaging the community and stakeholders in the development process may be difficult and time-consuming, but in the long run, the outcome will be worth it. Unique perspectives and the myriad of ideas generated through a project's development will bring about a quality project that the community will support and lead to its success. Community visioning exercises, utilizing non-profit groups, making products available throughout the process, and using place audits (such as walking audits) to get participants to really understand their wants and needs are just some actions that can promote participation from a larger spectrum of the community.

BENEFITS OF A SOLANO COUNTY TLC PLAN

Environmental, economic, and quality-of-life impacts resulting from land use patterns and transportation systems have been recognized at every level of government and society. Use of alternative forms of transportation is more appealing and necessary than ever before. Market demand for TLC development forms such as "neo-traditional," compact, mixed-use, and transit-oriented development

is increasing. This is the basis for the development of the many federal, state, and local transportation and land use programs and private initiatives that offer other alternatives.

The Solano Transportation Authority plans to further support TLC projects in Solano County by administering the Solano Countywide TLC Program utilizing countywide TLC and Enhancement funds, which will be provided by the MTC. The Solano Countywide TLC Program is expected to receive $525,000 each year starting FY05/06 or a total of about $12.5 million over the next 25 years. The program will be modeled after the MTC program with funds awarded to projects that address transportation and land use issues.

In addition there are other alternative mode funding sources including Regional TLC/HIP, Regional Bicycle/Pedestrian Program, Transportation Fund for Clean Air Program (TFCA), Eastern Congestion Mitigation Air Quality Management Program (E. CMAQ) and the Yolo Solano Air Quality Management District Clean Air Funds that can also be used to augment TLC type projects. Developing a countywide TLC plan promises to have many positive effects within Solano County.

Housing Options

Market demand for TLC type development is expected to be strongly influenced by two factors: continued population and household growth, and a shortfall in available housing, especially affordable housing for low- and moderate-income residents. Despite the increasing number of cases where commuting has become onerous, many people will still choose a suburban house and to commute alone in their car as long as they can afford it. However, for a growing number of households, the option to own a conventional single-family residence is financially out of reach, or comes with a commute that severely strains household income and quality of life. Nationwide, support for alternatives to conventional auto-oriented development principles is high. A growing number of people who can afford the alternative are choosing to live in denser types of development that are within walking distance to jobs, shopping, activities, and access to regional transit because they gain an improved convenience to destinations than in typical suburban areas.

Serve a Growing Senior Population

Solano County's population is projected to age significantly over the next twenty years. ABAG projects that the 40-54 age group (e.g., the Baby Boomers) will decline from nearly 23 percent of the total

population in 2000 to less than 19 percent by 2030. Significant increases in the proportion of the population in the 55-64 and 65+ age groups are expected. The 65+ age group will increase from 10 percent of the county population in 2000 to 19 percent in 2030.

Solano County's growing senior population will likely be accompanied by changing transportation needs (see "Solano County Senior and Disabled Transit Study," prepared by the Solano Transportation Authority – June 2004, for more information on future needs and recommended transit implementation strategies for the senior and disabled population in Solano County). A substantial increase in the demand for transit service for the elderly and disabled (paratransit)- those who need transportation to health care and other human services - is likely given the current trends. Also, older people may not feel comfortable driving; therefore, they require access to convenient transit to carry out their daily lives. Housing opportunities available to older people near destinations and close to transit will be a growing need all over Solano County.

Meet Air Quality Standards

Solano County is located within two separate air basins, the Bay Area and Sacramento. Air quality conformity is monitored by the Yolo/Solano Air Quality Management District for a small northeastern portion of Solano County and the Bay Area Air Quality Management District for the rest of Solano County.

The northeastern portion of Solano County, representing approximately one-third of the county area, is located within the Sacramento Federal Nonattainment Area. The area has been designated a "severe" nonattainment area for ozone by the U.S. EPA. The average annual number of days exceeding the federal 1-hour ozone standard was 18 during the 1980s, and decreased to 8 during the 1990s. Due to the implementation of emission controls, there has been an overall trend towards improved air quality. The 1990 Federal Clean Air Act Amendments require that the region demonstrates how it will "attain" clean air standards by 2005. Failure to meet the federal standards could result in the loss of federal transportation funds that are allocated to the region.

A majority of Solano County lies within the San Francisco Bay Area Nonattainment Area. In April 2004, U.S. EPA made a final finding that the Bay Area has attained the national 1-hour ozone standard. The Bay Area Air Quality Management District plans to submit a redesignation request to EPA in order to be reclassified as an

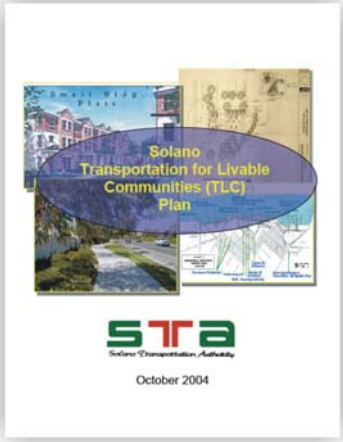
attainment area as well as a maintenance plan to show the region will continue to meet the 1-hour ozone standard.

Improve Quality of Life

The same compact, mixed-use, and transit-oriented development that saves cities and their residents' money can improve their quality of life as well. These benefits can be realized through increased health and public safety, decreased congestion and commute length, and an overall improved "sense of place."

TLC-type development helps to reduce commute traffic, especially when it is adjacent to major regional transit stops. In addition, a broader benefit of TLC and similar developments is a reduction in local "convenience" trips. People take advantage of safe, attractive walking and biking routes that provide close access (within ¼ to ½ mile) to pedestrian-oriented shopping districts, parks, schools, community centers, and other activity centers. These short walking or bike trips to the store, for casual dining, for family activities, to school, or to the park reduce the traffic on local and arterial roads. Perhaps more importantly, these local trips help people know and appreciate the place where they live, and to meet other people who live in the community. This "sense of place" leads to better participation in civic and cultural affairs, and generally healthier communities. Increases in transportation choices such as bicycling, walking, or riding public transit, are directly related to improved public health. One study has demonstrated that the incidences of heart disease, obesity, and diabetes could be cut in half if all sedentary people nationwide walked or bicycled 30 minutes per day. In return, improved public health benefits the economy as well. In California, improved public health from biking and walking could translate to an annual savings of $528 million in healthcare costs.

Transit-oriented developments and TLC projects provide safer conditions for residents, pedestrians, and bicyclists, as well. Pedestrian and bicycle safety in such environments has been tested and proven to be successful in European countries, such as Germany and the Netherlands. In these countries, where pedestrian and bicycle needs are taken into account, pedestrian fatality rates are 1/10 as high as in the U.S., and bicycle related fatalities are 1/4 as high. Other sources have found that communities and developments built according to TLC principles increase access to convenient housing, jobs, and services, thereby reducing traffic congestion. Overall, the California Department of Transportation has cited a 20 to 40 percent decrease in vehicle miles traveled per year by implementing these measures.



SOLANO COUNTYWIDE TLC PLAN PROCESS

The Solano TLC Plan has been developed as a part of the 2030 Solano Comprehensive Transportation Plan (CTP). The STA Board and its Alternative Modes Subcommittee met throughout the planning process to develop the policies, strategies and programs identified in this Element. Opportunities for full public input were provided to the member agencies in the fall and spring of 2003-04. The STA's member agencies (Solano cities and county) were also provided two separate opportunities to submit candidate TLC projects in the fall of 2003 and summer of 2004.

TRANSPORTATION ENHANCEMENTS SET ASIDE FOR LOCAL TLC PROJECTS

The STA actively supports the efforts of its member agencies to build livable communities. To date, the STA has assisted Solano County agencies in obtaining more than $5 million in TLC, Housing Incentives Program (HIP), and transportation enhancement grants allocated by the Metropolitan Transportation Commission.

EXISTING CONDITIONS

TLC projects are generally associated with urban settings. Although Solano County is often viewed as a rural county in the Bay Area, there have been several successful TLC projects funded and built over the past several years with funding provided from both MTC and STA.

MTC Funded TLC Projects in Solano County

Solano County communities have received planning and capital grants totaling $3,524,500 in MTC TLC/HIP funding. One of the earliest planning efforts in Solano County that was partially funded by a TLC grant was the Jepson Parkway Concept Plan. The Concept Plan was prepared by the STA working in coordination with the City of Fairfield, the City of Suisun City, the City of Vacaville, and the County of Solano. The Concept Plan included "A Guide to Transit Compatible Land Use and Design," a section that provided guidance on how to link transportation improvements planned for the Jepson Parkway with future land use and design decisions made by individual agencies along the corridor.

Dixon Streetscape Revitalization Project

The Dixon Streetscape Revitalization project includes plans to enhance one and one half blocks of B Street and North Jackson Street, between First and A Streets. Planned streetscape improvements include:

Decorative Lighting

Sidewalk Improvements

Landscaping

Benches

Trash Receptacles

Jepson Parkway Bikeway-Phase 1 (Segments 9 and 10): Suisun City

The Jepson Parkway Bikeway is a multi-jurisdictional project being developed by Suisun City, Fairfield, Vacaville, and the County of Solano. As proposed in the Jepson Parkway Concept Plan approved by the STA in April 2000, this project will provide a 10-foot wide bike path along most of the entire 12-mile length of the planned Jepson Parkway. A short segment south of Cement Hill Road on Walters (Between Air Base Parkway and East Tabor Avenue in Fairfield will possibly be Class II bike lanes due to sensitive vegetation which limits available right-of-way, or a Class I along the Air Base Parkway to Peabody Road.

The multi-use path is supported by four "activity" nodes or staging areas that can serve as rest stops and recreational starting points. Each staging area would feature bicycle parking, rest rooms, special landscaping, parking for autos, picnic areas, and other amenities. Three of the staging areas are located to provide a connection between Jepson Parkway and other planned or existing bikeways, while the fourth offers an important non-motorized connection to the Fairfield/Vacaville Multi-modal Train Station.

The initial portion of the Jepson Parkway Bikeway-Phase 1 (Segments 9 and 10) located along Walters Road from SR 12 to East Tabor Avenue in Suisun City, were under construction in 2003-04. Full completion of this phase is expected during 2004-05 as part of the widening of Walters Road between Bella Vista and East Tabor Avenues.

Downtown Rio Vista Revitalization Plan

Rio Vista's Downtown Revitalization Plan has been the recipient of regional TLC planning and construction funds. The project is intended to restore the Rio Vista's downtown and link Main Street to the Helen Madere (Rio Vista) Bridge and the City's waterfront. Specific improvements include:

- Streetscape Improvements
- Landscape Improvements
- Pedestrian Amenities
- Bicycle Amenities

Old Town Cordelia Improvement Project

The goal of this planning study is to define and plan a project that will be strongly supported by the local community, the affected agencies, and MTC, and which would therefore best serve the community and have the best opportunity for the planned project to be constructed. This project should improve the appearance of Cordelia and the Cordelia Road corridor; at the same time increase the livability and safety for the affected community by providing safety measures, historical interest, and walking and bicycle paths.

Suisun City's Main Street Phase 1 and Driftwood Waterfront Pedestrian Plaza

The Driftwood/Civic Center Drive Improvements Project in Suisun City utilizes the same design concepts developed in the Downtown Concept Plan and the TLC Main Street Phase I project, and applies them to Driftwood Street and Civic Center Drive between Lotz Way and Main Street, to formalize a downtown square. Current construction on the property bounded by the square includes public spaces and amenities. Planned City improvements include improved pedestrian crossings with bulb-outs and distinctive crosswalk materials for added measures of protection, landscaping, pedestrian amenities, new sidewalks, and lighting.

Vacaville's Davis Street Pedestrian and Gateway Improvements

The Davis Street Pedestrian and Gateway Improvements Project was developed to improve pedestrian circulation on Davis Street and draw people toward historic Main Street, the Ulatis Creek Walk, and a new commercial center at the redeveloped Basic American Foods Industrial site. Project components included:

- Wider sidewalks
- Landscaped bulb-outs
- Sidewalk improvement
- Pedestrian-scaled lighting

Vallejo Sereno Transit Village

The city of Vallejo's $382,000 HIP grant is associated with development of the Sereno Village Apartments, which provided 125 affordably priced units near an existing shopping center and bus hub. This project involved construction of higher density affordable housing near a local Vallejo bus transfer facility.

Vallejo Georgia Street/Waterfront Redevelopment Plan

The Vallejo Waterfront Plan is a culmination of three recent planning efforts to redevelop and revitalize Vallejo's waterfront, downtown, and public open spaces. The plans make specific recommendations to provide comprehensive improvements in the downtown and waterfront areas including:

- Vallejo Intermodal Center
- Multi-Modal Transportation Enhancements
- Bicycle & Pedestrian Systems
- Streetscape Improvements
- Landscape Improvements
- Public Art
- A Festival Green
- Central Plaza

The Georgia Street Extension Project was completed and opened to the public in early 2004.

Vallejo Station

The Vallejo Station is the centerpiece of the Vallejo Waterfront/ Downtown Planned Development Master Plan. This project will serve as a multimodal transit hub that includes:

- Housing and commercial transit village development.
- New waterfront open spaces
- New Bay Trail segments

SOLANO COUNTY TLC & TRANSPORTATION PLANNING LAND USE SOLUTIONS (T-PLUS) PROGRAMS

A new program from MTC, called Transportation Planning and Land Use Solutions (T-PLUS), will be financed for at least ten years, with planning funds of $150,000 a year provided to the STA. The STA will allocate T-PLUS planning grants of between $25,000 and $50,000 to member agencies over a two-year period. All nine counties are participating in the T-PLUS. The T-PLUS program is intended to move funding from the regional to the local level, providing the flexibility to implement the regional policies at the local level in ways which are most appropriate to the variety of communities in the region.

The general scope of work for T-PLUS focuses on four transportation/land use priorities for MTC:

1. **The Transportation for Livable Communities/Housing Incentives Programs (TLC/HIP).** These two programs fund projects which integrate transportation with land use, such as streetscapes, improved transit access, and bicycle and pedestrian improvements, or which encourage high-density housing near transit. The key project goal for both programs is to have ridership demand in place to support transit by providing higher density housing near transit facilities with attractive access improvements.
2. **MTC Transportation 2030 Land Use Principles or Transportation - Land Use Platform.** MTC is encouraging workshops, the development of modeling tools and best practices "toolkits," and other incentives and strategies to implement the smart growth concepts adopted for the region. In 2004 STA staff participated on the MTC Transportation - Land Use Task Force to develop and refine a Transportation/Land Use Platform for the region. One of the main purposes of the platform is to better co-ordinate transportation and land use decisions in each of the cities and counties to improve the quality of life in the region.
3. **MTC Resolution 3434: Major Transit Corridor Planning and Implementation.** Resolution 3434 focuses on transit corridors and regional transit policies, which need local actions such as transit-oriented development to be successful.

4. **Mitigation programs.** Transportation-related impacts can be reduced or offset with mitigation programs such as more extensive transit usage and ridesharing, and the use of mitigation banks.

Each CMA's approach to the Transportation Planning Land Use Solutions (T-PLUS), while having similar elements, is somewhat unique. Certain parts of the T-PLUS program will apply to all CMAs. All will assist MTC with the monitoring and delivery of the TLC/HIP program, will provide an annual report to MTC, and are expected to address all four general areas to some degree. Beyond that, CMAs can tailor elements of the general work scope to fit their local needs and opportunities.

REGIONAL TLC SELECTION CRITERIA

MTC Criteria

MTC subjects all TLC applications through a screening process to determine which projects satisfy the objectives of the programs. All projects must have had a collaborative planning process with community stakeholders, the project sponsor(s), the local jurisdiction and the local transit operator(s) will be undertaken. The first tier of evaluation criteria includes:

- The project supports one or more of the objectives of MTC's adopted "Transportation/Land Use Connection Policy" to promote the development/redevelopment of livable communities in the Bay Area.
- The project pertains to a defined physical location.
- The project pertains to a physical setting where deficiencies exist (or will exist) which if remedied will provide significant community benefit.
- The overall project will have identifiable and likely synergistic effects such as increased housing opportunities in the project area at densities to encourage on time transit, bicycling, and pedestrian trips.
- As appropriate during the development of the project, the following issues will be evaluated: accessibility as it relates to the Americans with Disabilities Act, economic development opportunities, environmental impacts, economic/financial considerations, safety and security, and potential adverse impacts, if any, to local trips made by commercial delivery vehicles and public transit and other forms of transportation

- The project will result in a discrete and clear work product, which will guide the overall project to the next level of planning and/or form the basis to compete for funding for the overall project.
- The project is structured to be completed within one year. The project sponsor commits to begin the project immediately if the Commission approves the project.
- The project is unlikely to be fully funded other than through MTC's program.
- The sponsor commits to pursuing the project recommendations, including subsequent planning activities, and to pursue the overall project to the extent feasible.

Second tier of evaluation criteria:

- **Project innovation**: to what degree does the project set new ground as called for in the TLC program? To what degree does the project involve the participation of community organizations and local jurisdictions? Doe the project involve mixed-use development, particularly housing/
- **Project readiness**: when does the project need funding? When is construction of the overall project expected to begin?
- **Local match**: to what degree is local match offered as pat of the proposed project's total cost?
- **Advisory Council comments**: the advisory council's TLC subcommittee will have the opportunity to comment on community planning projects as they are evaluated.

STA TLC & T-PLUS Program Criteria

Each year, the STA proposes to award $25,000 annually or up to $50,000 biannually in T-Plus Planning funds to locally programmed TLC projects to develop concept plans or serve as matching funds for candidate projects. In addition to the above listed MTC Planning Grant criteria, STA proposes the following additional criteria:

- The member agency has secured, or has attempted to secure, a substantial amount of the planning from city, county, regional, or impact fee funding sources, and needs some additional funding to complete project studies during the fiscal year.
- The study includes either a project listed in the above stated MTC criteria or includes a TLC Corridor or special TLC

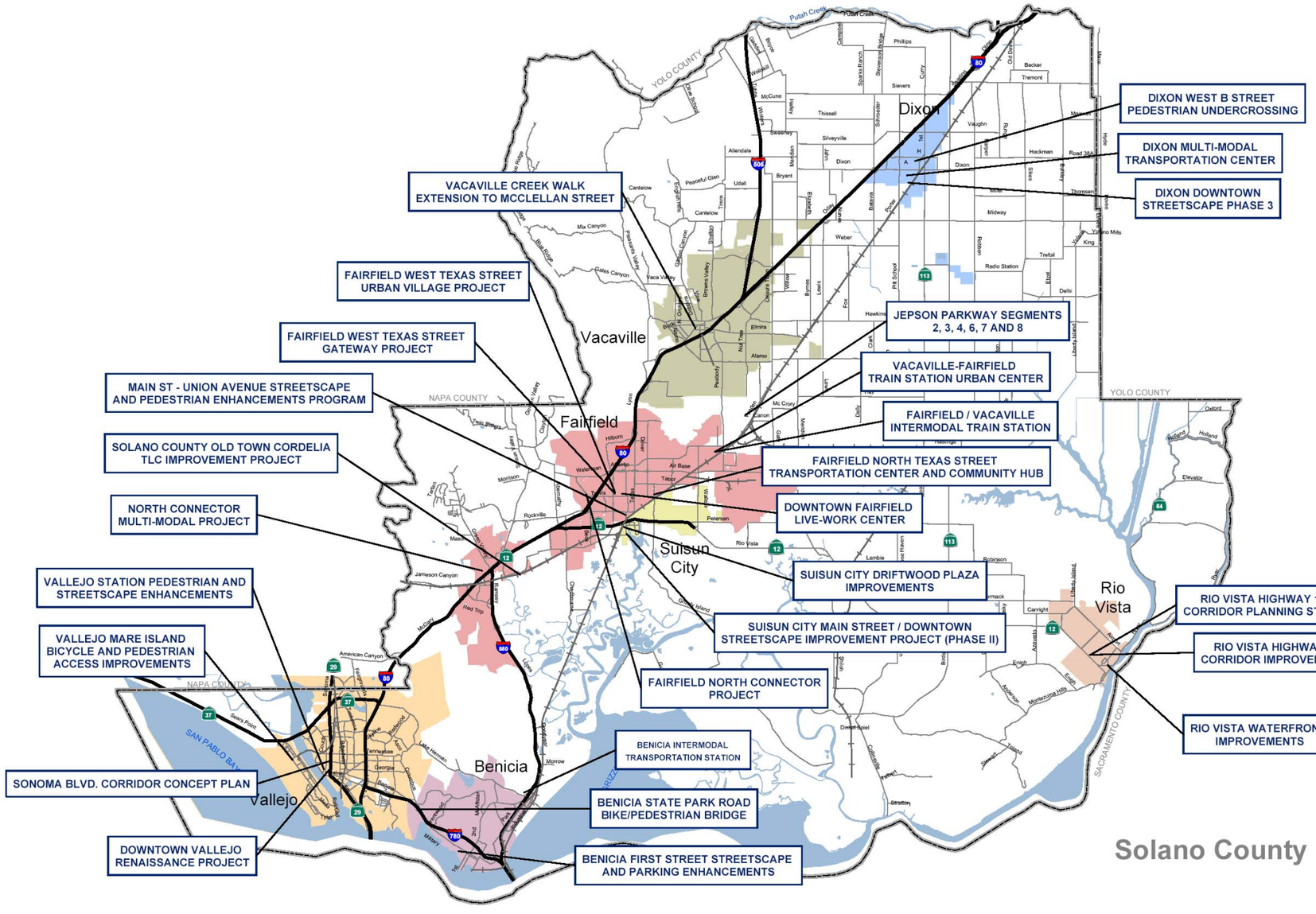
candidate project or study area identified in the Alternative Modes or TLC Element of the CTP.

- The proposed study would likely result in the project moving forward for securing a TLC, regional or countywide, capital grant during the following 3-5 years after completion of the study.
- The project study would directly implement a transit hub, intermodal center, or a new expanded transit route or service identified in the Intercity Transit Element of the CTP.

The STA will also award member agencies approximately $2.1 million in Countywide TLC Capital projects over the next four years (FY 05/06 to FY08/09). Projects must be identified in the following list of TLC Candidate Projects and will be selected based on the Solano Countywide TLC Program Guidelines.

CANDIDATE PROJECTS

Figure 3.1 shows TLC candidate projects in the 2004 TLC Plan. For a complete list and description of TLC candidate projects, please refer to the Solano Transportation for Livable Communities (TLC) Plan adopted in October 2004.



LEGEND

TLC Candidate Projects

Comprehensive Transportation Plan

Transportation for Livable Communities (TLC) Projects

Figure 3.1

RIDESHARING

Support for carpooling and vanpooling is an important strategy to enhance mobility and minimize congestion in Solano County, and ridesharing is a key element of this Solano Comprehensive Transportation Plan. To foster continuing interest in carpooling and vanpooling, a local rideshare program is important. This document includes a policy statement to "maintain rideshare mode split with county growth" and to support this with another policy statement "support long-term funding opportunities to maintain and further develop rideshare programs."

The rideshare component of the Alternative Modes Element is organized into five sections:

- Comprehensive Transportation Plan Relationship;
- Rideshare Institutional Organization and Funding;
- SNCI Services and Programs;
- Historical and Current Commute Rideshare Travel;
- Ridesharing Infrastructure; and
- Potential Program Enhancements.

INTRODUCTION

Carpooling and vanpooling are popular means of commuting in Solano County and provide significant congestion relief benefits along key travel corridors. For at least the past 10 years, about 20% of Solano residents carpool or vanpool to work. This compares to the next highest alternative mode use, transit, with an approximate 5% mode split. Solano County has the highest rate of car/vanpooling in the Bay Area. Nearly 250 vanpools operate in/out of Solano, which represents a significant portion of the approximately 650 vanpools in the entire Bay Area. With an average of 12 passengers per vanpool, vanpools carry about 3,600 individuals and eliminate nearly 6,600 daily trips. The vast majority of these are run entirely by private individuals.

Vanpools succeed in long-distance commutes, of which there are many for Solano residents. The vast majority of Solano-based vanpools travel to San Francisco or South San Francisco, with other vanpool destination concentrations in Oakland and Sacramento. With the advantage of self-determination and flexibility, vanpools travel to a variety of other locations such as San Rafael, Napa, San Ramon, Richmond, Rancho Cordova, etc.

There has been relatively little public investment for car/vanpooling programs since vehicle purchase, operating, and maintenance costs are typically borne by individuals and driver duties are shared by "volunteers" who are also on their way to work. Carpools are very personal in nature; family, friends, and co-workers without institutional assistance set up most. Rideshare agencies such as STA's Solano Napa Commuter Information (SNCI) program assist the many individuals who are unable to locate a carpool partner through their own means. Commuter vanpools tend to be more structured and the larger ones in particular need to comply with State Vehicle Code standards. Vanpools typically utilize rideshare agency services.

COMPREHENSIVE TRANSPORTATION PLAN RELATIONSHIP

The goal of the Alternative Modes Element emphasizes alternative modes of travel and commuting in Solano County by implementing and maintaining a transportation system that provides for transit integration and makes alternative modes of transportation convenient, safe, efficient, and cost effective. Objective D for this Goal is to provide incentives to expand ridesharing modes. Six policy actions are defined to achieve this objective:

1. Develop and implement marketing and educational strategies to inform private employers of the benefits of ridesharing;
2. Implement and expand programs that provide ridesharing incentives and encourage additional ridesharing activities;
3. Plan for and prioritize funding for additional park-and-ride lots or spaces throughout the county;
4. Support long-term funding opportunities to encourage employers to develop rideshare programs;
5. Maintain rideshare mode split with county growth; and
6. Maintain the Rideshare Program in Solano County in partnership with regional programs.

RIDESHARE INSTITUTIONAL ORGANIZATION AND FUNDING

The STA's Solano Napa Commuter Information (SNCI) program and RIDES for Bay Area Commuters are the two Bay Area programs that make up the Metropolitan Transportation Commission's (MTC) Regional Rideshare Program. The goal of these programs is to provide information and assistance to commuters for using alternatives to driving alone. SNCI is contracted with RIDES to deliver the program in Solano and Napa counties.

RIDES for Bay Area Commuters

RIDES for Bay Area Commuters operates the Regional Ridesharing Program in the other seven Bay Area counties. RIDES is a non-profit organization located in Oakland that has been providing rideshare services to the Bay Area since the mid-1970s.

Solano Napa Commuter Information (SNCI)

Solano County has had the benefit of a Rideshare Agency located within the county since 1979 to locally assist carpoolers and vanpoolers. The task of STA's SNCI Program is to provide and promote car/vanpool services to Solano residents in an effort to improve mobility through better roadway management, improve air quality through reduced emissions, and reduce energy consumption. These priorities have varied over time depending upon the state of outside public policy.

When the SNCI program relocated from the Solano County organization to the Solano Transportation Authority, a new SNCI work plan was developed. Each year the STA Board approves an updated work plan. The Napa County Transportation Planning Agency (NCTPA) requested that SNCI include a work plan for SNCI's services in Napa County, as well, so each year, the NCTPA approves a work plan for SNCI services in Napa County. These Work Programs are consistent with SNCI's contract as part of the Regional Rideshare Program.

In many aspects, RIDES and SNCI provide similar services for their respective service areas. In some situations, service agreements have been established to ensure coordination. There are some exceptions. The ridematching database management, regional research, and a few other regional activities are performed by RIDES only. RIDES is the lead on regional promotional campaigns with SNCI coordinating localized planning and implementing the campaigns in Solano and Napa counties. The SNCI program has been providing

personalized transit trip planning services as well as local and regional schedules for many years. This is one service SNCI has provided that RIDES has not, but this may change shortly with the full implementation of TranStar, an automated transit trip planning system.

To avoid duplication the service areas are broken down as follows:

TABLE 3.2 RIDESHARE SERVICE RESPONSIBILITY

Service/ Activity	SNCI Responsibility	RIDES or MTC Responsibility
Outreach and Services to Employers	Solano & Napa employers	Seven other Bay Area counties
Home based Marketing	In Solano and Napa	Seven other Bay Area counties
Phone number	In Solano and Napa	Seven other Bay Area counties
Vanpool Support	Vanpools destined to Solano/Napa/Yolo/ Sacramento and SFO airport swing/night shift vanpools from these 4 counties	All other vanpools in the Bay Area
Major Promotional Campaigns	Coordinate with region, plan/implement in Napa and Solano	Regional campaign lead. Plan/implement in seven other Bay Area counties

SNCI Funding

Over twenty years of established SNCI program service does not guarantee twenty more years of rideshare services. SNCI's funding has been continuous, but only through a series of short-term commitments. SNCI currently is in the fifth year of a secure five-year funding agreement with RIDES and MTC. For service after FY 2004/05, MTC has the option to extend for another five years or re-bid the regional rideshare program. MTC has chosen to re-bid the reformed Rideshare Program. At the same time MTC is delegating employer outreach and other services to SNCI. Once an agreement is finalized it will cover the 6-year period between FY05/06 to FY10/11. SNCI will wok closely with the selected Regional Rideshare Program.

Air quality agencies also have been an important source of funding for STA's SNCI rideshare program activities. Solano County is in two air basins and therefore is eligible for air district funding from two agencies, Bay Area Air Quality Management District (BAAQMD) and Yolo Solano Air Quality Management District (YSAQMD). Since 1992, SNCI has successfully competed for and received local discretionary BAAQMD TFCA Program Manager funds from the STA ranging from $50,000 to $295,000 in annual grants. SNCI must annually compete with all other eastern Solano County eligible projects for YSAQMD air quality funds. The SNCI program has received special project grants ranging from $2,000 to $15,000.

Another potential source of funding is Caltrans' Transportation Management Plan (TMP) funds related to freeway and other construction on state highways. For several years while the I-80 HOV lanes were being constructed in Contra Costa and Alameda counties, SNCI received two multi-year contracts from Caltrans to implement a vanpool incentive program. The contract funded a position to administer and market the incentive program until construction was completed. No similar freeway construction TMPs are currently funding the SNCI program nor are any expected in the near-term.

The bottom line is that the absence of a committed long-term funding source limits long-term planning and program commitments.

NEIGHBORING RIDESHARE PROGRAMS

About a dozen regional rideshare programs remain in California. These programs continue to network and support one another through regular meetings throughout the year. Beside RIDES, which serves the other Bay Area counties, SNCI's other neighboring rideshare agencies include: the Sacramento Area Council of Governments (SACOG) Rideshare and the San Joaquin Council of Governments (SJCOG)'s Commute Connections.

SACOG Rideshare

SACOG's rideshare program covers the metropolitan Sacramento Region and coordinates closely with a number of other public and private Transportation Demand Management (TDM) organizations. SACOG's rideshare database overlaps slightly with Solano County's. SNCI does not utilize this database, but both agencies coordinate client referrals to one another as appropriate.

SJCOG Commute Connections

San Joaquin County's Stockton based Commute Connections' service area includes San Joaquin and Stanislaus Counties along with some service to three neighboring mountainous counties. Like SNCI, Commute Connections handles a significant number of long-distance commute trips bound for the Bay Area and for Sacramento. Commuters traveling Highway 12 between Solano and I-5 are referred between SNCI and Commute Connections.

SNCI SERVICES AND PROGRAMS

STA's SNCI program provides a wide array of services and programs including:

- Transportation Alternatives Information and Assistance Services
- Employer Commute Assistance Program
- Vanpool Program
- Marketing Campaign Coordination such as California Rideshare Thursday and California Bike to Work Week
- Guaranteed Return Trip Program (planned)
- Publicity

This section provides a description of rideshare programs and services available through RIDES and SNCI.

Transportation Alternatives Information and Assistance Services

The foundation of SNCI activity is to provide information and assistance to commuters regarding carpooling, vanpooling, and other alternatives to driving alone. This effort involves:

- Providing information to the public regarding carpooling, vanpooling, transit, and other alternatives through SNCI's (800) 53-KMUTE phone number, which is accessible throughout Solano and Napa counties as well as Northern California. SNCI Commute Consultants are available during the week to answer questions; after hours, a self-service voicemail system is available. SNCI's services have also been integrated into MTC's regional 511 traveler information number in the Bay Area.
- Carpool/vanpool formation, support to users, and outreach to individuals interested in forming carpools and vanpools. SNCI contributes information into MTC's Bay Area ride matching database managed by and housed at RIDES.
- Local and regional transit trip planning and referrals. This includes local and intercity bus, ferry, BART, Amtrak, Capitol Corridor, general public dial-a-ride, etc.
- Bicycle information including bikes on transit, maps storage referrals etc.
- Airporter referrals for San Francisco, Oakland, and Sacramento airports.
- Marketing, education, and public outreach, such as promoting the use of HOV lanes, park- and-ride lots, and express bus services. These efforts are also coordinated with local transit operators and the rest of the Bay Area Region.
- SNCI is the primary contact for CalWORKS - Solano and Napa County's Welfare to Work efforts – in these counties. General information is accessible to Welfare to Work clients and social service support staff. SNCI has worked closely with County Health and Social Service (HSS) staff to plan and implement transportation services tailored for Calworks clients.

Employer Commute Assistance Program

A RIDES survey found that four out of ten respondents are employed at companies with 50 or fewer employees; just over half (53.4%) of respondents work for employers with 100 or fewer employees. The likelihood that an employer will operate a program that encourages employees to use alternatives to driving alone

increases with employer size. Less than a quarter of companies with 50 or fewer employees operate commute programs while almost three-quarters of large companies (500+) operate commute programs. The data clearly shows that larger employers are much more likely to operate commute programs. It is worth noting here that the findings are based on respondents' knowledge of their company's programs, and that there is considerable variation in the content and quality of programs. It is possible that some companies may have programs, but respondents are not aware of them.

Employer-based commute programs have been at the heart of the approach to marketing the Regional Ridesharing Program since its inception. Both the percentage of employers operating programs (based on respondent's awareness of their employer's programs) and the effectiveness of these programs (as measured by the difference in the drive-alone rate for commuters at companies with and without programs) increased this year.

TABLE 3.3 - COMMUTE MODES WITH AND WITHOUT EMPLOYER ENCOURAGEMENT(1)

	Drive Alone	Carpool	Transit	Other
Employer encourages alternative modes[1]	59%	18%	16%	8%
Employer doesn't encourage alternative modes[2]	66%	19%	10%	6%

Notes: (1) Source: Commuter Profile 2003

The SNCI program functions as a resource to Napa and Solano employers who need commute alternative information including setting up internal rideshare programs. Employers are key channels through which SNCI distributes information and promotional materials. SNCI concentrates efforts with larger employers (100+ employees), as well as chambers of commerce, through surveying, distribution of materials, event displays, targeting with regular newsletters and including in major promotions. Additional outreach will be considered through the economic development community particularly in the area of company relocations.

- **Employer Database.** SNCI manages an employer database, which focuses on large employers. Employers receive annual promotional mailings for vanpool promotions, California Bike

to Work Week, and California Rideshare Week. SNCI's employer newsletter is another communication vehicle, which covers Napa and Solano rideshare and transit related information.

- **Relocation Assistance.** The SNCI program assists employers moving to or within Napa or Solano Counties retain their employees by providing transit, carpool, vanpool and other information specifically for their worksite to ease the move.
- **Chamber of Commerce Coordination.** The SNCI program functions as a general commuter information service to existing and relocating businesses and residents as well as providing technical assistance. SNCI participates in Chamber of Commerce events such as business expos.
- **Commuter Check.** This program is administered by MTC to allow employers to offer their employees a financial benefit for using commute alternatives. Commuter Checks can be used to purchase Bay Area transit passes or pay fares on registered vanpools/buspools. Commuter Checks are purchased by the employer or the employee with a pre-tax salary deduction. Commuter Checks offer a benefit of up to $1,200 a year of tax-free income for employees, and employers do not pay payroll taxes on Commuter Checks that are part of employees' compensation packages. If the Commuter Check program is offered as a pre-tax benefit, employees typically save $300 to $400 annually. The employer must establish the Commuter Check program for employees to receive this benefit. Commuter Check is one way that employers can implement the federal Commuter Choice benefits program. SNCI promotes and monitors the use of MTC's Commuter Choice Program to increase the availability of employer subsidized and tax-free transit and rideshare services. SNCI helps RIDES maintain a database of employers who receive Commuter Choice services; actively informs and encourages employers to participate in this program; informs and encourages vanpool drivers to participate; and monitors program use per RIDES format.
- The commuter check program encourages enrollment in and provides support to employers who enroll in the BAAQMD's and the Sacramento Region's voluntary Spare the Air programs.

Vanpool Program

The SNCI program aims to form over 30 new vanpools on an annual basis and handles the primary support of 85 vanpools while assisting with the support of several dozen more. Another key

program is to assist individuals in forming commuter vanpools. In Napa and Solano, vanpools are usually formed and run by individuals, not employers. Services include:

- Vanpool group formation, support, and outreach; and vanpool maintenance
- Advising individuals regarding compliance with state laws; distributing vanpool start-up kits; processing driver checks through the Department of Motor Vehicles (DMV); offering medical exam reimbursements, insurance information, and special vanpool parking permits; etc.
- Offering driver check and medical reimbursement incentives

Major Promotional Campaigns: California Rideshare Week, Bike to Work Week, Vanpool Campaign

The SNCI program's major promotional activity occurs around the Rideshare Thursday campaign held in October and April each year. Program staff coordinates the Napa and Solano component of the Bay Area-wide Rideshare Thursday campaign. This multi-modal campaign encourages individuals to use a mode other than driving alone to work at least one day during the week. Rideshare Thursday is promoted online through SNCI's website, through employers, prints, radio media and other means. To encourage individuals to make this pledge, participants become eligible to win an assortment prizes. Annual participation in similar campaigns for Solano/Napa has ranged from 1200-2500 participants.

In May, Solano County celebrates California Bike to Work/School Week. STA's SNCI program coordinates the Solano and Napa component of this campaign. This campaign encourages individuals to try bicycling on Bike to Work Day (the third Thursday of May) through pledges with prize incentives. This is a smaller scale campaign, but similar to the fall Rideshare Week campaign. SNCI promotes this through employers, the general public while partnering with bicycle clubs, advisory committees, and bicycle shops.

Another promotion, sometimes held in the Bay Area is Vanpool Week. It was held for the first time in February 2001 to promote vanpooling as a commute option. This outreach effort, focused primarily on employers and vanpools, encouraged individuals to inquire about being a vanpool passenger or driver.

The goal of these campaigns is to effect long-term change in commute patterns. The plan for doing so is to encourage individuals to try an alternative mode, and give commuters the tools to do so.

Guaranteed Return Trip (GRT) Program

Solano County does not have a Guaranteed Return Trip program, but one is currently under development. The STA has obtained a Yolo-Solano Air Quality Management District (YSAQMD) grant to allow the development of the GRT program in the eastern part of Solano County. This YSAQMD grant will be matched with Bay Area Air Quality Management District (BAAQMD) Transportation Fund for Clean Air (TFCA) funds so that the program may be expanded countywide.

The GRT service would provide a free taxi ride home or free rental car in case of an emergency (illness, family crisis, unscheduled overtime). For a typical program, eligible employees are those who work in Solano County and use any alternative to driving alone to work (public transit, carpooling, vanpooling, biking, or walking) on the day of the emergency. Some programs require that for companies with 100 or more employees, both employer and employee must pre-register in the program.

Publicity

Several indicators suggest that promotion of ridesharing should continue. According to the Bay Area Commuter Profile 2003, 27% of Solano and Napa residents aware of the availability transit and commuter service information through SNCI, but improvements can be made.

SNCI has a broad-based marketing program that includes:

- Staffing community events (such as community events, Farmers' Markets, and transportation facility and service celebrations) with SNCI booths;
- Speaking engagements;
- Partnering with other agencies (e.g., local jurisdictions, Capitol Corridor, BAAQMD and YSAQMD, Solano/Napa Resource teams);
- Freeway signage;
- Information and ads to local newspapers, newsletters, etc.;

- Radio commercials;
- Supplying display racks and materials to public and private employers. Social services, real estate professionals and other organizations; and
- Marketing strategies with a long shelf life (telephone directories, chamber directories, regional brochures).

With the introduction of MTC's 511 Travel Information System, the public awareness of SNCI's 1-800 phone number seems to be declining. Yet while the public continues to adapt to the multipurpose 511 system, SNCI's 1-800 number remains the preferred phone number. Callers are immediately assisted rather than having to navigate 511 voicemail system.. Since the early '90s, SNCI's services and outreach have broadened. From primarily providing carpool/vanpool services and information, the SNCI program now provides comprehensive alternative transportation information. At the same time, staffing has been reduced from six to four.

As a subcontractor to RIDES and as an MTC regional rideshare program contractor, the SNCI program must make service adjustments as the direction of the region changes. Several major changes, which may significantly change SNCI's local identity, have recently been completed or are on the horizon. In summary, some major shifts in rideshare service delivery are imminent regionally and locally.

HISTORICAL AND CURRENT COMMUTE RIDESHARE TRAVEL

What are the important factors that influence rideshare participation? What have been and what are the characteristics of ridesharing in Solano County? In general, carpool and vanpool journey to work trips tend to have regular travel times and origin-destination patterns. Carpool, vanpool, and transit usage is highest in highly congested corridors with preferential lanes for rideshare vehicles and in corridors with convenient park and ride facilities. Carpool and vanpool usage tends to be highest in regions with relatively sparse public transit services, for long distance trips, and for trips benefiting from HOV travel time and/or toll savings. Suburban office complexes that are not located along major transit trunk lines tend to be good carpool/vanpool markets.

Factors Influencing Commute Ridesharing

RIDES for Bay Area Commuters conducts annual region-wide telephone surveys of commuters. The results of these surveys are published as Commute Profile reports focusing on trends in commuter travel behavior. These survey findings provide useful insight into commuter ridesharing in the Bay Area and regarding Solano County residents and were used to analyze factors below that influence ridesharing.

Ridesharer Characteristics

Most Commute Profile respondents indicated that they carpooled with co-workers (42%) or members of the same household (33%). Co-workers and household members are consistently the two most common groups of carpoolers, and they trade the number one and two spots from year-to-year. The next most common arrangement (8%) was through casual carpools. Seven percent of carpoolers indicated that they carpooled with relatives who did not live in the same household, 6% of carpools included friends and neighbors, and the remaining 4% indicated other carpooling arrangements.

Longer Commute Distances

Solano County itself has relatively few jobs relative to its workforce size, which results in a high proportion of long distance commute trips. On average, residents of Solano County have the longest commutes in the Bay Area (in 2003, the average commute from Solano County was 23 miles and took 33 minutes). The longer commute distances traveled by Solano County residents increase the appeal of alternative modes.

Cost of Parking and Tolls

A much lower rate of driving alone occurs for commuters who work in areas where free parking is not available, indicating that car and vanpool programs should be targeted to areas where parking is scarce and costly. In the Bay Area almost eight out of ten respondents (78%) have free all-day parking available at or near their worksite. As explained by Commute Profile and current transportation research, the influence on mode choice of destinations with and without free parking is significant. In the Bay Area, locations with free parking have a drive-alone rate of 71%, while those without free parking have a drive-alone rate of 37%. Results from past years have shown similar differences between respondents who commute to areas with free parking versus those who commute to areas where one must pay to park. Commuters will trade their car for the bus or train given the right combination of incentives (e.g., frequent service) and disincentives (e.g., paid parking).

Solano County commuters are already willing to try alternatives to driving alone. Modifying the region's infrastructure to discourage driving alone is a difficult and long-term challenge, but based on local evidence the goal has merit. Although seven out of ten commuters drive their car by themselves, the rate drops to four out of ten in areas where one must pay to park and frequent transit service is available.

Commuters driving to San Francisco must pay two bridge tolls, if they do not have three or more persons in their vehicle. This commute cost is a significant incentive to rideshare. Discussions regarding increasing bridge tolls could lead to even stronger incentives to rideshare. After crossing the Carquinez or Benicia Bridge to leave Solano County, Solano residents must contend with congested commute corridors on the I-80 and I-680 respectively. The stress and unreliability of traveling in these corridors also acts as an incentive to use rideshare alternatives.

Lost Tax Credits

For many years until 1995, California gave a tax credit for vanpools. Vanpool passengers could receive a credit for 40% of their annual vanpool fare up to $480/year. This was a popular incentive. Several attempts to extend this tax credit failed and enthusiasm for vanpooling waned for a while. Reviving the credit would provide a desirable incentive to encourage additional vanpooling with little administrative cost.

ROLE OF RIDESHARING TODAY

Carpooling and vanpooling remain a popular commute alternative for Solano residents (see Table 3.4). In 2003, ridesharing was used by 22% of Solano residents to commute to work. Over the past ten years, ridesharing has been used by "in the ballpark" of 22% of Solano commuters. This compares to about 4% who use transit for work trips. Solano has consistently maintained a higher rideshare usage than the average in the Bay Area. Ridesharing has remained a consistent and important commute alternative in Solano over time and significantly helped manage the roadway system by moving more people per vehicle during commute periods. Table 3.4 illustrates Solano County's commute mobes split between 1993 to 2004. Table 3.5 illustrates the entire Bay Area commute split during the same period.

TABLE 3.4 - SOLANO COUNTY COMMUTE MODE SPLIT

Mode	1993	1994	1995	1996	1998	1999	2000	2001	2002	2003
Drive Alone	68%	72%	73%	67%	77%	66%	72%	73%	73%	71%
Car/vanpool	25%	22%	22%	23%	18%	25%	19%	24%	22%	22%
Transit	4%	3%	3%	5%	4%	4%	7%	2%	2%	3%
Other Mode	3%	3%	3%	6%	2%	4%	3%	1%	3%	5%

Source: Commute Profile 2003, RIDES

TABLE 3.5 - BAY AREA COMMUTE MODE SPLIT OVER TIME

Mode	1994	1995	1996	1998	1999	2000	2001	2002	2003
Drive Alone	66%	62%	64%	71%	67%	68%	69%	69%	64%
Car/vanpool	17%	19%	17%	14%	15%	14%	17%	18%	18%
Transit	12%	12%	13%	11%	14%	14%	10%	10%	12%
Other Mode	5%	7%	6%	4%	4%	4%	4%	3%	6%

Source: Commute Profile 2003, RIDES for Bay Area Commuters, Inc.

Results from RIDES' Commute Profile 2003 indicate that the percentage of Bay Area commuters who rideshare has fluctuated only a few percentage points throughout the decade. Most recently, ridesharing has increased from 14 percent in 2000 to 18 percent in 2003. Table 3.5 reports Bay Area commute mode splits from 1994 through 2003.

RIDESHARING INFRASTRUCTURE

Casual Carpooling

Solano County, along with Alameda and Contra Costa counties, supports a significant level of casual carpooling. Casual carpooling is an informal, unscheduled approach to ridesharing where drivers offer rides to unknown passengers. Casual carpools (with three or more people) are eligible to use the HOV lane at the Bay Bridge toll plaza and bypass the toll and metering lights, thereby saving travel time and the cost of the toll during the morning commute. Typically, casual carpooling operates one-way, providing morning commuters a free ride to San Francisco. However, signing has been established in San Francisco to facilitate return trips via casual carpools. Return trips also benefit from the carpool lane time-savings on I-80 as well as free, fast toll passage at the Carquinez Bridge in the afternoon. Information is maintained on Environmental Defense Fund's (EDF) website www.edf.org.

Casual carpool locations tend to be located near transit routes that provide parallel service, which provide a ride home opportunity in the evening for passengers in a morning casual carpool. The Curtola park-and-ride lot became a favorite location for casual carpoolers when I-80 HOV lanes were opened in Contra Costa and Alameda Counties. RIDES' 1998 Casual Carpool Report counted 170 casual carpools that formed at the Curtola park-and-ride lot during the morning commute period (6 to 9 a.m.).

Park-and-Ride Lots

Park-and-ride lots are an important component of Solano's comprehensive transportation system. There are 15 existing park-and-ride lots located in the county. These locations serve as important staging areas for carpools, vanpools, and transit. The existing lots range from ad-hoc locations where multiple commuters meet along the side of a road or highway to catch transit or to ride-share, to formal lots with limited infrastructure improvements other than parking, to large transportation centers that include multi-modal connections, long-term storage solutions for motorized and non-motorized users, services, and ITS. Due to the high percentage of carpool and vanpool commuters in Solano County (22% according to the Rides for Bay Area Commuters, 2003 Commute Profile), a number of these facilities are used to capacity during peak commute times. New park and ride facilities are planned as components of transportation projects in Benicia, Dixon, Fairfield, Suisun City, Vacaville, and Vallejo.

Table 3.6 - EXISTING AND PLANNED PARK-AND-RIDE FACILITIES

	City	Location	Transit	Spaces Existing	Planned	Bikes	Lighting
1	Benicia	East Second St. & East "S" St. at I-780		15	15	No	Yes
2	Cordelia	Green Valley Rd. at I80 & I-680		65	65		Yes
3	Dixon	Market Ln. & I-80 near Pitt School Rd.	F/S	89	89	Yes	Yes
4	Dixon	B St. at Jackson Capitol Corridor Station		114	225	Yes	Yes
5	Dixon	Downtown Intermodal Park and Ride Facility					
6	Fairfield	Cadenasso Dr. near West Texas at Beck St.	F/S, VAL	400	600	Yes	Yes
7	Fairfield	K-Mart on N. Texas near Air Base Highway (Unofficial site)	F/S	48	48	Yes	No
8	Suisun City	Main St. at Route 12	CC, F/X, VAL	80	160	Yes	Yes
9	Vacaville	Cliffside at I-80	Greyhound, VVCC	128	128	No	Yes
10	Vacaville	Davis St. at I-80	F/S, VAL	250	250	Yes	Yes
11	Vacaville	Leisure Town Rd. at I-80	VVCC	47	47		
12	Vallejo	Benicia Rd. at I-80		13	13	No	No
	Vallejo	Lemon St. at Curtola Pkwy & I-80 (NW)	BEN, VAL, VINE	379	600	Yes	Yes
13	Vallejo	Lemon St. at Curtola Pkwy near I-80 (SW)	VAL	64	64	Yes	Yes
14	Vallejo	Magazine St. and Lincoln Rd. at I-80	VAL	21	21	No	Yes
15	*Vallejo*	*Intermodal Center at Mare Island Way & Georgia St.*	VAL, BEN, VINE	650	1400	Yes	Yes

	City	Location	Transit	Spaces Existing	Planned	Bikes	Lighting
			Currently Planned Park and Ride Lots				
16	*Benicia*	*Industrial Way/ Park Road and/or Benicia Intermodal Transportation Station (Lake Herman) at I-680*	BEN, CC	0	300 to 500	Yes	Yes
17	*Benicia*	*Columbus/ Rose Drive*	TBD	0	TBD	TBD	TBD
18	*Benicia*	*West Military/ Southampton Road Area*	TBD	0	TBD	TBD	TBD
19	*Benicia*	*Downtown*	TBD	0	TBD	TBD	TBD
20	*Dixon*	*I-80/First Street*	TBD	0	TBD	TBD	TBD
21	*Fairfield*	*Intermodal Rail Station at Peabody Rd. & Vanden Rd.*	F/S, CC	0	600	Yes	Yes
22	*Fairfield*	*Red Top Rd. & I-80*		0	200		
23	*Suisun City*	*SR 12 and Walters Road*					
24	*Fairfield*	*Gold Hill Road*					
25	*Vacaville*	*Bella Vista & I-80*		0	200		
26	*Vacaville*	*Leisure Town Rd. & I-80*		0	50		
27	*Rio Vista*	*Church St. & SR 12*		0	50		
			Total	2247	7188		

Transit Abbreviations

BEN = Benicia Transit VAL = Vallejo Transit F/S = Fairfield/Suisun Transit CC = Capitol Corridor

VVCC = Vacaville City Coach VINE = VINE (Napa County)

Planned stations are *italicized*.

Proposed Park-and-Ride Facilities Improvement

A number of park-and-ride facility improvements were identified in the I-80/680/780 Transit Corridor Study and included in this update Comprehensive Transportation Plan's Intercity Transit Element. Improvements include the development of new lots as well as expansion and upgrading of current lots. Improved convenience and provision of adequate capacity will be critical to the achievement of the full potential for ridesharing in Solano County. Where

appropriate, consideration of non-exclusive or joint use park-and-ride lots should be explored. In addition to upgrading and expanding current park-and-ride facilities, new carpool and vanpool oriented park-and-ride lots are proposed for:

Interstate 80
North First Street/SR-113 (Dixon)
West A Street (Dixon)
Nut Tree Development (Vacaville)
North Texas Street (Fairfield)
Red Top Road (Fairfield)
State Route 37/I-80 Turner Overcrossing (Vallejo)

Interstate 680
Gold Hill Road (Fairfield-Cordelia)
Industrial Way/Park Road and/or Benicia Intermodal Transportation Station- Lake Herman (Benicia)

Interstate 780
Rose and Columbus (Benicia)
West Military/ Southampton Road Area (Benicia)
Downtown (Benicia)

State Route 12
Church Street (Rio Vista)
Vicinity of Main Street (Rio Vista)
SR12/Walters Road (Suisun City)

Transit oriented park-and-ride terminals are identified fully in the Intercity Transit Element of the Comprehensive Transportation Plan. Opportunities for integrating park-and-ride facilities into the plans for the I-80/I-680/I-780 Major Investment and Corridor Study need to be pursued.

High Occupancy Vehicle (HOV) Lanes

HOV or carpool lanes play an important role in motivating commuters to use high occupancy vehicle (HOV) modes. According to Commute Profile 2003 results, 51 percent of respondents who were currently using a carpool, vanpool or bus indicated that the carpool lane had influenced their choice of travel mode. Of those who regularly use the carpool lane, 61% indicated that they would continue to use an HOV mode if the carpool lane did not exist.

Except at the Benicia and Al Zampa (Carquinez) bridges during peak hours, Solano does not currently have HOV lanes; however a west bound HOV lane is now planned from the Al Zampa Bridge to just east of SR 29. Toll-free and non-stop passage is available on the Carquinez Bridge for vehicles with three or more passengers during peak hours. On the Benicia Bridge, there is not an HOV exclusive lane at the toll plaza, but a vehicle with three passengers may cross toll-free during commute hours. Large vanpools (11-15 passengers) may cross these and other Caltrans bridges toll-free 24 hours a day once Caltrans eligibility is secured.

The HOV lanes that provide the most benefit to Solano County commuters are the I-80 HOV lanes between the junction with State Route 4 in Hercules and the Bay Bridge toll plaza. Funds have been programmed to extend this HOV asset across the Carquinez Bridge into Solano County. An HOV facility is also planned on I-80 between the Carquinez Bridge and I-680 as well as an HOV lane across the Benicia Bridge. These new HOV facilities will make ridesharing and transit use much more attractive in the future. Increased ridesharing and transit usage will place increased pressure on Solano County's park-and-ride facilities. The already overburdened Vallejo Curtola park-and-ride lot will be particularly impacted by the new HOV facilities.

POTENTIAL PROGRAM ENHANCEMENTS

Commute Profile 2003 found that carpooling is the commute alternative that appeals to the greatest number of people who are currently driving alone. That suggests that Napa and Solano counties, which both have disproportionately high numbers of drive alone commuters as well as a demonstrated willingness to try car and vanpooling in Solano, have untapped ridesharing potential.

Car and vanpoolers are conscious of commuting costs—significantly more so than drive alone commuters. It is doubtful, however, that even rideshare commuters fully appreciate the cost associated with drive alone commuting. These full costs typically are in the range of $3,500 annually, or $300 per month. At six percent annual interest this would translate to approximately $40,000 in additional 20-year mortgage value with which to purchase better living accommodations. Transporting children, using HOV lanes, and the companionship provided by carpool members are other factors that influence the choice to rideshare.

Vanpool Program Enhancement

STA's SNCI program has a comprehensive vanpool program. These Elements and potential enhancements are described in Table 3.7. Another potential strategy would be to subsidize cell phone costs for the vanpool driver to help coordinate rideshare connections.

Table 3.7 – VANPOOL PROGRAM

Target	Purpose/Description	Financial & Other Incentive
Existing Program		
Vanpool drivers	Medical check-up reimbursement. To encourage compliance with State law requirement and defray cost the first time. Check-up required every two years.	Up to $60 of out-of-pocket cost reimbursement. One time. The amount could be increased or made available more frequently.
Vanpool drivers	Free Motor Vehicle Record (MVR) check and Sworn Statement Card. Annual driver check required by State Law and clean record required for inclusion in regional database.	Save the $5 cost if did this through DMV and save them the trip to the DMV. SNCI will also forward to insurance provider upon request.. Could be done more quickly if subscribed to Equifax.
Vanpools crossing Bay Area bridges	To encourage HOV modes across bridges.	Daily savings of $3-$6 and time-savings where exclusive HOV lane.
Start-up vanpools to specific areas (Contra Costa, San Mateo, Napa, and Sacramento counties)	To encourage the formation of vanpools to/from these counties.	Incentives offered by agencies in these counties. Provide this information to appropriate vanpool startups.
Vanpool passengers to Contra Costa County	To encourage joining a vanpool.	Incentive for new vanpool passengers to/from Contra Costa County. Eligible for CCTA GRT program.
Vanpools to San Francisco	To encourage vanpooling by minimizing parking costs.	SNCI processes SF reduced rate vanpool parking permit working with SF PTD.
Vanpools to Oakland	To encourage vanpooling by minimizing parking costs.	Provide information on Oakland reduced rate vanpool permit parking.

Target	Purpose/Description	Financial & Other Incentive
Vanpool Backup Driver Incentive	To encourage more vanpool passengers to be a back-up vanpool driver to avoid driver burn-out and/or folding of vanpool for lack of driver.	Cost to SNCI would vary depending upon incentive.
Vanpool Formation Incentive	For routes that do not have built-in demand, to facilitate starting a vanpool which does not have enough passengers to make it viable in the short-term while passengers are being recruited. Phase out incentive while passengers are being recruited.	A seat subsidy during a start-up period. Cost would depend upon number of eligible vanpools, subsidy time limit, and amount.

Target	Purpose/Description	Financial & Other Incentive
Potential Program Enhancements		
Established vanpools that cross Bay Area bridges	To give vanpools the same time savings as SOVs who use FasTrak at any time of the day on all bridges.	Working with MTC and Caltrans to establish non-revenue FasTrak account. No cost to SNCI.
Existing vanpools	To add value to vanpooling, develop public/private incentives via a "vanpool club."	No cost to SNCI if incentives donated by businesses interested in advertising to/supportive of vanpools via incentives (Thunderbirds example).
Vanpool resuscitation	To keep an established but struggling vanpool on the road when it may have otherwise folded.	Short-term seat subsidy for a struggling vanpool to keep on the road. The subsidy would give a vanpool time to recruit more passengers and/or drivers or set up new vanpool lease.
Commuter Check: vanpool coordinators	To increase the usage of Commuter Check by Solano/Napa vanpools.	Up to a $100 incentive is available to employees at companies who offer this benefit. May be used on vanpools that honor it. Educate vanpool coordinators and increase their acceptance of it. Amount of SNCI incentive to vanpool unknown.
Commuter Check: employers with existing or forming vanpools	To increase the usage of Commuter Check by Solano/Napa employers who have or would like to have vanpools to their worksite by educating them about Commuter Check and providing an incentive for them to do so.	Up to a $100 incentive may be offered to employees (pre or post tax). Cost to SNCI for incentive to employer unknown.
Vanpool drivers	There are State Laws (other than those referred to above) that vanpools need to comply with, primarily related to safety.	Develop nominal incentive to encourage compliance and make it easier for drivers. Minimal or no cost if incentives donated (i.e., maintenance check-up).
Vanpool drivers	Annual "gift" along with reminder during birthday month of need to update their MVR and/or Medical check-up.	About $1 cost per gift/reminder.

CARPOOL PROGRAM ENHANCEMENT

Similarly, the SNCI program has a comprehensive carpool program as summarized in Table 3.8. Three additional program enhancements are also identified in Table 3.8.

Table 3.8 – CARPOOL PROGRAM

Target	Description/Purpose	Financial Incentive
Existing Program		
New carpool members to/from /through Contra Costa County.	To encourage new carpool riders and increase the number of carpool members in existing carpools.	$20/month for two months; No cost to SNCI; CCCTA administers and funds. Eligible for CC GRT program.
Carpoolers to destinations across Bay Area bridges.	To encourage carpooling across bridges.	For 3-person carpools, free toll crossing (vs. $3/crossing) and time-savings.
Commuters driving to BART stations.	To encourage carpooling to BART stations and decrease parking demand.	$20/month for two months and preferred parking location at BART station ("Bartpool").
Commuters willing to divert 5 minutes on their commute to carpool. Target commuter through home and direct mailings.	Offer incentive to commuters who will carpool and register on ridematching database to improve potential for matches and increase carpooling.	Cost to SNCI would vary depending upon amount of incentive and number of respondents.
Potential Program Enhancements		
Commuters driving to selected PNRs.	To encourage carpooling to PNRs and maximize limited PNR spaces.	As PNR parking is free, offer preferred parking spaces. Offer $20/month for two months. Would need to create preferred parking spaces.
Commuters driving to Baylink Ferry Terminal.	To encourage carpooling to Baylink Ferry Terminal.	Ferry parking is free, so offer preferred parking spaces. Offer $20/month for two months. Would need to create preferred parking spaces.

Employer Incentive Program Enhancements

Table 3.9 summarizes employer incentive programs and potential enhancement strategies. Special focus of employer incentive programs should be given to coordination with welfare to work employers and employers not located at transit accessible sites.

Table 3.9 – EMPLOYER INCENTIVE PROGRAM

Target	Purpose/Description	Financial & Other Incentive
Existing Program		
Local employees	Encourage employee commuter info requests when surveying employer by offering prize-drawing incentive.	SNCI cost nominal or none if incentive donated. Alternative could be to offer incentive to all who complete commute info request form.
Solano/Napa employer transportation coordinators (ETC)	Offer incentives to ETC to encourage their active promotion of major campaigns (such as Rideshare Thursday) through prize drawings, competitions, and/or participation rates.	SNCI cost nominal. Typically use donated prizes.
Potential Program Enhancements		
Employment Area Shuttle Buses	To link employment areas to transportation centers or residential communities with free shuttle buses.	Employers provide 25% of the support funding for these free shuttles. Potential costs have not been studied.
Solano Guaranteed Return Trip (GRT) Program	To encourage the use of any alternative mode by Solano workers from employers participating in the GRT program. GRT program offers a free ride home (limited) in the case of emergencies to eligible commuters.	The set-up of this program is funded. On-going cost of program will depend on level of participation; some funding for implementation is secured.
Solano/Napa employers	To encourage employers' promotion through internal methods (including intranets) employees' use of SCI website commuter information request page through one-time promotion or on-going link.	Cost could vary depending upon incentive.
Solano/Napa employers within a given business park	To encourage "surveying" employees simultaneously and therefore maximize ridematches and transit promotion.	Cost unknown. Depends on nature of incentive.

Transit and Bicycling Promotion Program Enhancement

Table 3.10 summarizes current transit and bicycling incentive programs and potential new opportunities to enhance these programs. Deployment of real-time passenger information systems could also be explored to advise motorists of available parking at major ferry, rail and bus terminals and of actual arrival times. The viability of ClassPass fare payment for Solano Community College should also be investigated.

Table 3.10 - TRANSIT

Incentives ProgramTarget	Purpose/Description	Financial & Other Incentive
Existing Program		
General public, new bus riders	Free Fare Day. Through free "trial and sample," offer free fare on Solano & Napa bus tours. This also rewards regular riders. Held in conjunction with larger campaigns.	Varies depending on cost of transit trip. No benefit to monthly pass holder. No cost to SNCI.
Employers, real estate community, economic development community, social service agencies, event visitors, general public	Commute Guide free roundtrip coupon. Through free trial and sample, offer free fare on participating Solano/Napa transit.	Varies depending upon cost of transit trip. No cost to SNCI.
Commuters to/from Contra Costa County	To encourage new use of transit for commuting. New users provided a free monthly pass.	Varies depending on cost of monthly pass. No cost to SNCI. Eligible for CC GRT program.
New bus riders for commuting	To encourage regular bus usage by offering monthly transit pass as prizes for CRSW campaign.	Varies depending on cost of monthly pass. No cost to SNCI.
Potential Program Enhancements		
Existing express bus riders originating in Solano – Commuter Check promotion	To increase express bus rider retention, promote Commuter Check incentive to riders to maximize their taking advantage of employer's Commuter Check benefit or request it.	On-going cost of up to $100/month borne by employer or employee via pre-tax benefit program.

Incentives ProgramTarget	Purpose/Description	Financial & Other Incentive
Local employer transportation coordinators – Commuter Check	To increase the usage of transit for local commuting by increasing local employer participation in Commuter Check as an outright benefit of pre-tax benefit by Solano and Napa employers through heightened promotion.	Up to $100/month currently offered via pre-tax deduction or by employer. No SCI cost.
Free or subsidized monthly pass to encourage new bus commuters.	To increase the usage of transit for Solano/Napa residents by offering a free transit pass for new bus commuters.	Would vary depending upon the commute and transit pass cost. Cost borne by SNCI.
Existing and new Solano and Napa bus riders	To encourage and add value to riding the bus, have bus riders send in used monthly pass or transfer slip with personal info to be eligible for monthly prize drawings.	Cost to SNCI would vary depending upon if prizes are donated or purchased.

OTHER MEASURES

Land use coordination is a very important means of efficiently managing the deployment of limited transit resources. STA should consider development of land use strategy guidelines for transit and pedestrian friendly site plans to assist local communities work with developers. Such strategies would also benefit car and vanpooling. Other attractive measures include:

- Improved service delivery and outreach through the internet (website, email messages, links, etc.). More regular and interactive information.
- Increase service access and convenience through developing technology.
- Targeted, timed outreach to employment centers.
- Increase partnerships with organizations involved with relocating employers and residents.
- Increased promotional partnerships with private and public organizations.
- Promote and implement School-pool programs.

COUNTYWIDE BICYCLE PLAN

The Federal Highway Administration estimates that 60 percent of all automobile trips are less than five miles in length (Transportation Air Quality Selected Facts and Figures; USDOT FHWA, 1996). This highlights the tremendous potential for the increased use of bicycling and walking to meet these short trip transportation needs. Bicycling and walking are underutilized modes of transportation in Solano County. Together they account for approximately 2% of the County's mode split. However, they offer the potential for significant reductions in traffic congestion, transportation emissions, and demand for petroleum. Additional community benefits include: achieving the larger goals of developing and maintaining "livable communities"; making neighborhoods safer and friendlier; reducing transportation related environmental impacts, mobile emissions and noise; as well as reducing the destruction of open space, agriculture, and habitat.

Bicycling is important to the health of all Californians and Solano County residents, and not just to those doing the cycling. The California Air Resources Board estimates that statewide about 7 tons per day of smog-forming gases and almost a ton of inhalable particles are spared from the air due to the use of bicycles rather than motor vehicles. People choosing to ride rather than drive are typically replacing short automobile trips, which are disproportionately high in pollutant emissions.

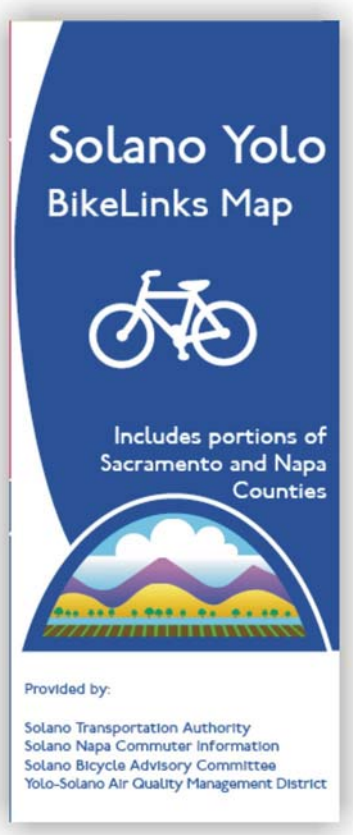
STA COUNTYWIDE BICYCLE PROGRAM

The Solano Transportation Authority has been working with its member agencies and a number of non-governmental groups to increase public awareness and promote bicycling as an environmentally sound, viable commute alternative since its inception. An important component of the Bicycle Program is the Countywide Bicycle Advisory Committee (BAC), which is comprised of representatives from the STA's member agencies and participants from the public.

The STA adopted its first Countywide Bicycle Plan in 1995. Much progress has been made since the original plan, with the adoption of three updates in 1997, 2001, and 2004, along with the development of several regional bikeway segments. Of the county's 416 miles of regional roadways, 30.9 miles now contain bike lanes and more than 13 miles of off-street multi-use paths have been developed.

The STA's bicycle program focuses on maximizing the use of bicycles as a viable commute alternative for work, school, shopping, recreation, and other purposes. To achieve it's cycling goals, the STA is working to ensure that safe and convenient facilities are located where residents choose to ride. The STA is planning for bicycle storage facilities and transit connections, to enable commuting cyclists to safely store their bicycles, extend the length of their trips, and avoid inclement weather. Multi-modal connections are currently available at most of the county's transit centers, park-and-ride lots and ferry terminals. Bicycle racks and lockers are found at most major shopping areas and destinations where residents choose to ride, and current plans address implementing new facilities where there is demand.

STA's Solano Napa Commuter Information (SNCI) Program supports and promotes bicycling programs in Solano County. SNCI promotes bicycling as a commute mode, develops bicycle maps, provides bridge, transit, and shuttle information for cyclists who use bikes on transit, promotes bicycle safety and education programs, works with employers and the Bicycle Advisory Committee to develop these programs, and promotes California's Bike to Work/School Week.



The 2004 Countywide Bicycle Plan provides specific recommendations on safety improvements, design standards, implementation, operations and maintenance, educational programs, performance standards, and funding. The Plan recommends the development of a comprehensive bikeway system in Solano County including more than 138 miles of bikeways, comprised of Class I multi-use paths, Class II bike lanes, and Class III bike routes. The planned regional system connects all seven cities with each other, and the major activity centers in the county, such as Solano Community College, major shopping and major commercial areas, multi-modal transfer stations, schools, parks, city centers, libraries, and open space areas. Bike paths will provide important linkages and allow bicyclists to travel without having to interface with automobile and truck traffic along busy streets and narrow county roads. Bike lanes and routes will provide an extra level of comfort for bicyclists negotiating city streets and avenues. Crossing improvements could help minimize conflicts between motorists and bicyclists at some appropriate locations. New bicycle lockers and racks will improve bicycle safety, decrease vandalism, provide long-term storage, and encourage and support bicycle commuters.

The planned bicycle system is based on a broad range of criteria including: access, traffic conditions, right-of-way availability, connection to major destinations, cost and implementation restraints, and level of public support expressed at the public workshops. The major components of this Plan are:

- An integrated and comprehensive network of bikeway facilities and programs totaling approximately $56 million to be invested over 25 years.
- Adoption of the goals, policies, design standards and guidelines, and recommendations in the Plan.

RECENTLY COMPLETED PROJECTS INCLUDE:

- Countywide Bridge Replacement Program – 12 narrow bridges in the unincorporated County have been replaced with widened structures to accommodate bike lanes - Solano County
- Dixon to Davis Bike Route Phase - Solano County
- Green Valley Bike Path - Solano County
- Central County Bikeway along Highway 12 - Suisun City
- Jepson Parkway (SR to Bella Vista Road) - Suisun City
- Ulatis Creek Bike Path - Vacaville
- Alamo Creek Bike Path - Vacaville
- Al Zampa (Carquinez) Bridge Multi-use Bikeway - Vallejo
- The Solano Bikeway Phase 1, Columbus Parkway to McGary Road – Vallejo

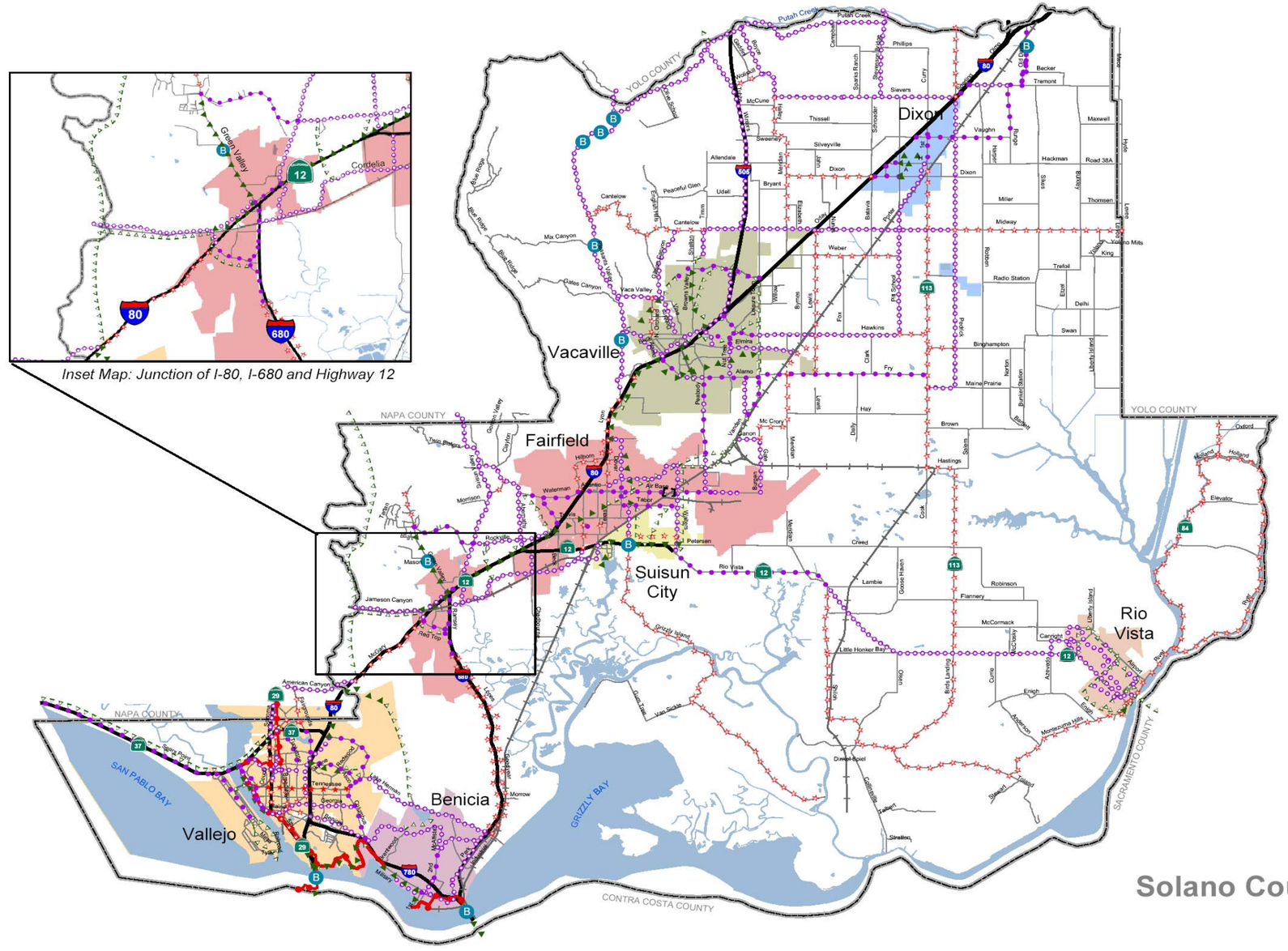
SHORT-TERM PROJECTS AND SPECIFIC RECOMMENDATIONS INCLUDE:

- Solano Bikeway Extension Phase 2 connecting Hiddenbrooke/American Canyon and Fairfield
- Vacaville-Dixon Bike Route
- Jepson Parkway Bike Path from Bella Vista Road in Suisun City (SR 12) to Vacaville (I-80)
- Benicia's State Park Road Bike Bridge
- Highway 37 Bike Route

- Countywide Signing Program using the custom "Solano Bike Route" sign
- Enhanced bicycle education programs for students and adults.
- Improved bicycle parking and transit standards.
- Adopt design standards that adhere to applicable state guidelines and provide a continuity of facilities between jurisdictions.
- Maintain outreach and educational programs and operations to maximize bicycling around the county.

The Solano Countywide Bikeway System bicycle projects are illustrated in the proposed system map figure 3.2. A more detailed description of these projects are in the Solano Countywide Bicycle Plan adopted in October 2004.

Many of the system's projects are feasible and should be implemented over the next 10 to 20 years through road improvements and new developments. This ultimate system is designed to meet the needs of bicyclists over the long term and help establish bicycling as a viable travel mode in Solano County.



LEGEND

EXISTING BIKEWAYS

- CLASS I BIKE PATH
- CLASS II BIKE LANE
- CLASS III BIKE ROUTE

PROPOSED BIKEWAYS

- CLASS I BIKE PATH
- CLASS II BIKE LANE
- CLASS III BIKE ROUTE

BAY TRAIL

- EXISTING
- PROPOSED

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Existing and Proposed Bicycle Facilities

Figure 3.2

COUNTYWIDE PEDESTRIAN PLAN

The goal of the Pedestrian Plan is to encourage and support walking as a means of transportation in Solano County. This includes creation and enhancement of ***connections*** that support pedestrian movement, and the creation or enhancement of ***places*** that support pedestrian travel or activity. "Walking" in this context includes accommodating people using wheelchairs and other types of mobility assistance.

The Plan is intended to identify general guiding policies and practices, and specific projects and priorities to be implemented by the eight Solano Transportation Authority (STA) member agencies, with assistance from the STA Pedestrian Advisory Committee. This Plan has a strong relationship to the STA's Transportation for Livable Communities (TLC) Program, which in addition to direct connections and enhancements, supports land use and development projects with densities and patterns that support walking and other alternative modes of transportation to the automobile.

The Pedestrian Plan is not intended to address recreational trails, which would be the purview of a regional parks or open space agency. There is some overlap with recreational trails because some existing or planned trails and pathways in urban areas also serve as important pedestrian circulation routes. The Plan does recognize existing and planned pedestrian routes to access regional open space areas. There is also some overlap with STA's Countywide Bicycle Plan in that some Class 1 (separated path) bicycle facilities also serve as significant pedestrian facilities. The Countywide Pedestrian Plan builds on many previous phases of studies and plans undertaken by STA and other agencies related to pedestrian circulation.

PEDESTRIAN PLAN OBJECTIVES

The Countywide Pedestrian Plan has two overall planning objectives:

1. To develop an overall vision and systematic plan for accommodating pedestrians in each urban area based on general shared policies, principles, and criteria, and;
2. To document existing conditions, and plans and projects that will implement the Plan, highlighting specific current or potential projects for each agency.

This Pedestrian Plan is based on information provided by the cities and the County, and developed in conjunction with the agencies. The scope of the Plan does not include detailed assessment of pedestrian needs or conditions, or preparation of detailed plans or projects descriptions except by working through the agencies. It is intended to encourage the local agencies to undertake such systematic planning based on the framework provided by the Plan.

PEDESTRIAN PLAN ELEMENTS:

- A Plan Summary, including recommended goals, objectives and policies; a categorized and prioritized list of current projects of the STA member agencies that focus on or feature pedestrian improvements, and a list of concepts for future improvements for each of the agencies.
- A review of the physical, social, economic and environmental benefits of walking, and the opportunities presented by current federal and state policies and funding programs
- General information regarding pedestrian safety, and information for Solano County relative to other Bay Area counties, and for each city, if available, showing the location of pedestrian/vehicle accidents
- A review of policies and plans from each of the cities and Solano County relating to pedestrian circulation and creation or improvement of areas that are conducive to pedestrian activity
- Principles, policies, and guidelines for planning and designing good pedestrian places and connections, including a checklist that can be used to rate a city's existing conditions, policies and plans, and to guide development of new plans
- An inventory of existing and planned pedestrian connections and places in each city. Includes descriptions, maps and lists of the major existing and planned pedestrian routes, key connections, destinations and districts in each city, highlighting current and potential projects, including examples of good pedestrian projects in Solano County and elsewhere
- An Implementation Section, including a guide to building public and policy support, tips for preparing project documentation and grant applications, general cost information for pedestrian improvements; and funding sources for different types of projects, including key information on contacts, deadlines, and criteria

- Extensive annotated reference list of pertinent policy and planning documents from Solano County agencies, and other pedestrian plans, guidelines, standards, and references with more detail for planning and designing projects to accommodate pedestrians.

PEDESTRIAN PLAN BENEFITS

The Countywide Pedestrian Plan is intended to directly benefit local agencies by:

- Providing more attention to needs and opportunities to support walking as a means of transportation and as an integral part of community character;
- Supporting current city pedestrian plans and projects and providing a framework for creating more detailed city pedestrian plans; Sharing information on planning and implementing successful projects;
- Encouraging better consistency and coordination between communities on pedestrian accommodations and pedestrian oriented projects;
- Providing a means for local citizens and groups to understand pedestrian plans and opportunities and make suggestions;
- Providing resources for planning and describing projects, and identifying and preparing grant applications to support implementation;
- Coordinating Countywide projects for a better overall result and greater success in competing against other regions for project funding.

PUBLIC OUTREACH AND PARTICIPATION PROCESS

Preparation of the Countywide Pedestrian Plan included extensive efforts to reach a broad cross-section of Solano County constituents, including minorities and other Title VI groups. Information about the Plan goals and process and a request for input into the Plan was sent to the directors of the City Planning, Public Works and Parks and Recreation Departments, or the equivalent, of each of the cities in the County, as well as to the County departments. The police department of each member agency was contacted to collect pedestrian safety data and to identify needs for safety improvements. Information and an input request was sent to the administrator of every school district in the county.

Through the member agencies, STA solicited appointment of representatives to its Pedestrian Advisory Committee (PAC), consisting of a broad cross-section of the several communities and stakeholder groups. The PAC reviewed and commented on the preparation of the Plan at each stage. Follow-up contacts were made with each City and County department and school district to encourage participation. Special staff and/or public presentations and discussions were offered to each member agency to focus on the needs in that community, and most of the agencies took advantage of this to provide additional concepts to current plans and projects.

The project was explained and participation was encouraged at meetings of STA's Technical Advisory Committee, consisting of Public Works Directors, from each of the cities and the Solano County Transportation Department and Solano Planning Director's Group. The draft Plan was presented to these groups and reviewed by the member agencies. The Plan was reviewed at noticed public meetings of the STA Board's Alternative Transportation Modes Committee and will be reviewed and approved by the full STA Board of Directors.

CURRENT PEDESTRIAN-SUPPORTIVE PROJECTS AND CONCEPTS

The overall goal of the Countywide Pedestrian Plan is "A complete, safe, and enjoyable system of pedestrian routes and zones in the places people need and want to go in Solano County, providing a viable alternative to use of the automobile, through connection to transit, and employment, health, commercial, recreational and social centers." Achieving the overall goal requires a long-term commitment. The Plan identifies 39 current pedestrian-support projects. The priority pedestrian projects for Solano County are:

1. State Park Road/I-780 Bike/Pedestrian Bridge (City of Benicia)
2. Vallejo Ferry Station Pedestrian and Streetscape Enhancements (City of Vallejo)
3. West Texas Street Urban Village Project (City of Fairfield)
4. Driftwood Drive Pedestrian Project (City of Suisun)
5. Vacaville Creekwalk Extension to McClellan Street (City of Vacaville)
6. Multi-Modal Transportation Center (City of Dixon)

7. Waterfront Plan and Improvement Project (City of Rio Vista)
8. Old Town Cordelia Improvement Project (Solano County)
9. Jepson Parkway Concept Plan (Multi-Jurisdiction: Fairfield, Suisun, Vacaville, and Solano County)
10. Union Ave to Main Street Streetscape Enhancements Program (Multi-Jurisdiction: Fairfield, Suisun, and Solano County)

The Plan also identifies pedestrian concept projects that have not yet been formally proposed as projects. These concepts originated from various sources, including informal discussion with agency staff, specific policies found in general plans and other policy documents, studies and reports related to pedestrian issues, and public workshops held for development of the Plan.

Many of the identified pedestrian projects are Transportation for Livable Communities (TLC) projects and Class I multi-use bicycle projects. Therefore, the costs for many of the current pedestrian-supportive projects are already accounted for in the Countywide Bicycle Plan, the Countywide TLC Program, or other components of the CTP. The total estimated cost of pedestrian improvement projects and enhancements that are not accounted for in other CTP elements is $3,622,000. Figure 3 is an overview map illustrating the locations of the pedestrian-oriented projects, the major on-street and off-street routes that accommodate pedestrians, and the general origin and destination areas for pedestrians.

The Solano Countywide Pedestrian Plan also identified pedestrian concept projects that have not yet been formally proposed as projects. These concepts originated from various sources, including informal discussions with agency staff, specific policies found in general plans and other policy documents, studies and reports related to pedestrian issues, and public workshops held for this Pedestrian Plan. These concepts are also described in each agency's respective portion of Section 6 of the *Solano Countywide Pedestrian Plan*. These concepts may not yet be commitments of the agencies, but they represent the potential next tier of pedestrian projects to work toward the comprehensive system envisioned by the Pedestrian Plan.

The total estimate "placeholder" cost of pedestrian improvement concepts that are not yet defined as projects is $21,550,000. Ultimately, many of these concepts may become all or part of projects in other CTP elements.

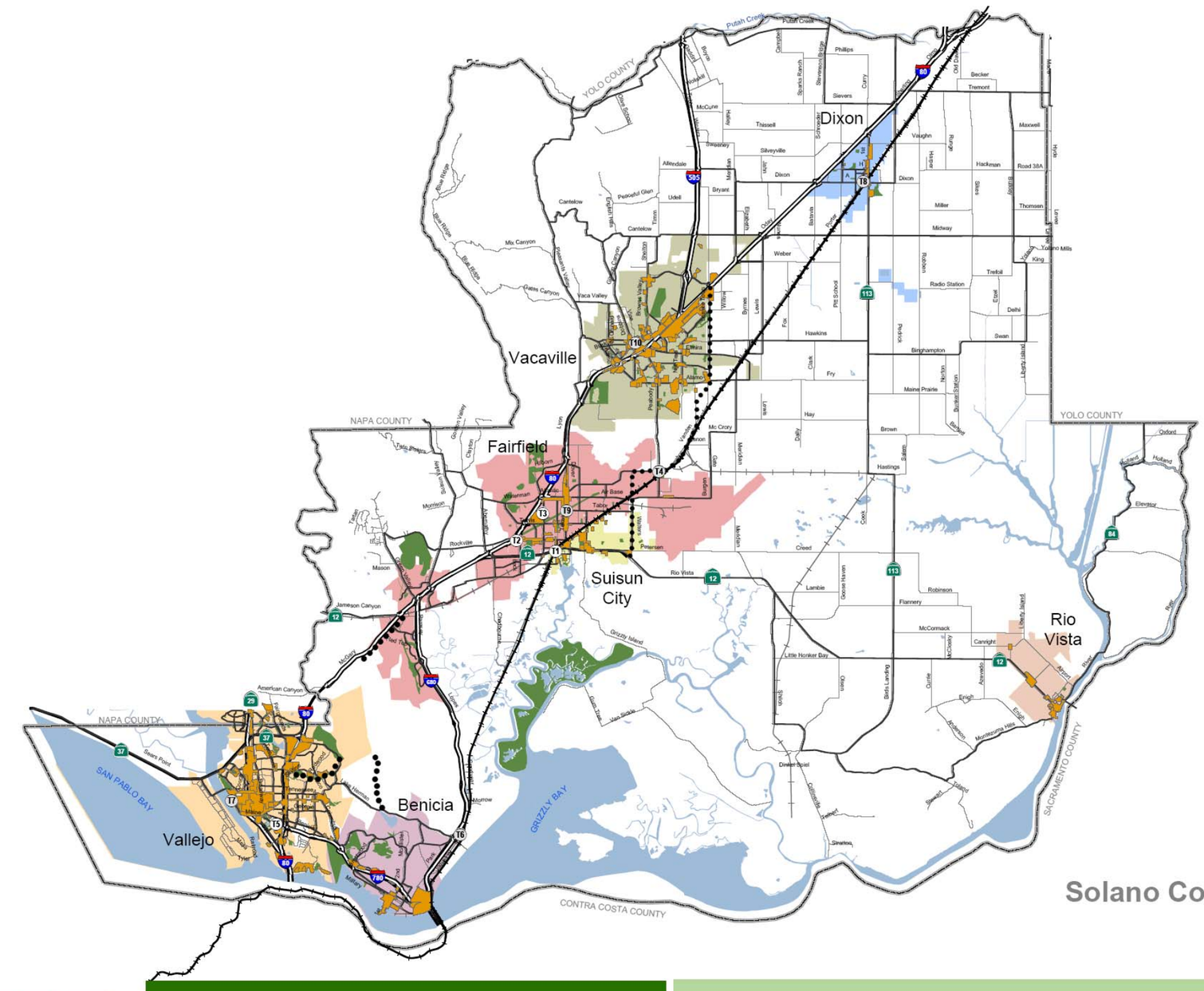
GUIDELINES FOR PLANNING & DESIGNING PEDESTRIAN ROUTES & PLACES

Planning and design must occur at all stages and scales to successfully encourage and facilitate pedestrian activity and circulation. Information on planning and designing for pedestrians is organized into four different topic areas:

1. Land Use
2. Site Planning & Design
3. Street System Planning & Layout
4. Pedestrian Routes, Spaces, & Amenities

PEDESTRIAN IMPROVEMENT COSTS

One of the objectives of this Pedestrian Plan is to estimate the cost of the complete future pedestrian transportation system as part of STA's overall Comprehensive Transportation Plan (CTP). A figure of $25 million has been identified as a working budget for future pedestrian improvements, based on a relative proportion to the CTP's budget allocations for other transportation modes.



LEGEND

- PEDESTRIAN ORIENTED AREAS
- PEDESTRIAN ROUTES WITH REGIONAL CONNECTIONS

TRANSIT HUBS

EXISTING
- T1: SUISUN CITY INTERMODAL STATION
- T2: FAIRFIELD TRANSPORTATION CENTER
- T3: SOLANO MALL
- T4: CURTOLA PARK AND PARK AND RIDE

PLANNED
- T5: FAIRFIELD/VACAVILLE INTERMODAL TRAIN STATION
- T6: BENICIA INTERMODAL TRAIN STATION
- T7: VALLEJO STATION
- T8: DIXON MULTIMODAL TRANSPORTATION CENTER
- T9: NORTH TEXAS TRANSPORTATION CENTER AND COMMUNITY HUB
- T10: VACAVILLE BUS TERMINAL AND TRANSFER CENTER

- MAJOR ROADS/PEDESTRIAN ROUTES
- HIGHWAYS
- AMTRAK CAPITOL CORRIDOR ROUTE
- PARKS & OPEN SPACE

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County-Wide Pedestrian Plan Overview

Figure 3.3

AIR QUALITY AND DEVELOPMENT OF ALTERNATIVE FUELS AND INFRASTRUCTURE

This section is designed to educate the STA's member agencies on advances in alternative transportation technologies and to identify the county's existing and proposed alternative fuels infrastructure. New transportation technologies have the potential to reduce our dependence on fossil fuels and offer significant air quality, economic, and environmental advantages over conventional technologies. However, their introduction and use requires careful planning. While the STA has a clear interest in transportation related air quality planning activities, its authority lies in its ability to provide guidance, funding, and assistance on transportation plans and strategies to its member agencies, local districts and transportation agencies, as policies, regulations, and enforcement of state and federal ambient air quality standards fall under the jurisdiction of the state and air districts. The STA's role in the introduction of emerging transportation technologies is as an educational and support mechanism for its member agencies. Each of the alternative fuels technologies described below has unique advantages and disadvantages. Local jurisdictions will need to choose which technologies to invest in. Ideally they will select the ones that will meet environmental requirements, be cost-effective and readily available, and provide the performance required by their developing communities.

Local programs and policies can make a difference. Local agencies can play a critical role in laying the groundwork for clean air vehicles in their communities, as evidenced by efforts in the City of Vacaville, which has the highest per capita use of private electric vehicles in the nation due to local efforts. In addition to acquiring clean vehicles for their fleets, local governments can implement purchase assistance programs for its citizenry, develop thresholds for development projects that require the installation of alternative fuels infrastructure, and provide enforcement of alternative fuels vehicle parking policies.

AIR QUALITY REGULATIONS

Solano County lies within two separate air basins. The western portion of the county is within the Bay Area Air Basin, within the boundaries of the Bay Area Air Quality Management District (BAAQMD), a National 1-Hour Ozone Non-Attainment Area. The eastern portion of Solano County lies within the Sacramento Federal Ozone Non-Attainment Area, within the boundaries of the Yolo-Solano Air Quality Management District (YSAQMD).

While air quality has improved in recent years in the eastern portion of the County, exceedances of the health based ozone air quality standards continue to occur. According to the YSAQMD, the number of days exceeding the federal 1-hour ozone standard in eastern Solano County was one day in 1996, two days in 1998, and one day in 1999. No exceedances of the 1-hour ozone standard occurred in eastern Solano County in 2000, and no exceedances of the federal standard occurred in 2001.

The Sacramento Air Basin is one of the worst regions in the nation for ozone. As a result, much emphasis has been placed on reducing emissions of all types, including vehicle emissions throughout the air basin. Rideshare activities have been successful to a certain extent in eliminating some vehicle emissions by eliminating some commute vehicle trips to the work site, via carpooling, vanpooling, transit use, and encouraging other alternative modes such as bicycling, walking, compressed work schedules, and even telecommuting. However, efforts to continue to reduce mobile emissions and improve the commute mode split are needed as about 70% of the commuting public continues to drive to work as single occupant vehicle (SOV) drivers.

ALTERNATIVE FUEL VEHICLES

Since a large portion of the ozone forming emissions comes from vehicles, a major strategy to reduce emissions in the region is the use of lower emission vehicles and alternative fuels. For air quality purposes, an alternative fuel is any fuel used in place of gasoline or diesel fuel. The fuels and technologies that are either in use in Solano County or are being considered for use by the local air districts include: biodiesel, electricity, fuel cells, hybrid electric, liquefied and compressed natural gas (L/CNG), low sulfur (clean) diesel, propane (LPG), and methanol.

Generally, a reduction in ozone forming emissions and particulates can be achieved with the use of most alternative fueled vehicles when compared with conventional gasoline or diesel engines, especially in heavy-duty applications. Different fuels have different impacts on the environment. These impacts occur in two phases: first in the production, processing and transport of the fuel and second in its consumption on-board of the vehicle. In general, both phases are relevant as far as global impacts are concerned (e.g. greenhouse effect), but the latter is more important with regard to the local air quality. For example, the use of electricity in battery-powered vehicles does not cause local emissions, but its generation leads to emissions at the power plant.

When determining what alternative fuels to use for light, medium or heavy duty vehicles, public and private vehicle owners and fleet managers should weigh all the factors: economics, available models, rebates, incentives, the ease of refueling, and number and cost of fueling infrastructure. Vehicle owners and operators should also consider whether the vehicle is a dedicated or a bi fuel vehicle, whether its emission rating falls into one of the following categories: Low Emissions Vehicle (LEV), Transitional Low Emissions Vehicle (TLEV), Ultra Low Emissions Vehicle (ULEV), Super Low Emissions Vehicle (SULEV), and Zero Emissions Vehicle (ZEV), and what its operating range and maintenance costs will be.

A brief description of the fuels and technologies that are currently in use in Solano County as well as emerging technologies being considered for use by the local air districts follows below. A more detailed description of these technologies is included in Appendix C.

ENERGY IMPACTS OF ALTERNATIVE FUEL VEHICLES

The prices of all fuels are dynamic. Not only have we experienced significant price spikes for gasoline in recent years, but also given California's recent energy crisis and ongoing energy concerns, it is important to consider the potential energy impacts associated with electric vehicles (EVs) and other alternative fuel vehicles. In the short term, the use of EVs and other alternative fuel vehicles is expected to have no significant impact on the demand for electricity or other sources of energy. In the long term, energy consumption patterns will shift and our expanded use of alternative fuel vehicles will reduce our dependence on petroleum in the transportation sector, and diversify our energy supply. Ultimately, a more diversified vehicle fleet can help to reduce our vulnerability to

shortages or price increases in any one sector of the energy market. Key points are summarized below:

- The transportation sector accounts for only a fraction of one percent of current natural gas consumption in California, according to data from the California Energy Commission staff.
- In the next 3-5 years, the number of electric vehicles on the road will remain small, and their aggregate electricity demand will be negligible. Even by the year 2010 as more EVs are phased into use, the California Energy Commission estimates they will use less than one-half of one percent of today's electrical demand.
- EVs typically recharged at night when there is excess capacity in the electrical grid. PG&E already offers a special rate structure to EV drivers to encourage off-peak charging.
- Electric (and hybrid electric) vehicles are inherently more efficient in energy use compared to internal combustion engines. Also, EVs and Hybrids recapture a portion of the energy they use through regenerative braking.

Local agencies will need to consider infrastructure and energy requirements in their plans to acquire and operate alternative fuel vehicles. The capital and operating costs associated with these emerging technologies will need to be evaluated with the variety of alternative and conventional technologies available. The initial purchase cost of an alternative fuel vehicle is generally higher, however, they offer savings in fuel costs and reduced maintenance costs as compared to gasoline vehicles. According to the California Energy Commission, the cost to drive battery electric vehicles has typically been 30-40% of the cost of gasoline vehicles on a per mile basis. Even with a significant increase in electric prices, EVs should still be cheaper to operate, based upon overall fuel and maintenance costs.

Not only did California's electric grid feel the crunch of our recent energy crisis, but prices for natural gas have experience sharp spikes in the short term market too. Despite the fact that natural prices are

already declining, many agencies that operate natural gas fleets had to negotiate long-term contracts to protect against short-term fluctuations in the price of the fuel, and in some cases revert to using retired conventional vehicles.

The future price of any one fuel and the price of electricity and natural gas relative to gasoline cannot be predicted. However, by moving to diversify the fuels that power the vehicles we drive, public agencies and private operators can reduce their vulnerability to rapid increases in the cost of any one fuel, whether it's gasoline, diesel, natural gas, or electricity.

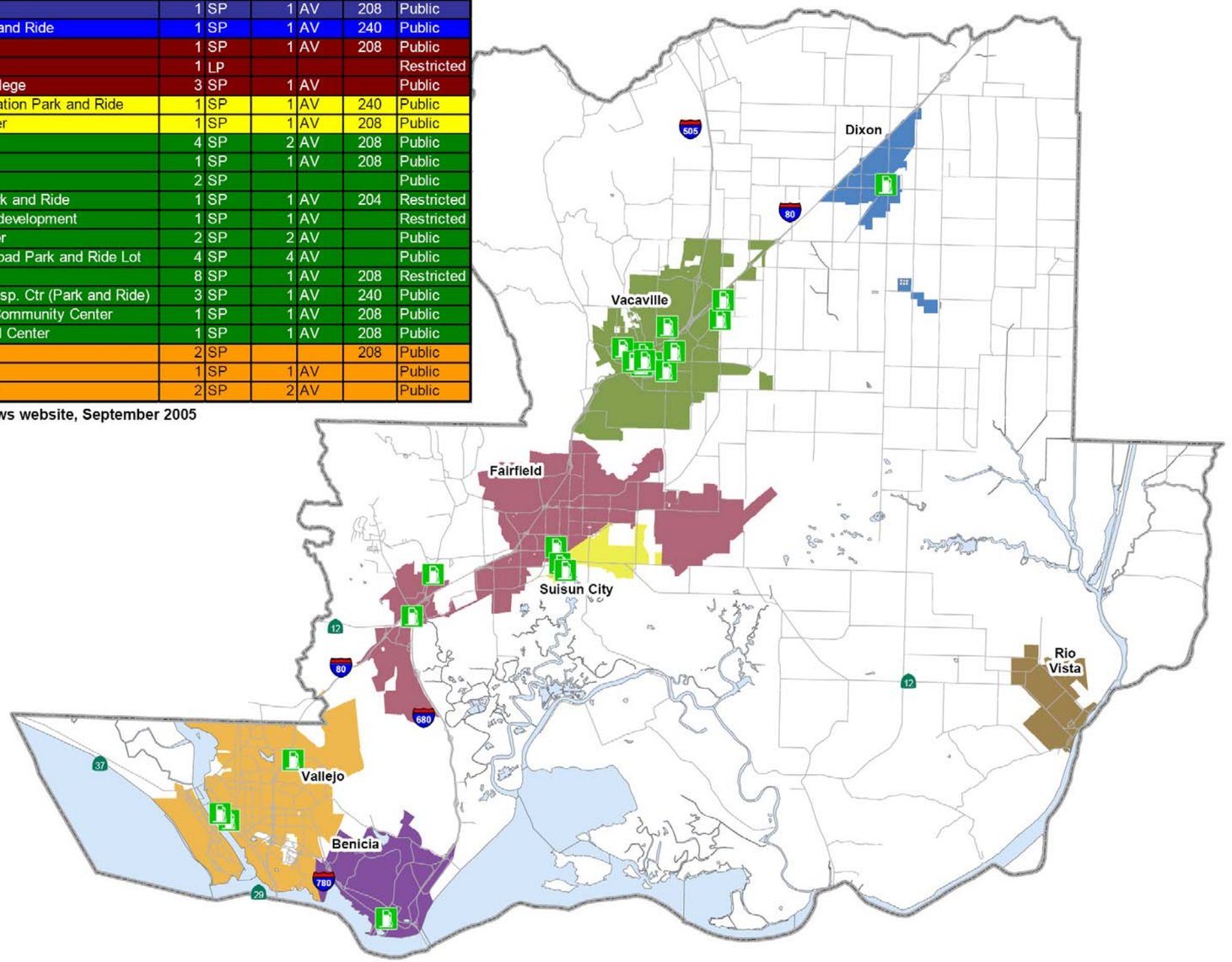
ALTERNATIVE FUELS INFRASTRUCTURE

Alternative fuels provide opportunities to reduce vehicle emissions and reduce our dependence upon imported petroleum. However, the lack of adequate fueling infrastructure has limited the alternative fuels market penetration and expanded use. Therefore developing the infrastructure necessary to deliver alternative fuels is a critical component of bringing the technologies into the market place for private consumers. There are a number of existing barriers which need to be addressed, but ultimately can be overcome. For example, compressed natural gas requires complex compressor stations that have proven to be expensive to build and difficult to maintain, and EVs are currently available utilizing two different charging technologies. The existing barriers, real or perceived, must be examined and understood to determine how they limit widespread public use of alternative fuels.

The following map displays the 20 different electric vehicle charging station locations around Solano County.

City	Electric Vehicle Charging Station Location	Inductive		Conductive		Volts	Type
Benicia	Benicia City Hall	1	SP	1	AV	208	Public
Dixon	Downtown Dixon Park and Ride	1	SP	1	AV	240	Public
Fairfield	Fairfield City Hall	1	SP	1	AV	208	Public
Fairfield	Saturn of Fairfield	1	LP				Restricted
Fairfield	Solano Community College	3	SP	1	AV		Public
Suisun City	Suisun City Amtrak Station Park and Ride	1	SP	1	AV	240	Public
Suisun City	Suisun City Civic Center	1	SP	1	AV	208	Public
Vacaville	Costco Vacaville	4	SP	2	AV	208	Public
Vacaville	KUIC parking lot	1	SP	1	AV	208	Public
Vacaville	Leisure Town Center	2	SP				Public
Vacaville	Leisure Town Road Park and Ride	1	SP	1	AV	204	Restricted
Vacaville	Office of Housing & Redevelopment	1	SP	1	AV		Restricted
Vacaville	Stars Recreation Center	2	SP	2	AV		Public
Vacaville	Vacaville Bella Vista Road Park and Ride Lot	4	SP	4	AV		Public
Vacaville	Vacaville City Hall	8	SP	1	AV	208	Restricted
Vacaville	Vacaville Regional Transp. Ctr (Park and Ride)	3	SP	1	AV	240	Public
Vacaville	Vacaville Three Oaks Community Center	1	SP	1	AV	208	Public
Vacaville	Vacaville Ulatis Cultural Center	1	SP	1	AV	208	Public
Vallejo	Costco Vallejo	2	SP			208	Public
Vallejo	Vallejo City Hall	1	SP	1	AV		Public
Vallejo	Vallejo Ferry Terminal	2	SP	2	AV		Public

* Data taken from EV Charger News website, September 2005



LEGEND

EV Charging Station

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September 2005

Comprehensive Transportation Plan

Solano County Electric Vehicle Charging Stations

Figure 3.4

ALTERNATIVE FUELS FUNDING OPPORTUNITIES

There are a variety of funding opportunities available to implement alternative transportation projects over time. Funding for these projects comes from local, regional, state, and federal sources. Potential sources are listed below:

Congestion Mitigation & Air Quality Improvement Program (CMAQ)

Transportation Fund for Clean Air (TFCA)

CARB ZEV Incentive Program

Efficient Vehicle Incentive Program (VIP)

Lower-Emission School Bus Program

Sacramento Emergency Clean Air and Transportation Pilot Program

Charge! Grant Program to Install Public Electric Vehicle Charging Facilities

Carl Moyer Memorial Air Quality Standards Attainment Program

Yolo-Solano Air Quality Management District Clean Air Fund (CAF)

Solano Clean Air Fund (AB 8)

Regional Electric Vehicle Incentives CEC's ZEV Demonstration Program

California Energy Commission (CEC) Alternative Fuel Incentive Program